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Why Kerala waxes lyrical about Salil Chowdhury

His compositions were the starting point of a shift in Malayalam cinema from setting tunes to lyrics to the other way round

PCS

S.R. Praveen
THIRUVANANTHAPURAM

A curious connection exists between musician **Salil Chowdhury** and the way music is composed in most Malayalam films now.

When the **Bengali musician**, whose birth centenary year was on Tuesday, first came into Malayalam, the usual practice was for the lyricists to write the lines, based on which the composer would structure the tunes.

One of the early occasions on which this whole working style was changed was when **Chowdhury started composing his evergreen classic soundtrack for**



Salil Chowdhury

Chemmeen (1965).

Although there was quite some resistance to the idea initially, it was the starting point of a shift which has now completely reversed with most young composers creating the tunes first into which the lyrics are fit into later.

Already a big name in Bengali and Hindi film music, Chowdhury's association with filmmaker Ramu Kariat

through the **Indian People's Theatre Association (IPTA)**, for which he composed revolutionary songs, paved his way to Malayalam film music.

"Most composers weave in their signature style towards the later parts of a song, but **Salilda's signature was all over every song he composed.** Be it any genre, right from the opening moment we can recognise his signature style. It is not easy to have such a distinct identity and at the same time bring in drastic variations as he did. He was really a blessing that Malayalam cinema got from Bengal," says music composer Sharreth.

As a music reality show

host, he says the number of young children still choosing to sing his songs are a testimony to his impact.

Among the 100-odd Malayalam songs he composed for 27 films are equally beautiful and complex melodies as 'Saagaram Santhamakanee' from *Madanolsavam* (1978), 'Oru Mukham Mathram Kannil' from *Etho Oru Swapnam* (1978), 'Keli Nalinam' from *Thulavarsham* (1976), 'Kadarumasam' from *Ezhu Rathrikal* (1968) and 'Sourayoodhathil' from *Swapnam* (1973).

His most prolific musical partnership was with O.N.V. Kurup, with whom he had 45 songs, followed by Vayalar

Ramavarma and Sreekumaran Thampi. No Onam season passes without listening to Chowdhury's onam songs – 'Poovili Poovili Ponnanamayi' from *Vishukkani* (1977) and 'Onappoo poove' from *Ee Ganam Marakkumo* (1978).

'A total revolution'

"His music was totally a revolution, compared to what Malayalis had listened to in their films. He had a good grounding in Hindustani, imbibed the folk traditions of Bengal and was well versed in Western classical. The coming together of these influences is evident in his compositions," says singer G. Venugopal.



Why Kerala waxes lyrical about Salil Chowdhury केरल सलिल चौधरी की प्रशंसा क्यों करता है

His compositions marked a shift in Malayalam cinema from setting tunes to lyrics first, to the reverse practice where tunes are composed first, and lyrics are fitted later.

उनकी रचनाओं ने मलयालम सिनेमा में संगीत-गीत की परंपरा को बदलकर पहले धुन और फिर गीत लिखने की प्रक्रिया शुरू की।

- Salil Chowdhury's **birth centenary year** was celebrated on Tuesday.
सलिल चौधरी का जन्म शताब्दी वर्ष मंगलवार को मनाया गया।
- He was a **Bengali musician** who had already made a name in Bengali and Hindi film music before entering Malayalam cinema.
वह एक बंगाली संगीतकार थे जिन्होंने मलयालम सिनेमा में आने से पहले ही बंगाली और हिंदी फिल्म संगीत में अपनी पहचान बना ली थी।
- His association with filmmaker **Ramu Kariat** through the **Indian People's Theatre Association (IPTA)** introduced him to Malayalam film music.
फिल्म निर्माता रामू करियाट के साथ उनकी इंडियन पीपल्स थियेटर एसोसिएशन (IPTA) के जरिए सहभागिता ने उन्हें मलयालम फिल्म संगीत से जोड़ा।
- Salil Chowdhury's **signature style** was distinct and recognizable from the very beginning of a song.
सलिल चौधरी की अनूठी शैली हर गाने की शुरुआत से ही पहचानी जा सकती थी।
- His entry into Malayalam cinema brought **revolutionary changes** in its music, blending **Hindustani, Bengali folk traditions, and Western classical music**.
मलयालम सिनेमा में उनकी एंट्री ने संगीत में क्रांतिकारी बदलाव लाए, जिसमें हिंदुस्तानी, बंगाली लोक संगीत परंपराएं, और पश्चिमी शास्त्रीय संगीत शामिल थे।
- Some of his **evergreen compositions** include:
 - 'Saagarame Santhamakanee' from *Madanolsavam* (1978)
 - 'Oru Mukham Mathram Kannil' from *Etho Oru Swapnam* (1978)
 - 'Keli Nalinam' from *Thulavarsham* (1976)
 - 'Kadarumasam' from *Ezhu Rathrikal* (1968)
 - 'Sourayoodhathil' from *Swapnam* (1973)उनकी कुछ अमर रचनाएं हैं:
 - 'सागरमे शांतमकनी' (मदनोल्सवम, 1978)
 - 'ओरु मुखम मात्रम कंनिल' (एथो ओरु स्वप्नम, 1978)
 - 'केली नलिनम' (थुलावरषम, 1976)
 - 'कडरूमासम' (एजु रात्रिकल, 1968)
 - 'सौरयुद्धथिल' (स्वप्नम, 1973)
- His **most prolific collaborations** were with lyricists **O.N.V. Kurup (45 songs)**, followed by **Vayalar Ramavarma** and **Sreekumaran Thampi**.





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उनकी सबसे अधिक सफल साझेदारी गीतकार ओ.एन.वी. कुरुप (45 गाने) के साथ रही, इसके बाद वायलार रामवर्मा और श्रीकुमारन थंपी के साथ।

- His Onam songs like 'Poovili Poovili Ponnanamayi' (*Vishukkani*, 1977) and 'Onappooove Poove' (*Ee Ganam Marakkumo*, 1978) are still celebrated. उनके ओणम गाने जैसे 'पुविली पुविली पोन्नानामयी' (*विशुककानी*, 1977) और 'ओनप्पुवे पुवे' (*ई गणम मरक्कुमो*, 1978) आज भी प्रसिद्ध हैं।
- Young generations continue to sing his songs, highlighting their enduring **impact**. युवा पीढ़ी आज भी उनके गाने गाती है, जो उनके स्थायी प्रभाव को दर्शाता है।
- Singer **G. Venugopal** praises his revolutionary approach and mastery of multiple musical traditions.

गायक जी. वेंगुपाल ने उनकी क्रांतिकारी शैली और विभिन्न संगीत परंपराओं की गहरी समझ की सराहना की।



Little improvement in air quality: Rai urges Modi to clear way for artificial rain

Four letters to Union Environment Minister on the issue have not elicited any response: Gopal Rai; he should have focused on farm fires in Punjab: BJP; Capital's AQI remains in 'severe plus' category

GS Paper III: Environment

The Hindu Bureau
NEW DELHI

Delhi Environment Minister Gopal Rai asked Prime Minister Narendra Modi to intervene and provide relief from the “medical emergency” by clearing hurdles in inducing artificial rain in the city even as he slammed the BJP-led Centre for its “carelessness” in responding to the toxic air crisis in north India.

However, the BJP's Delhi unit said the air quality could have improved significantly had Mr. Rai, instead of writing letters about artificial rain, asked Aam Aadmi Party (AAP)-ruled Punjab to check stubble burning.

The City residents continued to breathe heavily polluted air with the **air quality index (AQI)** in the ‘severe plus’ category for the second consecutive day on Tuesday. Delhi is likely to breathe ‘severe’ quality air till Friday.

Meanwhile, Jawaharlal Nehru University and Jamia Millia Islamia on Tuesday shifted to the online mode of teaching till November 23, a day after Delhi University stopped physical classes till November 23 due to the toxic air.

Delhi's overall 24-hour AQI was 460 at 4 p.m. on Tuesday – the worst in the



SMOKESCREEN: Delhi's air quality was the worst in the country on Tuesday, as per official data. SHASHI SHEKHAR KASHYAP

country – according to the Central Pollution Control Board.

The **AQI is a measurement of air pollution on a scale of 0-500. An AQI between 401 and 450 is considered 'severe' and 451 and 500 'severe plus'.**

‘Lack of urgency’

Addressing a press conference, Mr. Rai said he had written to Union Environment Minister Bhupender Yadav four times in the past three months, seeking permission to induce artificial rain by conducting cloud seeding in the Capital. However, Mr. Yadav did not respond to any letter, said the Delhi Minister.

Inducing **artificial rain to settle pollutants was part of the 21-point Winter Action Plan** the Delhi government launched on September 25.

“It is deeply disheartening to say that the BJP-led Central government has shown a lack of urgency even as half of north India suffers from severe pollution,” said Mr. Rai. He added, “This is the BJP's carelessness. I want to make an appeal today, including to the Prime Minister, to find a solution to the crisis.”

He said if the Central government does not have any solution to improve the air quality other than the restrictions that have

already been imposed, it should help in inducing artificial rain. He added that the government is contemplating introducing more measures, such as the odd-even vehicle-rationing scheme and work-from-home policy.

BJP holds protests

Delhi BJP spokesperson Praveen Shankar Kapoor said air quality in Delhi would have improved significantly had Mr. Rai “put as much effort into addressing real issues as he does in making statements and writing letters about artificial rain”. He said the city residents would have breathed better air by now had the Delhi Minister written to his party's government in Punjab over farm fires and the Public Works Department over broken roads.

Delhi BJP leaders, including city unit chief Virendra Sachdeva, East Delhi MP Harsh Malhotra, North East Delhi MP Manoj Tiwari, and former Union Minister Vijay Goel, held protests in the city over the rising pollution by distributing N95 masks.

According to the latest data by the Union Ministry of Earth Sciences, the contribution of stubble burning in the neighbouring States to PM2.5 (a chief pollutant) in Delhi on November 17 was 13.06%.



Little Improvement in Air Quality: Rai Urges Modi to Clear Way for Artificial Rain

वायु गुणवत्ता में मामूली सुधार: राय ने कृत्रिम बारिश के लिए मोदी से हस्तक्षेप का आग्रह किया

Delhi Environment Minister Gopal Rai requested Prime Minister Narendra Modi to intervene and approve artificial rain to address the severe air pollution in Delhi.

दिल्ली के पर्यावरण मंत्री गोपाल राय ने प्रधानमंत्री नरेंद्र मोदी से हस्तक्षेप कर कृत्रिम बारिश की अनुमति देने का अनुरोध किया ताकि दिल्ली में गंभीर वायु प्रदूषण का समाधान किया जा सके।

- Mr. Rai criticized the **BJP-led Centre** for its "carelessness" in addressing the toxic air crisis in north India.
श्री राय ने **भाजपा-नीत केंद्र** पर उत्तर भारत में जहरीली हवा संकट को लेकर "लापरवाही" का आरोप लगाया।
- **Delhi BJP** countered that Mr. Rai should have addressed stubble burning in AAP-ruled Punjab instead of focusing on artificial rain.
दिल्ली भाजपा ने कहा कि श्री राय को कृत्रिम बारिश पर ध्यान देने की बजाय आप-शासित पंजाब में पराली जलाने की समस्या पर ध्यान केंद्रित करना चाहिए था।
- The Capital's **AQI remained in the 'severe plus' category** for the second consecutive day on Tuesday, with an overall AQI of **460** as per the Central Pollution Control Board.
राजधानी का **एक्यूआई 'गंभीर प्लस'** श्रेणी में रहा, मंगलवार को **460** का एक्यूआई केंद्रीय प्रदूषण नियंत्रण बोर्ड के अनुसार दर्ज किया गया।
- **AQI Scale:** 401-450 is 'severe', while 451-500 is 'severe plus'.
एक्यूआई पैमाना: 401-450 को 'गंभीर' और 451-500 को 'गंभीर प्लस' श्रेणी में रखा जाता है।
- **Educational institutions** like Jawaharlal Nehru University and Jamia Milia Islamia shifted to online classes till **November 23** due to toxic air.
जहरीली हवा के कारण **जवाहरलाल नेहरू विश्वविद्यालय और जामिया मिलिया इस्लामिया** ने अपनी कक्षाएं **23 नवंबर तक** ऑनलाइन कर दीं।
- Rai revealed that he had written **four letters** to Union Environment Minister Bhupender Yadav over the last three months for cloud seeding but received no response.
राय ने बताया कि उन्होंने केंद्रीय पर्यावरण मंत्री भूपेंद्र यादव को पिछले तीन महीनों में **चार पत्र** लिखे, लेकिन कोई जवाब नहीं मिला।
- Inducing artificial rain is part of the **21-point Winter Action Plan** launched by the Delhi government on **September 25**.





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कृत्रिम बारिश करवाना दिल्ली सरकार की 25 सितंबर को शुरू की गई 21-सूत्रीय शीतकालीन कार्य योजना का हिस्सा है।

- BJP spokesperson Praveen Shankar Kapoor said the air quality could have improved if Rai addressed **real issues like stubble burning and broken roads** instead of artificial rain.

भाजपा प्रवक्ता प्रवीण शंकर कपूर ने कहा कि अगर राय ने पराली जलाने और टूटी सड़कों जैसी वास्तविक समस्याओं पर ध्यान दिया होता, तो वायु गुणवत्ता में सुधार हो सकता था।

- Delhi BJP leaders, including **Virendra Sachdeva, Manoj Tiwari, and Vijay Goel**, protested rising pollution by distributing **N95 masks**.
दिल्ली भाजपा नेताओं, जिनमें वीरेंद्र सचदेवा, मनोज तिवारी, और विजय गोयल शामिल हैं, ने बढ़ते प्रदूषण के खिलाफ **N95 मास्क** बांटकर विरोध प्रदर्शन किया।
- According to the Union Ministry of Earth Sciences, the contribution of **stubble burning** to PM2.5 levels in Delhi on **November 17** was **13.06%**.
केंद्रीय पृथ्वी विज्ञान मंत्रालय के अनुसार, 17 नवंबर को दिल्ली में पीएम2.5 स्तर में पराली जलाने का योगदान **13.06%** था।



Key Maoist leader Vikram Gowda killed in Karnataka

He had been on the wanted list of Karnataka Police for 22 years; intensified patrolling in Kerala compelled him to abandon the tri-junction area bordering Kerala, Karnataka, and Tamil Nadu

GS Paper III: Internal Security
The Hindu Bureau
MANGALURU

A key Maoist leader from Karnataka, Vikram Gowda, 44, was killed in an alleged exchange of fire between Anti Naxal Force (ANF) and a team of Maoists near Peetabailu village, Kabbinala area near Hebri of Udupi district in Karnataka, on Monday night.

A top police official confirmed Gowda's death to *The Hindu* without revealing the time of the encounter.

For the last few days, six members of Maoist's 'Kabini Dalam', including Gowda, were searching for a safe place in Dakshina Kannada, Udupi, Chikkamagaluru, and Kodagu districts.

Sources said that the ANF and Udupi police personnel went to a place near Hebri on a tip-off that five armed Maoists had arrived to collect groceries. In the exchange of fire that followed, Gowda died while others in the team escaped, police claimed. The ANF has intensified combing operations in the nearby areas to search for Gowda's associates.

Sources said the ANF personnel have recovered a 9 mm carbine machine gun, which Gowda used to open fire at the ANF personnel,



Police officials speaking to mediapersons in Udupi where the Maoist leader Vikram Gowda (inset), was killed. UMESH S. SHETTIGAR

'7 more active Maoists remain in Karnataka'

The Hindu Bureau
BENGALURU

A group of around eight known Maoists had moved back to the Karnataka earlier this year from the Wayanad-Kannur belt in Kerala, sources in the security establishment now suspect.

Vikram Gowda, 44, killed in an encounter on Monday night, was the most prominent among them. There are seven

known Maoists left in this group known to be active in the State. However, police sources said whether there are more, is part of the probe.

Sources in the security agencies identified the eight members as: John alias Jayanna, Vikram Gowda, Mundagaru Latha, Vanajakshi, Sundari, Kotehonda Ravi, all from Karnataka, Ramesh from Tamil Nadu, and Jisha from Kerala.

near his body. Sources said none of the ANF personnel were injured.

Gowda was a tribal from

the Malekudiya community. Hailing from a family of peasants, he had studied up to Class 4 before dropping out

of school.

He reportedly came in contact with Maoists in the late 1990s and early 2000s, starting out as a courier for them and was later recruited, sources said.

He started with protests against Kudremukh National Park project. He went underground in 2002. He has been on the wanted list of Karnataka Police for 22 years.

While Karnataka Police had announced a reward of ₹5 lakh, the Kerala Police had announced a reward of ₹50,000 for information leading to his capture. He is accused in 114 cases – 64 in Karnataka and 50 in Kerala. Of the 64 cases, three pertain to murder, including that of Sadashiva Gowda.

His former wife Savitri, a former commander of the Kabini Dalam, has been active in the Maoist movement since 2004. She is presently lodged in a prison in Kerala.

Abandons tri-junction

Intensified patrolling by the police and anti-Naxal squads in suspected Maoist territories in Kerala may have compelled Gowda to abandon the tri-junction area bordering Kerala, Karnataka, and Tamil Nadu and flee to other areas.

(With inputs from Kalpetta in Kerala)

Key Maoist Leader Vikram Gowda Killed in Karnataka

कर्नाटक में प्रमुख
माओवादी नेता
विक्रम गौड़ा मारे
गए

Vikram Gowda, a 44-year-old Maoist leader, was killed in an alleged exchange of fire between the Anti-Naxal Force (ANF) and Maoists near Peetabailu village, Kabbinala area, Udupi district, Karnataka, on Monday night.

44 वर्षीय माओवादी नेता
विक्रम गौड़ा की सोमवार
रात कर्नाटक के उडुपी

जिले के पीटाबैलु गांव के पास एंटी-नक्सल फोर्स (ANF) और माओवादियों के बीच हुई कथित मुठभेड़ में मौत हो गई।

- Gowda had been on the **wanted list of Karnataka Police for 22 years**. गौड़ा 22 वर्षों से कर्नाटक पुलिस की वांछित सूची में थे।
- For the last few days, Gowda and **five members of the Kabini Dalam unit** were searching for a safe place in **Dakshina Kannada, Udupi, Chikkamagaluru, and Kodagu districts**.





पिछले कुछ दिनों से गौड़ा और कबिनी दलम के पांच सदस्य दक्षिण कन्नड़, उडुपी, चिक्कमगलूर और कोडागु जिलों में सुरक्षित स्थान खोज रहे थे।

- On a **tip-off** about **Maoists arriving to collect groceries**, ANF and Udupi Police personnel conducted operations near **Hebri**, leading to an exchange of fire. Gowda died, while others escaped.
हेब्री के पास माओवादियों के राशन लेने की सूचना मिलने पर **ANF और उडुपी पुलिस** ने ऑपरेशन चलाया। गोलीबारी में गौड़ा मारे गए, जबकि अन्य फरार हो गए।
- A **9 mm carbine machine gun** was recovered near Gowda's body, which he allegedly used during the exchange. No ANF personnel were injured.
गौड़ा के शव के पास से **9 मिमी की कार्बाइन मशीन गन** बरामद हुई, जिसका उन्होंने मुठभेड़ के दौरान इस्तेमाल किया था। **ANF के किसी कर्मी को चोट नहीं आई।**
- Gowda was from the **Malekudiya tribal community**, dropped out of school after Class 4, and started as a **courier for Maoists in the late 1990s and early 2000s**.
गौड़ा **मालेकुडिया जनजातीय समुदाय** से थे, कक्षा 4 के बाद पढ़ाई छोड़ दी और **1990 के दशक के अंत और 2000 के दशक की शुरुआत में माओवादियों के लिए कूरियर** के रूप में काम शुरू किया।
- He was involved in protests against the **Kudremukh National Park project** and went underground in **2002**.
उन्होंने **कुद्रेमुख राष्ट्रीय उद्यान परियोजना** के खिलाफ प्रदर्शन किया और **2002 में भूमिगत हो गए।**
- Karnataka Police had announced a **₹5 lakh reward**, while Kerala Police had announced a **₹50,000 reward** for information leading to his capture.
कर्नाटक पुलिस ने उनकी गिरफ्तारी के लिए **₹5 लाख का इनाम** और केरल पुलिस ने **₹50,000 का इनाम** घोषित किया था।
- Gowda was accused in **114 cases** — 64 in Karnataka (including three murder cases) and 50 in Kerala.
गौड़ा पर **114 मामलों** का आरोप था—कर्नाटक में 64 (जिसमें तीन हत्या के मामले शामिल हैं) और केरल में 50।
- His former wife, **Savitri**, a **former commander of Kabini Dalam**, has been active in the Maoist movement since **2004** and is currently imprisoned in Kerala.
उन्की पूर्व पत्नी **सावित्री**, जो **कबिनी दलम की पूर्व कमांडर** हैं, **2004 से माओवादी आंदोलन में सक्रिय हैं और वर्तमान में केरल में कैद हैं।**
- **Intensified patrolling** in Maoist territories near the **tri-junction of Kerala, Karnataka, and Tamil Nadu** forced Gowda to abandon the area.
केरल, कर्नाटक और तमिलनाडु के **त्रि-जंक्शन** के पास माओवादी क्षेत्रों में **गहन गश्त** के कारण गौड़ा को यह इलाका छोड़ना पड़ा।

Origin and Habitat:

- **Name Origin:** The term "Malekudiya" derives from the Kannada words "Male" (hills) and "Kudiya" (dwellers), meaning "hill dwellers."





- **Geographical Distribution:** Predominantly found in Dakshina Kannada, Udipi, and Chikkamagaluru districts of Karnataka. They inhabit forested areas and hilly terrains of the Western Ghats, which is a UNESCO World Heritage Site.

Socio-Economic Characteristics:

- **Livelihood:**
 - The Malekudiyas are traditionally agrarian and rely on small-scale farming, collection of forest produce, and animal husbandry.
 - Arecanut, paddy, and pepper are among the primary crops cultivated.
 - Non-timber forest products like honey, medicinal plants, and wild fruits supplement their income.
- **Housing:** They reside in small hamlets called "podus," often located in remote, forested areas.
- **Employment:** Modern development projects have also encouraged migration to nearby towns for casual labor or government employment under welfare schemes.

Cultural and Religious Practices:

- **Animistic Beliefs:** Malekudiyas follow animistic traditions and worship nature deities, with strong spiritual connections to their environment.
- **Festivals and Rituals:** Festivals are closely tied to agricultural cycles and nature worship.
- **Language and Dialect:** They speak Tulu, Kannada, and their own dialect, reflecting their integration with local communities while preserving their linguistic heritage.

Challenges Faced:

- **Displacement and Land Alienation:**
 - Deforestation and developmental projects in the Western Ghats have led to displacement.
 - Encroachment on their traditional lands has posed threats to their way of life.
- **Access to Education and Healthcare:**
 - Educational facilities are limited, and literacy rates remain low.
 - Lack of healthcare infrastructure often leads to dependency on traditional medicine or delayed medical interventions.
- **Economic Vulnerability:**
 - The community faces economic challenges due to their reliance on natural resources and limited access to modern markets.

Government Initiatives and Support:

- **Scheduled Tribe Status:** As a recognized Scheduled Tribe, Malekudiyas benefit from reservations in education, employment, and political representation.
- **Welfare Schemes:** The government has introduced schemes like:
 - Forest Rights Act, 2006, ensuring land tenure and access to forest resources.
 - Skill development programs for sustainable livelihoods.
 - Health and nutrition programs for tribal welfare.





Conservation Efforts and Integration:

- **Cultural Preservation:** Initiatives to document and preserve Malekudiya traditions, language, and folklore are being undertaken by non-profits and academic institutions.
- **Eco-Friendly Development:** Community-driven sustainable tourism and conservation projects are being promoted in the Western Ghats to involve Malekudiyas in preserving their environment.

Kudremukh National Park Project: Detailed Explanation in English and Hindi

Overview

- Kudremukh National Park (KNP) is located in the Chikkamagaluru, Dakshina Kannada, and Udupi districts of Karnataka, India.
- It was declared a national park in **1987** under the Wildlife Protection Act, 1972.
कुद्रेमुख राष्ट्रीय उद्यान (केएनपी) कर्नाटक के चिक्कमगलुरु, दक्षिण कन्नड़ और उडुपी जिलों में स्थित है।
इसे **1987** में वन्यजीव संरक्षण अधिनियम, 1972 के तहत राष्ट्रीय उद्यान घोषित किया गया था।

Name Origin

- The name Kudremukh means "**Horse Face**" in Kannada, referring to the horse-shaped peak in the park.
कुद्रेमुख का अर्थ कन्नड़ में "**घोड़े का चेहरा**" है, जो उद्यान में घोड़े के आकार की चोटी को संदर्भित करता है।

Ecological Significance

1. **Biodiversity Hotspot:** It is part of the **Western Ghats**, a UNESCO World Heritage Site and one of the eight hottest biodiversity hotspots in the world.
जैव विविधता का हॉटस्पॉट: यह पश्चिमी घाट का हिस्सा है, जो एक यूनेस्को विश्व धरोहर स्थल और दुनिया के आठ सबसे महत्वपूर्ण जैव विविधता हॉटस्पॉट में से एक है।
2. **Flora and Fauna:** The park hosts endemic species like the lion-tailed macaque, Malabar civet, and several medicinal plants.
वनस्पति और जीव-जंतु: उद्यान शेर की पूंछ वाले मकाक, मालाबार सिवेट और कई औषधीय पौधों जैसे स्थानिक प्रजातियों का घर है।
3. **Watershed Importance:** The park is the origin of three major rivers—**Tunga, Bhadra, and Netravati**.



जलग्रहण क्षेत्र का महत्व: उद्यान तीन प्रमुख नदियों—तुंगा, भद्रा और नेत्रावती—का उद्गम स्थल है।

Historical Background

- The Kudremukh Iron Ore Company Limited (KIOCL) began operations in the area in the 1980s. However, due to environmental concerns, mining activities were stopped in 2005 following a Supreme Court order.

कुद्रेमुख आयरन ओर कंपनी लिमिटेड (केआईओसीएल) ने 1980 के दशक में इस क्षेत्र में संचालन शुरू किया। हालांकि, पर्यावरणीय चिंताओं के कारण, खनन गतिविधियां 2005 में सर्वोच्च न्यायालय के आदेश के बाद बंद कर दी गईं।

HC clears decks for grant of Sangita Kalanidhi award to T.M. Krishna but with a rider

PCS

Mohamed Imranullah S.
CHENNAI

The Madras High Court on Tuesday cleared the decks for the conferment of the prestigious Sangita Kalanidhi award by the Music Academy on Carnatic singer T.M. Krishna, and also for presenting another mirror award, instituted by *The Hindu* in 2005 with a cash prize of ₹1 lakh, to him on January 1, 2025.

Justice G. Jayachandran, however, ordered that the mirror award carrying the



Carnatic singer T.M. Krishna

cash prize should not be named after acclaimed classical musician M.S. Subbulakshmi since she had executed a Will in 1997 expressing her desire that no trust, foundation, memorial, statue or bust should be instituted in her

name or memory. The orders were passed following a civil suit filed by Bengaluru-based V. Shrinivasan, claiming to be Subbulakshmi's grandson. He had opposed the award conferment on Mr. Krishna, on the ground that he had made highly critical remarks against her. Justice Jayachandran said none of the reported comments made by Mr. Krishna would matter when it comes to conferring the award or giving away the cash prize without using her name.





HC clears decks for grant of Sangita Kalanidhi award to T.M. Krishna but with a rider

संगीत कलानिधि पुरस्कार टी.एम. कृष्णा को प्रदान करने की मंजूरी हाईकोर्ट द्वारा, लेकिन शर्त के साथ

The Madras High Court cleared the way for conferring the **Sangita Kalanidhi award by the Music Academy on Carnatic singer T.M. Krishna** on January 1, 2025.

मद्रास उच्च न्यायालय ने 1 जनवरी 2025 को कर्नाटक गायक टी.एम. कृष्णा को संगीत अकादमी द्वारा संगीत कलानिधि पुरस्कार प्रदान करने का मार्ग प्रशस्त किया।

- The court also permitted the presentation of a **mirror award** instituted by *The Hindu* in **2005**, which includes a **cash prize of ₹1 lakh**, to T.M. Krishna.
अदालत ने द हिंदू द्वारा 2005 में स्थापित मिरर पुरस्कार, जिसमें 1 लाख रुपये का नकद पुरस्कार शामिल है, को टी.एम. कृष्णा को प्रदान करने की भी अनुमति दी।
- Justice G. Jayachandran ordered that the **cash prize mirror award** should not be named after **M.S. Subbulakshmi** due to her **1997 Will**, which explicitly stated that no trust, foundation, or memorial should be instituted in her name.
न्यायमूर्ति जी. जयचंद्रन ने आदेश दिया कि नकद पुरस्कार मिरर अवार्ड का नाम एम.एस. सुबुलक्ष्मी के नाम पर नहीं रखा जाना चाहिए क्योंकि उनकी 1997 की वसीयत में स्पष्ट रूप से उल्लेख किया गया था कि उनके नाम पर कोई ट्रस्ट, फाउंडेशन या स्मारक स्थापित नहीं किया जाना चाहिए।
- The decision followed a civil suit filed by **V. Shrinivasan**, claiming to be M.S. Subbulakshmi's **grandson**. He objected to the award being conferred on T.M. Krishna, alleging that Krishna made **critical remarks against her**.
यह निर्णय वी. श्रीनिवासन द्वारा दायर एक दीवानी मुकदमे के बाद आया, जिन्होंने स्वयं को एम.एस. सुबुलक्ष्मी का पोता बताया। उन्होंने यह पुरस्कार टी.एम. कृष्णा को प्रदान किए जाने का विरोध किया, आरोप लगाते हुए कि कृष्णा ने उनके खिलाफ **आलोचनात्मक टिप्पणियां** की थीं।
- Justice Jayachandran ruled that none of the reported comments made by T.M. Krishna mattered in deciding the **conferring of the award or cash prize**, as long as Subbulakshmi's name was not used.
न्यायमूर्ति जयचंद्रन ने फैसला सुनाया कि टी.एम. कृष्णा द्वारा की गई कथित टिप्पणियों का





पुरस्कार या नकद पुरस्कार प्रदान करने के निर्णय पर कोई प्रभाव नहीं पड़ेगा, जब तक कि सुबलक्ष्मी का नाम उपयोग में नहीं लिया जाता।

A community on the margins, its hidden scars

Essay

Heeramandi, a Netflix series by Sanjay Leela Bhansali, delves into the lives of courtesans in pre-Independence India, bringing to the forefront the untold stories of sex workers. Set in Lahore's historic red light district, it paints a vivid picture of the complex interplay between societal pressures, personal ambitions, and the pursuit of dignity and freedom. While capturing the resilience and agency of these women, who navigate the harsh realities of their profession under British colonial rule, it also subtly highlights the mental health challenges they face – which are still painfully relevant.

Globally, sex workers continue to face profound mental health challenges exacerbated by societal stigma, violence, economic pressures, and isolation. While much of the public discourse on sex work either romanticises or criminalises the profession, it often neglects the very real mental health struggles. The unique circumstances of their work makes sex workers vulnerable to complex emotional and psychological stressors. Yet, access to mental health services remains limited.

A spectrum of issues

Sex workers suffer from a range of mental health conditions, including anxiety, depression, post-traumatic stress disorder (PTSD), and substance use disorders. These stem from various factors such as violence, exploitation, and societal stigma. Stigma is one of the most significant contributors to their mental health issues. Ostracised, sex workers are deprived of basic human rights, which alienates them from accessing essential health services. This exclusion leaves them vulnerable to severe psychological distress, and the stigma attached to their profession is a major deterrent to their seeking



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The lived realities of sex workers must be acknowledged, with collaborative, compassionate and comprehensive interventions to promote their mental health

help. Violence is a constant in their lives. Many experience physical, emotional, and sexual violence from clients, pimps, and even law enforcement. This results in trauma and PTSD, significantly affecting their everyday life. The continuous trauma inflicted by violence exacerbates mental health disorders, creating a cycle that is difficult to break without appropriate interventions.

Economic pressures further drive their mental health issues. Many are drawn into the profession out of financial desperation, often as the sole means of supporting themselves and their families. The precarious nature of sex work, along with the lack of alternative employment opportunities, results in chronic stress and anxiety. The instability of income heightens their insecurity, further damaging their mental health.

Substance use is a common coping mechanism among sex workers who rely on drugs or alcohol to manage stress and trauma. However, substance use compounds their mental health problems, trapping them in a harmful cycle of addiction, isolation, and deteriorating mental well-being. The isolation faced by sex workers worsens their access to social support systems, heightens feelings of hopelessness and deepens mental health issues. This lack of support is a recurring theme, historically and today.

An absence of specific interventions

The intersection of sex work and mental health reveals deep-seated challenges that demand comprehensive and compassionate interventions. Although efforts have been made, particularly in addressing HIV prevention and treatment, specific mental health services tailored to sex workers are still lacking. For example, while India has seen initiatives focused on HIV prevention,

there is still a gap in mental health services. In Sonagachi, Kolkata, however, a mental health database project, with the goal of providing more targeted interventions and support. This initiative emphasises the need for data-driven solutions that are tailored to the unique mental health needs of the community.

Much progress can be made if the lived realities of sex workers are acknowledged and if interventions address their mental health needs with sensitivity and urgency. Comprehensive research is needed to test the feasibility, acceptability, and effectiveness of interventions co-designed with sex workers in India to promote their mental health and well-being. Additionally, sustained advocacy is required to establish supportive policies that offer a comprehensive package of services, including economic opportunities, access to mental health services, legal protection from violence, and efforts to reduce societal stigma.

Legal support is one area

The mental health crisis among sex workers demands collaborative, compassionate and comprehensive interventions. Legal protection, access to mental health services, and the creation of safe spaces where sex workers can access social support are essential to improving their well-being. As emphasized in the report, "Sex Work and Mental Health: Access to Mental Health Services for People Who Sell Sex in Germany, Italy, Sweden, and the UK", peer support networks are fundamental to mental health. By focusing on the lived realities of sex workers and advocating supportive policies, society can move toward a more just and humane approach in addressing the mental health challenges faced by this marginalised community.

A Community on the Margins, Its Hidden Scars

हाशिए पर एक समुदाय, इसके छिपे हुए घाव

- *Heeramandi*, a Netflix series by Sanjay Leela Bhansali, explores the lives of courtesans in pre-Independence India, focusing on their untold stories and the challenges of sex workers.

संजय लीला भंसाली की नेटफ्लिक्स सीरीज़ *हीरामंडी* आजादी से पहले के भारत में तवायफों के जीवन की पड़ताल करती है, जिसमें सेक्स वर्करों की अनकही कहानियां और उनकी चुनौतियां शामिल हैं।

- Set in Lahore's historic red-light district, the series highlights the interplay between societal pressures, personal ambitions, and the pursuit of dignity and freedom. यह लाहौर के ऐतिहासिक रेड-लाइट एरिया में स्थित है और सामाजिक दबाव, व्यक्तिगत महत्वाकांक्षा और गरिमा व स्वतंत्रता की तलाश को उजागर करती है।
- It underscores the resilience and agency of women navigating the harsh realities of their profession under British colonial rule, while subtly addressing mental health





challenges.

यह महिलाओं की सहनशीलता और स्वतंत्रता पर जोर देती है, जो ब्रिटिश औपनिवेशिक शासन के तहत अपने पेशे की कठोर वास्तविकताओं का सामना करती हैं, साथ ही मानसिक स्वास्थ्य चुनौतियों पर भी प्रकाश डालती है।

Global Mental Health Challenges for Sex Workers सेक्स वर्करों के लिए वैश्विक मानसिक स्वास्थ्य चुनौतियां

- Globally, **sex workers** face mental health challenges like **stigma, violence, economic pressures, and isolation**, which worsen their emotional and psychological well-being. वैश्विक स्तर पर, **सेक्स वर्कर कलंक, हिंसा, आर्थिक दबाव और अलगाव** जैसी मानसिक स्वास्थ्य चुनौतियों का सामना करते हैं, जो उनके भावनात्मक और मानसिक स्वास्थ्य को और खराब करती हैं।
- Public discourse often **romanticises or criminalises** their profession, neglecting their **mental health struggles**. सार्वजनिक चर्चा अक्सर उनके पेशे को **रोमांटिक या आपराधिक** बनाती है और उनके **मानसिक स्वास्थ्य संघर्षों** को अनदेखा करती है।

A Spectrum of Issues

समस्याओं का एक व्यापक दायरा

- Sex workers frequently suffer from **anxiety, depression, PTSD, and substance use disorders**, caused by **violence, exploitation, and stigma**. सेक्स वर्कर अक्सर **चिंता, अवसाद, PTSD, और नशे की समस्याओं** से पीड़ित होती हैं, जो **हिंसा, शोषण, और कलंक** के कारण होती हैं।
- **Stigma** leads to **ostracisation**, depriving sex workers of **basic human rights**, including access to **essential health services**. कलंक के कारण उन्हें **अलग-थलग** कर दिया जाता है, जिससे **मूलभूत मानवाधिकारों और आवश्यक स्वास्थ्य सेवाओं** की पहुंच से वंचित कर दिया जाता है।
- Violence, including **physical, emotional, and sexual abuse**, is a constant, causing **trauma and PTSD**. **शारीरिक, भावनात्मक और यौन शोषण** सहित हिंसा आम बात है, जो **आघात और PTSD** का कारण बनती है।
- Economic pressures force many into the profession, often as the **sole breadwinners** for their families, leading to **chronic stress and anxiety**. आर्थिक दबावों के कारण कई लोग इस पेशे में आते हैं और अक्सर अपने परिवारों के लिए **एकमात्र कमाने वाले** होते हैं, जिससे **दीर्घकालिक तनाव और चिंता** होती है।
- **Substance use** becomes a coping mechanism, but it exacerbates their mental health problems, creating cycles of **addiction and isolation**.





नशे का उपयोग एक मुकाबला तंत्र बन जाता है, लेकिन यह उनके मानसिक स्वास्थ्य समस्याओं को बढ़ाता है, जिससे लत और अलगाव का चक्र बनता है।

- Isolation limits their access to **social support systems**, intensifying feelings of **hopelessness** and worsening mental health issues.

अलगाव उनके सामाजिक समर्थन प्रणाली तक पहुंच को सीमित करता है, जिससे निराशा की भावना गहरी होती है और मानसिक स्वास्थ्य समस्याएं बढ़ जाती हैं।

An absence of specific interventions

विशिष्ट हस्तक्षेपों की अनुपस्थिति

- The intersection of sex work and mental health reveals deep-seated challenges that demand comprehensive and compassionate interventions.
यौन कार्य और मानसिक स्वास्थ्य का संबंध गहरे समस्याओं को उजागर करता है, जिनके लिए व्यापक और संवेदनशील हस्तक्षेपों की आवश्यकता है।
- Efforts have been made in **HIV prevention and treatment**, but specific mental health services tailored to sex workers are still lacking.
एचआईवी की रोकथाम और उपचार के लिए प्रयास किए गए हैं, लेकिन यौनकर्मियों के लिए विशिष्ट मानसिक स्वास्थ्य सेवाओं की अब भी कमी है।
- In **Sonagachi, Kolkata**, a mental health database project aims to provide targeted interventions and support, highlighting the need for **data-driven solutions** tailored to the unique needs of the community.
सोनागाछी, कोलकाता में एक मानसिक स्वास्थ्य डेटाबेस प्रोजेक्ट का उद्देश्य विशिष्ट हस्तक्षेप और समर्थन प्रदान करना है, जो समुदाय की अनूठी जरूरतों के लिए डेटा आधारित समाधान की आवश्यकता को रेखांकित करता है।
- Comprehensive research is necessary to test the feasibility and effectiveness of **co-designed interventions** with sex workers to promote their mental well-being.
यौनकर्मियों के साथ साझा रूप से डिजाइन किए गए हस्तक्षेपों की प्रभावशीलता और व्यवहार्यता की जांच के लिए व्यापक शोध आवश्यक है।
- Sustained advocacy is needed to establish supportive policies that offer:
 - **Economic opportunities**
 - Access to **mental health services**
 - **Legal protection from violence**
 - Efforts to **reduce societal stigma**निरंतर वकालत की आवश्यकता है ताकि सहायक नीतियां स्थापित की जा सकें, जो प्रदान करें:
 - आर्थिक अवसर
 - मानसिक स्वास्थ्य सेवाओं तक पहुंच
 - हिंसा से कानूनी सुरक्षा
 - सामाजिक कलंक को कम करने के प्रयास





Legal support is one area

कानूनी समर्थन एक प्रमुख क्षेत्र है

- The mental health crisis among sex workers requires **collaborative, compassionate, and comprehensive interventions**.
यौनकर्मियों के बीच मानसिक स्वास्थ्य संकट के लिए **सामूहिक, संवेदनशील, और व्यापक हस्तक्षेपों** की आवश्यकता है।
- Legal protection, access to mental health services, and the creation of **safe spaces** where sex workers can access social support are essential for their well-being.
यौनकर्मियों के लिए **कानूनी सुरक्षा**, मानसिक स्वास्थ्य सेवाओं तक पहुंच, और **सुरक्षित स्थानों** का निर्माण उनके कल्याण के लिए आवश्यक है।
- Peer support networks are fundamental to mental health, as emphasized in the report, **“Sex Work and Mental Health: Access to Mental Health Services for People Who Sell Sex in Germany, Italy, Sweden, and the UK”**.
सहकर्मी सहायता नेटवर्क मानसिक स्वास्थ्य के लिए अत्यधिक महत्वपूर्ण हैं, जैसा कि रिपोर्ट **"सेक्स वर्क और मानसिक स्वास्थ्य"** में बताया गया है।
- By focusing on the lived realities of sex workers and advocating supportive policies, society can move towards a **just and humane approach** to address the mental health challenges of this marginalized community.
यौनकर्मियों की वास्तविकताओं पर ध्यान केंद्रित करके और सहायक नीतियों की वकालत करके, समाज इस हाशिए पर पड़ी समुदाय के मानसिक स्वास्थ्य मुद्दों को हल करने के लिए एक **न्यायसंगत और मानवीय दृष्टिकोण** की ओर बढ़ सकता है।





GS Paper III: S&T (Use in governance)

Prison tag

Tracking devices may be used if they aid bail, help free up jail space

The suggestion for the introduction of electronic tracking of prisoners granted parole or furlough may merit consideration as a viable means of decongesting prisons. The idea of having a pilot programme to make undertrials who pose low or moderate risk wear devices that will track and restrict their movements has been mooted in a research report of the Supreme Court of India's Centre for Research and Planning. This is not the first time the use of electronic tracking has been considered, though. The Model Prisons and Correctional Services Act, 2023, contains a provision that says "prisoners may be granted prison leave on the condition of their willingness to wear electronic tracking devices" so that their movement and activities may be monitored. It speaks of cancelling the leave in case of any violation. The study points out that Odisha was the first State to propose the use of tamper-proof electronic trackers on undertrials accused of non-heinous offences to reduce congestion in jails. Such a measure would extend the concept to grant of bail. However, it also points out correctly that there are no guidelines or minimum standards for when and how the technology can be deployed without violating the prisoners' rights. The use of technology for tracking the movement of those allowed to leave prison on some conditions does raise such concerns.

The Court, earlier this year, disapproved of imposing bail conditions that would infringe their right to privacy of the accused. The context in that case was a bail condition that the accused should pin his location on Google Maps and share it with the investigating officer. However, it ought not to mean that electronic tagging should be rejected out of hand. A Parliamentary Standing Committee had approved of cost-effective devices being used with the consent of the accused, citing the possible gains of avoiding rights violation, reducing administrative costs and decongesting prisons. Rising occupancy in prisons has been a matter of concern in the last few years. Official statistics put the number of prisoners in the country's jails at 5,73,220 on December 31, 2022, amounting to 131.4% of the total capacity. Therefore, any move that will reduce the occupancy, including the use of tracking technology, ought to be a welcome measure. Several jurisdictions in the world deploy devices to track the movement of certain categories of offenders. It would be logical to use them to ensure that prisoners released recently do not approach their victims again or enter locations associated with their crimes. If the trackers were to be compact in terms of size and visibility, it could also make the beneficiaries of bail shed their reluctance to wear them for fear of stigmatisation.

- The **Parliamentary Standing Committee** approved the use of cost-effective tracking devices with the consent of the accused, citing reduced administrative costs and rights

Prison Tag कैदियों के लिए ट्रैकिंग टैग

Tracking devices may be used if they help grant bail or free up jail space. ट्रैकिंग डिवाइस का उपयोग किया जा सकता है यदि वे जमानत देने या जेल की जगह खाली करने में मदद करें।

- A suggestion for **electronic tracking of prisoners** on parole or furlough has been mooted as a viable means to decongest prisons.

पैरोल या फर्लो पर छोड़े गए कैदियों की इलेक्ट्रॉनिक ट्रैकिंग का सुझाव जेलों की भीड़ कम करने के एक व्यावहारिक उपाय के रूप में दिया गया है।

- A research report from the **Supreme Court of India's Centre for Research and Planning** suggests a pilot program to track **low or moderate-risk undertrials**.

भारत के सुप्रीम कोर्ट के सेंटर फॉर रिसर्च एंड प्लानिंग की एक रिपोर्ट ने कम या मध्यम जोखिम वाले विचाराधीन कैदियों की ट्रैकिंग के लिए एक पायलट कार्यक्रम का सुझाव दिया है।

- The **Model Prisons and Correctional Services Act, 2023**, includes a provision for granting prison leave if prisoners agree to **wear electronic tracking devices**.

मॉडल जेल और सुधार सेवाएँ अधिनियम, 2023 में यह प्रावधान शामिल है कि कैदियों को इलेक्ट्रॉनिक ट्रैकिंग डिवाइस पहनने की शर्त पर जेल अवकाश दिया जा सकता है।

- Odisha was the **first state** to propose tamper-proof electronic trackers for undertrials accused of non-heinous offences to reduce jail congestion.

ओडिशा पहला राज्य था जिसने गैर-गंभीर अपराधों के आरोपियों के लिए छेड़छाड़-रोधी इलेक्ट्रॉनिक ट्रैकर्स का सुझाव दिया ताकि जेल की भीड़ कम हो।





violations.

संसदीय स्थायी समिति ने आरोपियों की सहमति से किफायती ट्रैकिंग डिवाइस के उपयोग को मंजूरी दी, जिससे प्रशासनिक लागत और अधिकारों के उल्लंघन में कमी हो सके।

- On **December 31, 2022**, the official count of prisoners in Indian jails was **5,73,220**, which is **131.4% of the total capacity**.

31 दिसंबर 2022 को भारतीय जेलों में कैदियों की संख्या **5,73,220** थी, जो **कुल क्षमता के 131.4%** के बराबर है।

- Electronic tagging can ensure that released prisoners do not **approach victims** or enter locations associated with their crimes.

इलेक्ट्रॉनिक टैगिंग यह सुनिश्चित कर सकती है कि रिहा किए गए कैदी पीड़ितों के पास न जाएं या उनके अपराधों से जुड़े स्थानों में प्रवेश न करें।

- **Compact and less visible trackers could reduce the stigma and encourage use among beneficiaries of bail.**

छोटे और कम दिखाई देने वाले ट्रैकर्स कलंक को कम कर सकते हैं और जमानत पाने वालों को इसे इस्तेमाल करने के लिए प्रोत्साहित कर सकते हैं।

- **Privacy concerns were raised earlier this year when bail conditions included sharing location through Google Maps.** However, this does not mean electronic tagging should be outright rejected.

इस वर्ष की शुरुआत में, जमानत की शर्तों में **गूगल मैप्स के माध्यम से स्थान साझा करने पर गोपनीयता की चिंताएं** उठाई गई थीं। हालांकि, इसका मतलब यह नहीं है कि इलेक्ट्रॉनिक टैगिंग को पूरी तरह खारिज कर दिया जाना चाहिए।

- The use of **tracking devices** is common in several countries to monitor offenders, and India can adopt similar measures to reduce prison congestion effectively.

कई देशों में अपराधियों की निगरानी के लिए **ट्रैकिंग डिवाइस** का उपयोग आम है, और भारत जेल की भीड़ को प्रभावी ढंग से कम करने के लिए ऐसे उपाय अपना सकता है।



How India could counter the CBAM

GS Paper III and GS Paper II: Environment and IR

Protectionism is a threat to the collaboration required between the developed and developing world in addressing climate issues. Innovative protectionist ideas, such as the European Union's Carbon Border Adjustment Mechanism (EU-CBAM), the Corporate Sustainability Due Diligence Directive, and the EU Deforestation Regulation, have led to concerns in developing nations. India has criticised the EU-CBAM, in particular, as being "arbitrary".

A 'discriminatory' tool

The CBAM is meant to ensure that imported products bear a carbon emission cost comparable to the cost imposed on goods produced within the EU. Exporters will be mandated to provide information on the quantity and emissions of their goods and buy certificates to match those emissions. The definite phase of the CBAM will enter into force on January 1, 2026. This may pose significant risks to India's international trade. The EU comprises 20.33% of India's total merchandise exports, of which 25.7% are affected by CBAM. During the last five fiscal years, iron and steel have accounted for 76.83% of these exports, followed by aluminium, cement, and fertilizers.

In recent editions of the Conference of the Parties (COPs), India has said that CBAM is "discriminatory" and called on developing countries to establish a coordinated response to what it considers as an unjust transfer of responsibilities. The CBAM is attracting considerable attention at COP29 in Baku. However, under-prepared arguments presented at COP29 could undermine India's credibility as a leading voice of the Global South.

It is important to recognise that not all developing economies share the same economic aspirations as India, nor will they be equally affected by the impacts of climate change. Therefore, perceptions regarding CBAM are



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It is apparent that through CBAM, the EU wants to intimidate non-EU nations into adopting its self-proclaimed position as climate leader

complex even within the developing world. Issues related to multilateral and bilateral trade and cultural ties between developed and developing economies influence the tone of their arguments. The current production-based accounting principle practiced under the United Nations Framework Convention on Climate Change (UNFCCC) includes the emissions resulting from the production of exportable commodities within the emission inventory of the exporting nation. The exporting nation is held accountable for the reduction of these emissions, even though these products are not consumed within its domestic market. As a result, many developing economies with less stringent emission reduction measures are accused of climate change when they export more.

The proposed arguments

Therefore, India's arguments should also align with other developing countries' agenda, if India wishes to speak like a leader. The following could be some of the arguments. First, on the time for preparing for CBAM. With administrative deftness, the EU set a target to reduce greenhouse gas (GHG) emissions by 20% compared to 1990 levels by 2020; this is outlined in the EU Climate Action and Renewable Energy Package in 2008. Following the accomplishment of these targets, the European Green Deal was unveiled in 2019, extending the emission reduction target to 55% below the 1990 levels in a Fit for 55 Package. Does the CBAM offer developing economies a matchable time to adapt?

The second is on empowerment. The EU has decided to keep the revenues generated from the CBAM as its resources, which will be used to fund the NextGenerationEU recovery tool and operate the CBAM. Depending on the mechanism's ultimate design, the anticipated additional money generated by CBAM for 2030 is

estimated to be €5 to €14 billion annually. Is it appropriate for the EU not to share this revenue with non-EU trading partners? Doing so may contribute to capacity building and technology transfer in developing economies.

Third, there is the issue of quantifying emission reduction responsibilities. India can justifiably advocate for an alternative called Equity-based Accounting (EBA) of Nationally Determined Contributions, which emphasises a collective obligation for emission reductions among trade partners based on the ideas of horizontal intra-generational equity and vertical inter-generational equity. In the context of the EU-CBAM, India can introduce the concept of EBA to the developing world concerning retaliation measures. Using the EBA, a formula can be proposed to calculate the tariff base on imports from the EU, which considers factors such as relative per capita GDP, relative per capita emissions, relative gains from trade, and relative avoided emissions through trade. By expressing the actual emissions embedded in imports in a way that reflects the developmental and historical heterogeneities between trade partners, any developing economy can be better positioned under these new rules of the game, which provide an unbiased evaluation of climate initiatives.

Even the PBA adheres to the principle of Common but Differentiated Responsibilities and Respective Capabilities, which is significantly compromised under the CBAM framework. CBAM does not acknowledge compensatory justice or distributive justice. Consequently, the allocation of emission responsibilities is not equitably assigned to countries based on their historical contributions to climate change or their capacity to mitigate its effects. It is apparent that through CBAM, the EU wants to intimidate non-EU nations into adopting its self-proclaimed position as climate leader.





How India Could Counter the CBAM

भारत CBAM का मुकाबला कैसे कर सकता है

- **Protectionism as a threat to climate collaboration:** Protectionism poses challenges to collaboration between developed and developing countries in addressing climate issues. जलवायु सहयोग के लिए संरक्षणवाद एक चुनौती: संरक्षणवाद विकसित और विकासशील देशों के बीच जलवायु समस्याओं के समाधान के प्रयासों में बाधा उत्पन्न करता है।
- **Innovative protectionist measures:** Mechanisms like the **EU's Carbon Border Adjustment Mechanism (CBAM), Corporate Sustainability Due Diligence Directive, and the EU Deforestation Regulation** have raised concerns among developing nations. नवीन संरक्षणवादी उपाय: यूरोपीय संघ के कार्बन बॉर्डर एडजस्टमेंट मैकेनिज्म (CBAM), कॉर्पोरेट सस्टेनेबिलिटी ड्यू डिलिजेंस डायरेक्टिव, और EU वनों की कटाई विनियमन जैसे उपायों ने विकासशील देशों में चिंताएं बढ़ाई हैं।
- **India's criticism of CBAM:** India has termed CBAM "arbitrary" and "discriminatory," arguing that it unfairly transfers responsibility from developed to developing countries. **CBAM की भारत द्वारा आलोचना:** भारत ने CBAM को "मनमाना" और "भेदभावपूर्ण" बताया है, यह तर्क देते हुए कि यह अनुचित रूप से जिम्मेदारी को विकसित देशों से विकासशील देशों पर स्थानांतरित करता है।
- **Purpose of CBAM:** It ensures that imported products bear a **carbon emission cost similar to the cost imposed on goods produced within the EU.** **CBAM का उद्देश्य:** यह सुनिश्चित करना है कि आयातित उत्पादों पर कार्बन उत्सर्जन लागत लगे, जो यूरोपीय संघ में उत्पादित वस्तुओं पर लागू लागत के समान हो।
- **Implementation timeline:** The **definitive phase of CBAM** will begin on **January 1, 2026**, potentially impacting India's trade. **लागू होने की समयसीमा:** CBAM का अंतिम चरण 1 जनवरी, 2026 से शुरू होगा, जो भारत के व्यापार को प्रभावित कर सकता है।
- **Impact on India's exports:** The **EU constitutes 20.33% of India's total merchandise exports, with 25.7% being affected by CBAM.** **भारत के निर्यात पर प्रभाव:** यूरोपीय संघ भारत के कुल माल निर्यात का 20.33% हिस्सा है, जिसमें से 25.7% पर CBAM का प्रभाव पड़ सकता है।
- **Vulnerable sectors:** Over the last five fiscal years, **iron and steel** accounted for **76.83% of CBAM-affected exports, followed by aluminium, cement, and fertilizers.** **संवेदनशील क्षेत्र:** पिछले पांच वित्तीय वर्षों में, **आयरन और स्टील** ने CBAM से प्रभावित निर्यात का 76.83% हिस्सा बनाया है, इसके बाद **एल्यूमीनियम, सीमेंट, और उर्वरक** आते हैं।
- **India's stance at COP:** India has raised concerns at recent **Conference of the Parties (COP)** meetings, calling CBAM "discriminatory" and urging a coordinated response from developing countries.





COP में भारत का रुख: भारत ने हालिया COP बैठकों में CBAM को “भेदभावपूर्ण” बताते हुए विकासशील देशों से समन्वित प्रतिक्रिया की मांग की है।

- **CBAM discussion at COP29:** CBAM is under intense scrutiny at **COP29 in Baku**, but weak arguments could harm India’s credibility as a Global South leader.

COP29 में CBAM पर चर्चा: Baku में COP29 में CBAM पर गहन चर्चा हो रही है, लेकिन कमजोर तर्क भारत की वैश्विक दक्षिण के नेता के रूप में साख को नुकसान पहुंचा सकते हैं।

- **Diverse impact on developing economies:** Developing countries vary in their **economic aspirations** and **vulnerability to climate change**, leading to differing perceptions about CBAM.

विकासशील अर्थव्यवस्थाओं पर विविध प्रभाव: विकासशील देशों के आर्थिक लक्ष्य और जलवायु परिवर्तन के प्रति संवेदनशीलता अलग-अलग होने के कारण CBAM को लेकर अलग-अलग धारणाएं हैं।

- **UNFCC’s production-based accounting:** The **United Nations Framework Convention on Climate Change (UNFCCC)** attributes emissions from exportable goods to the producing nation, even if these goods are not consumed domestically. **UNFCC का उत्पादन-आधारित लेखा-जोखा:** UNFCC निर्यात योग्य वस्तुओं से होने वाले उत्सर्जन को उत्पादक राष्ट्र के खाते में जोड़ता है, भले ही ये वस्तुएं घरेलू बाजार में खपत न की जाएं।
- **Accusations against exporters:** Developing economies with less stringent emission measures face accusations of contributing to climate change due to higher exports. **निर्यातकों पर आरोप:** कम कठोर उत्सर्जन उपायों वाले विकासशील देशों पर उच्च निर्यात के कारण जलवायु परिवर्तन में योगदान देने का आरोप लगाया जाता है।

Proposed Arguments

प्रस्तावित तर्क

Time for Preparing for CBAM

- The **EU set a target** to reduce **greenhouse gas (GHG) emissions by 20%** compared to **1990 levels by 2020** under the **EU Climate Action and Renewable Energy Package (2008)**.
- After achieving this, the **European Green Deal (2019)** extended the target to **55% below 1990 levels** under the **Fit for 55 Package**.
- India could question whether CBAM provides **developing economies** enough time to adapt.
- **CBAM के लिए तैयारी का समय:**
- **EU ने 2008 में EU Climate Action and Renewable Energy Package के तहत 1990 के स्तर की तुलना में 2020 तक GHG उत्सर्जन को 20% कम करने का लक्ष्य निर्धारित किया।**
- इस लक्ष्य के बाद **2019 में यूरोपीय ग्रीन डील ने इसे 1990 के स्तर से 55% नीचे ले जाने का लक्ष्य रखा।**
- भारत सवाल कर सकता है कि क्या CBAM **विकासशील अर्थव्यवस्थाओं को अनुकूलन के लिए पर्याप्त समय प्रदान करता है।**





Empowerment through Revenue Sharing

- The **EU plans to use CBAM revenues** to fund **NextGenerationEU recovery tools** and operate the mechanism.
- By **2030**, CBAM is expected to generate **€5–€14 billion annually**.
- India could argue whether it is **fair for the EU to retain these funds** instead of sharing them with **non-EU trading partners** for **capacity building and technology transfer** in developing economies.
- **राजस्व साझाकरण के माध्यम से सशक्तिकरण:**
- **EU CBAM के राजस्व को NextGenerationEU पुनर्प्राप्ति उपकरण और संचालन के लिए उपयोग करने की योजना है।**
- **2030 तक**, CBAM से **€5-€14 अरब प्रति वर्ष** उत्पन्न होने की संभावना है।
- भारत यह तर्क दे सकता है कि क्या यह उचित है कि **EU इन निधियों को रखे** बजाय उन्हें **विकासशील अर्थव्यवस्थाओं में क्षमता निर्माण और प्रौद्योगिकी हस्तांतरण के लिए साझा करे।**

Quantifying Emission Reduction Responsibilities

- India can advocate for **Equity-based Accounting (EBA)** for **Nationally Determined Contributions (NDCs)**, focusing on **horizontal intra-generational equity and vertical inter-generational equity**.
- A formula under EBA could calculate tariffs based on factors like **relative per capita GDP, relative per capita emissions, and relative avoided emissions through trade**.
- **उत्सर्जन कटौती जिम्मेदारियों को मापना:**
- भारत **Equity-based Accounting (EBA)** की वकालत कर सकता है जो **राष्ट्रीय स्तर पर निर्धारित योगदान (NDCs) को क्षैतिज अंतःपीढ़ीगत समानता और ऊर्ध्वाधर अंतःपीढ़ीगत समानता पर केंद्रित करता है।**
- **EBA के तहत एक सूत्र का उपयोग सापेक्ष प्रति व्यक्ति GDP, सापेक्ष प्रति व्यक्ति उत्सर्जन, और व्यापार के माध्यम से टाले गए उत्सर्जन जैसे कारकों पर आधारित टैरिफ की गणना के लिए किया जा सकता है।**
- **Adherence to Common but Differentiated Responsibilities**
- **CBAM undermines the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) by not recognizing compensatory and distributive justice.**
- The EU does not allocate emission responsibilities equitably based on **historical contributions or mitigation capacity**.
- **सामान्य लेकिन विभेदित जिम्मेदारियों के प्रति प्रतिबद्धता:**
- CBAM **CBDR-RC सिद्धांत को कमजोर करता है** क्योंकि यह **प्रतिपूरक और वितरणात्मक न्याय को नहीं मानता।**
- **EU उत्सर्जन जिम्मेदारियों को ऐतिहासिक योगदान या शमन क्षमता के आधार पर समान रूप से आवंटित नहीं करता।**
- **EU's Intimidation Tactics**





- Through CBAM, the EU aims to position itself as a **climate leader**, coercing non-EU nations into compliance without acknowledging **developmental and historical differences**.
- **EU की डराने की रणनीति:**
- CBAM के माध्यम से, **EU स्वयं को एक जलवायु नेता के रूप में स्थापित करना चाहता है और गैर-EU देशों को विकासात्मक और ऐतिहासिक भिन्नताओं को स्वीकार किए बिना अनुपालन के लिए मजबूर करता है।**

The dangers of high-altitude sickness

How does high-altitude sickness occur? How will a mandatory registration system for tourists visiting the Himalayas improve measures to tackle the illness? How can the sickness be treated? What are some preventive measures one can take before embarking on scaling the Himalayas?

GS Paper III: Basic Science

EXPLAINER

Tikender Singh Panwar
Malay Sarkar

The story so far:

In September, a trekker from Idukki, Kerala, died in Uttarakhand while attempting to scale Garur Peak due to respiratory failure. Every year, numerous tourists like this succumb to the effects of high-altitude sickness in the pristine but challenging inner Himalayas. These regions present hidden dangers due to their extreme altitudes, where thinner air and reduced oxygen can lead to potentially fatal conditions.

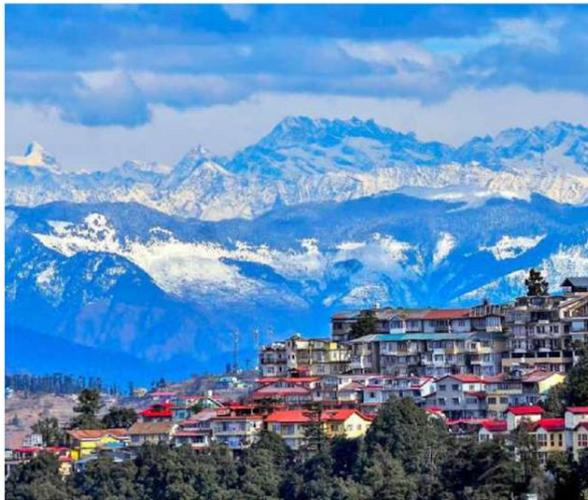
What is high-altitude sickness?

High-altitude sickness, or Acute Mountain Sickness (AMS), occurs when the body cannot acclimatise to high elevations, typically over 8,000 feet (2,400 metres). As altitude increases, the air pressure and oxygen levels decrease, leading to hypoxia – a shortage of oxygen in the body's tissues. Early symptoms of AMS include headache, nausea, fatigue, and shortness of breath. If left untreated, it can escalate into high-altitude pulmonary edema (HAPE), a life-threatening condition where fluid accumulates in the lungs, or high-altitude cerebral edema (HACE), where fluid collects in the brain. Both conditions require immediate medical intervention, and descent to lower altitudes is often the only way to prevent fatal outcomes.

At higher altitudes, the body tries to adjust by increasing the breathing rate, which can cause hyperventilation, and produce more red blood cells to carry oxygen, which thickens the blood and strains the heart. In cases of HAPE, fluid accumulation in the lungs exacerbates breathing difficulties, while HACE causes symptoms like confusion, hallucinations, and even coma.

What are the infrastructural issues?

While the Himalayan States witness a



Adequate precautions: A view of the snow covered Himalayas mountain range, as seen from Shimla, on January 7, 2022. PTI

steady stream of tourists, healthcare facilities beyond major towns like Shimla are inadequate to handle cases of high-altitude sickness. Leh, in the Union Territory of Ladakh, serves as a model, having developed specialised facilities for high-altitude ailments. Yet, most high-altitude regions lack this kind of infrastructure. Immediate and preventive health measures are also lacking. Basic preventive screenings or health checks at entry points for tourists venturing into high-altitude areas could save lives. Such protocols could mirror the erstwhile "Inner Line Permit" system, whereby tourists entering high-altitude zones such as Kinnaur or Lahaul-Spiti undergo screenings at base hospitals.

What about a registration system?

To better manage high-altitude tourism, it

is essential to implement a mandatory registration system for tourists entering remote mountain areas. Registrations, stored in a State government database, would allow authorities to monitor tourist movement and respond swiftly in case of emergencies. Such records would also support research on high-altitude illnesses by tracking demographic patterns and risk factors, helping scientists better understand how altitude impacts various populations.

What about early intervention?

The primary cause of high-altitude sickness is rapid ascent without allowing the body time to acclimatise. Gradual ascent, which allows the body to adapt to lower oxygen levels, is the best way to prevent high-altitude illnesses. According to the Wilderness Medical Society,

travellers ascending above 3,000 meters should take a rest day every 3-4 days and avoid increasing their sleeping elevation by more than 500 metres per day.

For travellers at moderate to high risk of AMS, doctors recommend medications like Acetazolamide, which aids acclimatisation by promoting better oxygenation, or Dexamethasone, a steroid that reduces inflammation in severe cases. Those with a history of HAPE may take Nifedipine as a preventive measure, starting a day before ascent. However, no prophylactic medication guarantees complete immunity, and anyone travelling to high altitudes with pre-existing health conditions should first consult with a doctor familiar with altitude-related risks.

What are the treatment strategies?

When high-altitude sickness does develop, the most effective treatment is immediate descent to lower altitudes. Symptoms usually improve significantly with a descent of 300-1,000 metres. Supplemental oxygen or a portable hyperbaric chamber, if available, can also help alleviate symptoms of AMS and HACE in emergencies. Pharmacological treatments, such as acetazolamide and dexamethasone, may provide short-term relief, but descent remains the cornerstone of treatment.

What are some policy proposals?

The following steps are recommended – establish state-of-the-art medical facilities in high-altitude regions of the Himalayas; create research centres dedicated to studying high-altitude illnesses; equip Himalayan States with air-ambulance services for rapid medical evacuation in emergencies; and provide health and safety information on government websites and at check-in points.

Tikender Singh Panwar is former deputy mayor of Shimla and is working in the Himalayan region for sustainable development. Dr. Malay Sarkar is Head of the Department of Pulmonary Medicine, IGMC, Shimla

THE GIST

While the Himalayan States witness a steady stream of tourists, healthcare facilities beyond major towns like Shimla are inadequate to handle cases of high-altitude sickness.

The primary cause of high-altitude sickness is rapid ascent without allowing the body time to acclimatise. Gradual ascent, which allows the body to adapt to lower oxygen levels, is the best way to prevent high-altitude illnesses.

To better manage high-altitude tourism, it is essential to implement a mandatory registration system for tourists entering remote mountain areas.

The Dangers of High-Altitude Sickness

ऊंचाई पर बीमारी के खतरे





- **How does high-altitude sickness occur?**

High-altitude sickness, also known as Acute Mountain Sickness (AMS), occurs when the **body fails to acclimatize to high altitudes, typically above 8,000 feet (2,400 meters)**. When altitude increases, **air pressure and oxygen levels decrease, leading to hypoxia, which is a shortage of oxygen in the body's tissues.**

उंचाई पर बीमारी कैसे होती है?

उंचाई पर बीमारी, जिसे **अक्यूट माउंटेन सिकनेस (AMS)** भी कहा जाता है, तब होती है जब शरीर उच्च उंचाई पर अनुकूलित होने में विफल रहता है, सामान्यतः **8,000 फीट (2,400 मीटर)** से ऊपर।

जैसे-जैसे उंचाई बढ़ती है, **वायुमंडलीय दबाव और ऑक्सीजन स्तर घट जाते हैं**, जिससे **हाइपोक्सिया** होती है, जो शरीर के ऊतकों में ऑक्सीजन की कमी है।

- **Early symptoms of AMS**

The initial symptoms of AMS include **headache, nausea, fatigue, and shortness of breath.**

If untreated, it can progress to **High-Altitude Pulmonary Edema (HAPE), where fluid accumulates in the lungs, or High-Altitude Cerebral Edema (HACE), where fluid collects in the brain.**

AMS के प्रारंभिक लक्षण

AMS के प्रारंभिक लक्षणों में **सिरदर्द, उल्टी, थकान, और सांस लेने में कठिनाई** शामिल हैं।

यदि इलाज न किया जाए, तो यह **हाई-एल्टीट्यूड पल्मोनरी एडिमा (HAPE)** में बदल सकता है, जहां फेफड़ों में तरल पदार्थ जमा हो जाता है, या **हाई-एल्टीट्यूड सेरेब्रल एडिमा (HACE)**, जहां मस्तिष्क में तरल पदार्थ जमा हो जाता है।

- **Progression of AMS**

If left untreated, AMS can lead to **HAPE or HACE**, both of which are **life-threatening conditions** that require **immediate medical intervention.**

Descent to lower altitudes is often the only way to prevent fatal outcomes.

AMS की प्रगति

यदि इलाज न किया जाए, तो AMS **HAPE** या **HACE** में बदल सकता है, जो दोनों **जीवन-धातक स्थितियाँ** हैं और इसके लिए **तत्काल चिकित्सा हस्तक्षेप** की आवश्यकता होती है।

मृत्यु दर से बचने के लिए **निची उंचाई पर उतरना** अक्सर एकमात्र तरीका है।

- **Infrastructural issues in high-altitude regions**

Many high-altitude areas lack adequate **healthcare facilities** to deal with high-altitude sickness.

Leh in Ladakh serves as a model, with specialized facilities for high-altitude ailments, but most other high-altitude regions lack such infrastructure.

उंचाई वाले क्षेत्रों में अवसंरचनात्मक समस्याएँ

कई उंचाई वाले क्षेत्रों में उंचाई पर बीमारी से निपटने के लिए पर्याप्त **स्वास्थ्य देखभाल सुविधाएँ** नहीं हैं।

लेह, जो लद्दाख में है, एक आदर्श के रूप में कार्य करता है, जिसमें उंचाई पर बीमारियों के लिए **विशिष्ट सुविधाएँ** हैं, लेकिन अधिकांश अन्य उंचाई वाले क्षेत्रों में ऐसी सुविधाएँ नहीं हैं।

- **Lack of preventive health measures**

There is a lack of **preventive screenings or health checks** for tourists entering high-





altitude areas. Implementing protocols similar to the **Inner Line Permit system** could help save lives.

रोकथाम स्वास्थ्य उपायों की कमी

ऊंचाई वाले क्षेत्रों में जाने वाले पर्यटकों के लिए **रोकथाम स्क्रीनिंग** या **स्वास्थ्य जांच** की कमी है। **Inner Line Permit प्रणाली** जैसी प्रक्रियाएँ लागू करने से जीवन बचाने में मदद मिल सकती है।

- **Benefits of a mandatory registration system for tourists**

A mandatory registration system can ensure **preventive health checks** for tourists visiting high-altitude areas. It can help identify **high-risk individuals** before they venture into remote Himalayan regions.

पर्यटकों के लिए अनिवार्य पंजीकरण प्रणाली के लाभ

एक अनिवार्य पंजीकरण प्रणाली यह सुनिश्चित कर सकती है कि ऊंचाई वाले क्षेत्रों में यात्रा करने वाले पर्यटकों के लिए **रोकथाम स्वास्थ्य जांच** की जाए। यह **उच्च जोखिम वाले व्यक्तियों** की पहचान करने में मदद कर सकती है, इससे पहले कि वे दूरदराज के हिमालयी क्षेत्रों में जाएं।

- **Treatment for high-altitude sickness**

Treatment often involves **descend** to lower altitudes. Medical interventions like **oxygen therapy**, **medications for swelling**, and **hydration** are used to treat AMS, HAPE, or HACE.

ऊंचाई पर बीमारी का इलाज

इलाज में अक्सर **निची ऊंचाई पर उतरना** शामिल होता है। **ऑक्सीजन थरेपी**, **सूजन के लिए दवाएं**, और **हाइड्रेशन** जैसे चिकित्सा उपाय AMS, HAPE, या HACE के इलाज के लिए उपयोग किए जाते हैं।

- **Preventive measures before scaling the Himalayas**

To prevent high-altitude sickness, trekkers should **acclimatize slowly**, **stay hydrated**, **avoid overexertion**, and **consider medications like acetazolamide**.

हिमालय को चढ़ने से पहले रोकथाम के उपाय

ऊंचाई पर बीमारी से बचने के लिए, ट्रेकरों को **धीरे-धीरे अनुकूलित** करना चाहिए, हाइड्रेटेड रहना चाहिए, अधिक मेहनत से बचना चाहिए, और दवाओं जैसे **एसीटाजोलामाइड** पर विचार करना चाहिए।

A Registration System for High-Altitude Tourism

- Implement a **mandatory registration system** for tourists entering **remote mountain areas**.
- पंजीकरण प्रणाली लागू करें जो **दूरदराज के पहाड़ी क्षेत्रों** में जाने वाले पर्यटकों के लिए **अनिवार्य** है।
- **Registrations**, stored in a **State government database**, would allow authorities to monitor **tourist movement** and respond swiftly in case of **emergencies**.
- **पंजीकरण**, जो **राज्य सरकार के डेटाबेस** में संग्रहीत होंगे, अधिकारियों को **पर्यटकों की गतिविधियों** पर निगरानी रखने और **आपातकाल** की स्थिति में त्वरित प्रतिक्रिया देने में सक्षम बनाएंगे।
- Such records would support **research on high-altitude illnesses** by tracking **demographic patterns** and **risk factors**.





- इस प्रकार के रिकॉर्ड उंचाई से संबंधित बीमारियों पर शोध का समर्थन करेंगे, जो जनसांख्यिकी पैटर्न और जोखिम कारकों को ट्रैक करके वैज्ञानिकों को यह समझने में मदद करेंगे कि उंचाई विभिन्न जनसंख्याओं पर कैसे प्रभाव डालती है।

Early Intervention for High-Altitude Sickness

- The **primary cause of high-altitude sickness is rapid ascent without allowing the body time to acclimatize.**
- उंचाई पर बीमारी का मुख्य कारण तेज़ी से चढ़ाई करना है, जिससे शरीर को अनुकूलित होने का समय नहीं मिलता।
- **Gradual ascent**, allowing the body to adapt to **lower oxygen levels**, is best to prevent high-altitude illnesses.
- **धीमी चढ़ाई**, जो शरीर को **कम ऑक्सीजन स्तर** के अनुकूल होने का समय देती है, उंचाई पर बीमारियों को रोकने का सबसे अच्छा तरीका है।
- Travellers ascending above **3,000 meters** should take a **rest day** every **3-4 days**.
- **3,000 मीटर** से ऊपर चढ़ाई करने वाले यात्रियों को हर **3-4 दिनों में एक विश्राम दिन** लेना चाहिए।
- Medications like **Acetazolamide** or **Dexamethasone** are recommended for those at **moderate to high risk** of AMS.
- मध्यम से उच्च जोखिम वाले लोगों के लिए **एसीटाजोलामाइड** या **डेक्सामेथासोन** जैसी दवाएं की सलाह दी जाती हैं।
- People with a history of **HAPE** may take **Nifedipine** as a preventive measure.
- **HAPE** के इतिहास वाले लोग एक **निवारक उपाय** के रूप में **निफेडिपाइन** ले सकते हैं।

Treatment Strategies for High-Altitude Sickness

- **Immediate descent** to lower altitudes is the most effective treatment for high-altitude sickness.
- उंचाई पर बीमारी का सबसे प्रभावी उपचार है **तुरंत निचली उंचाई पर उतरना**।
- Symptoms improve significantly with a **descent of 300-1,000 meters**.
- लक्षण आमतौर पर **300-1,000 मीटर** की उंचाई कम करने से महत्वपूर्ण रूप से सुधरते हैं।
- **Supplemental oxygen** or a **portable hyperbaric chamber** can help in emergencies.
- **पूरक ऑक्सीजन** या एक **पोर्टेबल हाइपरबैरिक चेम्बर** आपातकालीन स्थिति में मदद कर सकता है।
- **Pharmacological treatments** like **Acetazolamide** and **Dexamethasone** may provide short-term relief.
- **फार्माकोलॉजिकल उपचार** जैसे **एसीटाजोलामाइड** और **डेक्सामेथासोन** अल्पकालिक राहत दे सकते हैं।
- **Descent** remains the cornerstone of treatment.
- उपचार का आधार **निचली उंचाई पर उतरना** है।

Policy Proposals for High-Altitude Health and Safety

- Establish **state-of-the-art medical facilities** in high-altitude regions of the **Himalayas**.
- **हिमालय** के उंचाई वाले क्षेत्रों में **अत्याधुनिक चिकित्सा सुविधाओं** की स्थापना करें।





- Create **research centres** for studying high-altitude illnesses.
- ऊंचाई पर बीमारियों के अध्ययन के लिए **अनुसंधान केंद्र** स्थापित करें।
- Equip states with **air-ambulance services** for rapid medical evacuation.
- राज्यों को **आपातकालीन चिकित्सा निकासी** के लिए **वायु-एंबुलेंस सेवाओं** से लैस करें।
- Provide **health and safety information** on **government websites** and at **check-in points**.
- **सरकारी वेबसाइटों** और **चेक-इन बिंदुओं** पर **स्वास्थ्य और सुरक्षा की जानकारी** प्रदान करें।

Is imposing tariffs on Chinese imports a good idea?

What will be the impact of the move on the U.S. economy as well as the Chinese economy? Will the imposition of such tariffs trigger another global trade war?

GS Paper III: External Sector

The story so far:

Donald Trump, the President-elect of the U.S., has promised to impose tariffs of up to 60% on Chinese imports to correct the huge trade deficit the U.S. has with China and also as a punitive measure to make China reduce the subsidisation of its domestic production, which make Chinese goods cheaper and attractive to American consumers as compared to locally produced American goods. He has also threatened to impose 10% import tariffs on imports from European Union.

What will be the impact?

The imposition of tariffs by the U.S. will raise the domestic price of such products in U.S. markets. If the tariffs are across the board and cover a large part of consumer

goods sold in the U.S., then it will increase domestic inflation. However, if it helps to reduce the overall trade deficit of the U.S., it may improve the value of the U.S. dollar and moderate domestic inflation. If the tariffs shift consumption away from Chinese goods and other imported goods, it will boost domestic production and increase domestic supply of consumer goods and help moderate inflation.

However, if China and other countries which are threatened by U.S. tariffs, respond with appropriate tariffs of their own on American goods, triggering another round of global trade wars, the intended policy impact of the action on the trade balance between the U.S. and its major trading partners, may not materialise to the desired extent.

On the contrary, it could have a debilitating impact on global commodity prices, and worsen inflation in most countries.

How will it materially translate?

Consider the following hypothetical example: Assume a shirt costs 724 Chinese yuan in China and is sold in the U.S. market for a \$100, based on the current U.S. dollar-Chinese yuan exchange rate of \$1:CN¥7.24. Let us also assume, that the same shirt can be supplied by U.S. manufacturers domestically for \$105 or 760.2 Chinese yuan. Since they are overpriced, Chinese producers capture the U.S. market and set the domestic price of a shirt in the U.S. at \$100. At this price, U.S. producers are unable to compete with Chinese producers in supplying U.S. markets.

Now if the U.S. imposes a 10% import tariff on imported Chinese shirts, under its America First policy, the price of a shirt in the American market will rise to \$110 or 796.4 Chinese yuan, based on the above-mentioned dollar-yuan exchange rate. At 796.4 yuan per shirt, Chinese

imports are no longer attractive to American buyers. The American producers are happy as they make a profit of \$5 as their cost of producing a shirt is \$105 while the tariff-inclusive price in the U.S. market is \$110. The Chinese exporters will have to bear the 10% import tariff on their exports, which in Chinese currency is equal to 72.4 yuan at the prevailing Dollar-Yuan exchange rate. If the Chinese government decides to support its textile exporters, it can adopt any one of the following policy measures: provide a State subsidy of 72.4 Yuan per shirt; devalue the yuan by 10%; or lower its Central Bank interest rate and increase stimulus spending in the economy, so that the dollar-yuan exchange rate depreciates by 10% to reach \$1 equals 7.964 yuan.

At this exchange rate, the Chinese garment exporters will receive 796.4 Chinese yuan per shirt, pay the U.S. import tax of 72.4 Chinese yuan and retain 724 Chinese yuan per shirt as their export earnings, the amount they got per shirt prior to the 10% import tariff. The risk to the Chinese economy could be in the form of a rise in its domestic rate of inflation due to a devalued or depreciating currency. But if these policy interventions help in boosting domestic production and exports, the risk may be offset by increased GDP growth.

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Is Imposing Tariffs on Chinese Imports

चीनी आयातों पर शुल्क लगाना

On March 9, 2022, President-elect Donald Trump promised to impose tariffs of up to 60% on Chinese imports to correct the trade deficit between the U.S. and China.

9 मार्च 2022 को राष्ट्रपति-निर्वाचित डोनाल्ड ट्रंप ने अमेरिका और चीन के बीच व्यापार घाटे को ठीक करने के लिए चीनी आयातों पर 60% तक शुल्क लगाने का वादा किया।

- He also threatened to impose a **10% import tariff** on goods imported from the **European Union**.
उन्होंने यूरोपीय संघ से आयात किए गए सामान पर **10% आयात शुल्क** लगाने की भी धमकी दी।
- Imposing tariffs will raise the domestic price of such goods in the U.S. market.
शुल्क लगाने से अमेरिकी बाजार में ऐसे सामान की घरेलू कीमत बढ़ जाएगी।
- If the tariffs cover a large portion of consumer goods, it could result in an increase in **domestic inflation** in the U.S.
यदि ये शुल्क उपभोक्ता सामान के एक बड़े हिस्से पर लागू होते हैं, तो इससे अमेरिका में **घरेलू महंगाई** में वृद्धि हो सकती है।
- Shifting consumption away from Chinese goods could boost **domestic production** and supply of U.S. goods.
चीनी सामान से उपभोग का बदलाव **घरेलू उत्पादन** और अमेरिकी सामान की आपूर्ति को बढ़ावा दे सकता है।
- If other countries retaliate with tariffs on U.S. goods, it may trigger a **global trade war**.
यदि अन्य देश अमेरिकी सामान पर शुल्क लगाकर जवाबी कार्रवाई करते हैं, तो इससे **वैश्विक व्यापार युद्ध** शुरू हो सकता है।

Hypothetical Example

काल्पनिक उदाहरण

- Assume a shirt costs **724 Chinese yuan** in China and is sold for **\$100** in the U.S., based on the exchange rate of **\$1 = CN¥7.24**.
मान लीजिए कि एक शर्ट चीन में **724 चीनी युआन** में बिकती है और अमेरिका में **\$100** में बिकती है, विनिमय दर **\$1 = CN¥7.24** के आधार पर।
- U.S. manufacturers supply the same shirt for **\$105** or **760.2 Chinese yuan**, making the Chinese shirt more attractive in the U.S.
अमेरिकी निर्माता वही शर्ट **\$105** या **760.2 चीनी युआन** में आपूर्ति करते हैं, जिससे अमेरिका में चीनी शर्ट अधिक आकर्षक हो जाती है।





- If a **10% import tariff** is imposed, the shirt's price in the U.S. market rises to **\$110** or **796.4 Chinese yuan**.
यदि **10% आयात शुल्क** लगाया जाता है, तो शर्ट की कीमत अमेरिकी बाजार में **\$110** या **796.4 चीनी युआन** हो जाएगी।
- At this price, Chinese goods become less attractive to U.S. consumers, benefiting U.S. producers who can now sell shirts for **\$110**.
इस कीमत पर, चीनी सामान अमेरिकी उपभोक्ताओं के लिए कम आकर्षक हो जाते हैं, और अमेरिकी उत्पादक अब **\$110** में शर्ट बेच सकते हैं।
- Chinese exporters will bear the **10% tariff**, which is **72.4 yuan** at the current exchange rate.
चीनी निर्यातकों को **10% शुल्क** का भुगतान करना होगा, जो वर्तमान विनिमय दर पर **72.4 युआन** होता है।
- China could offset the tariff by providing a **subsidy of 72.4 yuan** per shirt or devaluing the yuan by **10%**.
चीन शुल्क को संतुलित करने के लिए प्रति शर्ट **72.4 युआन** की सब्सिडी दे सकता है या युआन को **10%** कम कर सकता है।
- By devaluing the yuan, China could maintain its export earnings of **724 Chinese yuan** per shirt.
युआन का अवमूल्यन करने से, चीन प्रति शर्ट **724 चीनी युआन** की निर्यात आय बनाए रख सकता है।
- However, this could result in **domestic inflation** in China due to a depreciated currency.
हालांकि, इससे चीन में अवमूल्यन मुद्रा के कारण घरेलू महंगाई बढ़ सकती है।





AFP

If diamonds and pencils are made out of carbon, how is it that pencils can write?

When you write using a pencil, you are sliding the core of the pencil on paper. In the process, you're forcing the carbon atoms of the pencil to slide on the atoms of the paper. If you use a diamond on paper, the atoms of the material are so tightly bound they have absolutely no interest in leaving

GS Paper III: S&T

Adhip Agarwala

“Can I get a pencil?”
“Yes of course,” and the lady at the counter hands me a cigarette.

I awkwardly resist and say “I actually do need a pencil.” She judges me a bit and hands me one, probably wondering why an adult might need this. As it turns out, ‘pencil’ is one of many words young adults use to refer to cigarettes, which is unfortunate because a pencil should just mean a pencil.

While tables and smartphones are all the fad, some of us still prefer the pencil. They are a technological marvel and very resourceful. They can help push in electrical sockets, keep your teeth fit (if you chew on them), and punch open a food packet. And of course they can help you write.

Each pencil has a black-grey core surrounded by wood. When you sharpen the pencil, the core becomes more exposed, and the pencil can write better.

We regularly use pens to write but they have a thick liquid ink inside. This is essentially a coloured liquid that flows like any other liquid, be it water or oil. Since it flows on paper and has a colour, it leaves its footprints behind as it flows, and in this way pens write. But the core of a pencil is solid, like a metal spoon. If we move a steel spoon on paper, no amount of metal spills on the paper.

How then does a pencil write?

Carbon and its phases

The core of the pencil is made of carbon – the same carbon most of us are

primarily made of. Carbon is one of the most common elements on our planet. It can come in different phases and forms.

In ambient conditions, water is a liquid. When it's hotter, it becomes vapour, a gas. When it's cold enough, it becomes a solid called ice. These phases of matter have completely different properties. You could sit (with some inconvenience) on a block of ice but you shouldn't risk sitting on a pool of water. Yet both are made of the same molecules of hydrogen and oxygen: H₂O. The difference is in how these molecules connect to each other.

Similarly, when carbon atoms are arranged and stacked in different ways, they have completely different properties. Imagine each carbon atom has four hands. Each hand is a restless electron. If the hand forms a bond with another carbon, the atoms share the electron and it becomes calmer. In this way, if the carbon atoms arrange themselves in the form of an Egyptian pyramid-like structure, they form a diamond.

Diamonds are shiny, transparent, and the hardest material known in nature. This is why it's often used to cut other metals. No wonder diamonds are expensive and, for no fault of their own, often confused with expressions of love. The real magic lies with the carbon in a pencil.

Graphite and sandwiches

Pencil cores are made of carbon, too, but a different form called graphite.

Unlike in diamonds, the carbon atoms in graphite are arranged in sheets, like slices of bread in a sandwich. Each layer

contains carbon atoms connected to each other with three hands – that's a very strong bond. However, the bonds between sheets are weak. Each layer in this arrangement is called graphene.

When graphene is stacked in multiple layers, it creates graphite – which is at the core of a pencil.

If you like, imagine the pencil's core to be a tower of your favourite sandwich, containing millions of layers of bread with some cheese, patties, and/or sauce in between. If both graphite and diamond are made of carbon atoms, why can't we write with diamonds?

Writing by sliding

When you write using a pencil, you are sliding the core of the pencil on paper. In the process, you're forcing the carbon atoms of the pencil to slide on the atoms of the paper.

If you slide a hard material like diamond or a steel spoon on paper, the atoms of the material are so tightly bound to each other they have absolutely no interest in leaving and moving to the surface of the paper.

But something amazing happens when you slide graphite. Graphite has layers of graphene. And just as it is slightly harder to remove a slice of bread from the middle of the sandwich than from the top, sliding graphite on paper sloughs off graphene-like layers onto the paper.

This is how scientists first discovered graphene, too. They stuck cellophane tape on graphite and then ripped it off. When they looked at the tape under a microscope, they found thin layers of carbon stuck to it, i.e. graphene.

As you go on wiggling the pencil, more and more layers of carbon come off. Each of these layers is black and shiny and is readily apparent to the human eye.

This is how a pencil can write even though it lacks liquid ink.

Condensed matter physics

Carbon atoms arranged in one way behave so differently from when they're arranged in a different way – even though each carbon atom itself behaves the same way. Diamond is whitish transparent while graphite is shiny and black. These differences arise based on how the electrons the carbon atoms share behave even though, again, all electrons are the same.

The underlying physics here is similar to why birds form patterns in the evening sky or how even humans behave so differently when they are in large groups. We may not be able to predict the behaviour of even a single bird or a person in general, but when they get together, they can acquire altogether new behaviours. The same is true for cars in traffic and ants in a colony.

This field of study is called condensed matter physics. If you want to explore it more, consider taking an undergraduate degree in physics.

And the next time you have some time to spare on a casual evening, consider getting yourself a pencil. Sharpen it well and sketch. As you find your lines shaping up your thoughts, don't forget to thank those hundreds of carbon atoms selflessly sliding off at your will.

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If diamonds and pencils are made out of carbon, how is it that pencils can write?

अगर हीरे और पेंसिल कार्बन से बने हैं, तो पेंसिल कैसे लिख सकती है?

When you write using a pencil, you are sliding the core of the pencil on paper. In the process, you're forcing the carbon atoms of the pencil to slide on the atoms of the paper. If you use a diamond on paper, the atoms of the material are so tightly bound they have absolutely no interest in leaving

जब आप पेंसिल से लिखते हैं, तो आप पेंसिल के कोर को कागज़ पर खिसकाते हैं। इस प्रक्रिया में, आप पेंसिल के कार्बन परमाणुओं को कागज़ के परमाणुओं पर फिसलने के लिए मजबूर कर रहे हैं। अगर आप कागज़ पर हीरे का इस्तेमाल करते हैं, तो पदार्थ के परमाणु इतने कसकर बंधे होते हैं कि उन्हें बाहर निकलने में कोई दिलचस्पी नहीं होती।

The Pencil and Its Magic

पेंसिल और इसका जादू

- A person asks for a **pencil** but gets handed a **cigarette** instead, as "pencil" is sometimes used as slang for **cigarettes**.
एक व्यक्ति पेंसिल मांगता है लेकिन उसे इसके बदले सिगरेट दे दी जाती है, क्योंकि "पेंसिल" कभी-कभी सिगरेट के लिए स्लैंग के रूप में इस्तेमाल होती है।
- **Pencils** are simple yet versatile objects. They can be used for many tasks like pushing electrical sockets, helping with oral hygiene (if chewed), or opening food packets. Most importantly, they help us **write**.
पेंसिल साधारण होते हुए भी बहुपरकारी वस्तु है। इन्हें कई कार्यों के लिए उपयोग किया जा सकता है, जैसे इलेक्ट्रिकल सॉकेट में दबाना, मुँह की सफाई में मदद करना (यदि चबाए जाएं), या खाद्य पैकेट खोलने में। सबसे महत्वपूर्ण बात यह है कि ये हमें लिखने में मदद करती हैं।
- The **core** of a pencil is made of **carbon**, surrounded by wood. When sharpened, the core is exposed, improving the pencil's writing ability.
पेंसिल का कोर कार्बन से बना होता है, जिसे लकड़ी से घेरा जाता है। जब इसे शार्प किया जाता है, तो कोर का खुलासा होता है, जिससे पेंसिल की लेखन क्षमता में सुधार होता है।
- Pens have liquid ink that flows on paper and leaves color, whereas the pencil's solid core does not spill any material when moved on paper.





पेन में तरल स्याही होती है जो कागज पर बहती है और रंग छोड़ती है, जबकि पेंसिल का ठोस कोर कागज पर घिसते समय कोई सामग्री नहीं छोड़ता।

- Carbon, the material of the pencil core, can exist in **different phases** and forms, just like water changes between **liquid, vapor, and solid** states.

पेंसिल के कोर की सामग्री **कार्बन, विभिन्न रूपों** और अवस्थाओं में हो सकती है, ठीक वैसे ही जैसे पानी **तरल, वाष्प, और ठोस** अवस्थाओं में बदलता है।

- Carbon atoms have **four electrons** (like four hands) that form bonds with other carbon atoms, changing the material's properties.

कार्बन परमाणुओं में **चार इलेक्ट्रॉन्स** होते हैं (जैसे चार हाथ), जो अन्य कार्बन परमाणुओं के साथ बंधन बनाते हैं, जिससे पदार्थ की गुणधर्म बदल जाती है।

- When carbon atoms are arranged in a specific pattern, such as in a **diamond**, they form a material that is transparent, shiny, and the hardest natural substance known.

जब कार्बन परमाणु एक विशिष्ट पैटर्न में व्यवस्थित होते हैं, जैसे **हीरा** में, तो यह एक ऐसा पदार्थ बनाते हैं जो पारदर्शी, चमकदार और प्रकृति में सबसे कठोर पदार्थ होता है।

- The magic of **pencil** lies in the carbon used in its core, which has properties different from its other forms like diamonds.

पेंसिल का जादू उसके कोर में उपयोग किए गए कार्बन में निहित है, जिसकी गुणधर्म हीरे जैसे अन्य रूपों से भिन्न होते हैं।

Graphite and Sandwiches

ग्रेफाइट और सैंडविच

- Pencil cores are made of **graphite**, a different form of **carbon**. The carbon atoms in graphite are arranged in **sheets**, like slices of bread in a sandwich.

पेंसिल के कोर **ग्रेफाइट** से बने होते हैं, जो **कार्बन** का एक अलग रूप है। ग्रेफाइट में कार्बन परमाणु **परतों** में व्यवस्थित होते हैं, जैसे सैंडविच में रोटी के टुकड़े।

- Each layer in graphite contains **strong bonds** between carbon atoms, but the bonds between layers are **weak**.

ग्रेफाइट में प्रत्येक परत में कार्बन परमाणुओं के बीच **मजबूत बंधन** होते हैं, लेकिन परतों के बीच **कमजोर बंधन** होते हैं।

- When graphene layers are stacked together, they form **graphite**, which is used in pencils.

जब ग्रेफीन की परतें एक साथ रखी जाती हैं, तो वे **ग्रेफाइट** बनाती हैं, जिसका उपयोग पेंसिल में किया जाता है।

- Imagine the pencil's core as a **sandwich tower** with layers of bread (graphene) and fillings (like cheese, patties, or sauce).

पेंसिल के कोर की कल्पना एक **सैंडविच टावर** के रूप में करें, जिसमें ब्रेड की परतें (ग्रेफीन) और बीच में फिलिंग्स (जैसे पनीर, पैटीज या सॉस) होती हैं।

- Despite graphite and diamond both being made of carbon, **diamond's atomic structure** is much stronger, making it unsuitable for writing.





हालांकि ग्रेफाइट और हीरा दोनों कार्बन से बने होते हैं, हीरे का परमाणु संरचना बहुत मजबूत होती है, जिससे यह लिखने के लिए अनुपयुक्त हो जाता है।

Writing by Sliding

लिखने के लिए स्लाइड करना

- When writing with a pencil, the **core slides on paper**, forcing the **carbon atoms** to move from the pencil onto the paper.
पेंसिल से लिखते समय, कोर कागज पर स्लाइड करता है, जिससे कार्बन परमाणु पेंसिल से कागज पर स्थानांतरित होते हैं।
- Hard materials like **diamond** or **steel** do not leave any material on paper because their atoms are **tightly bound**.
कठोर सामग्री जैसे हीरा या स्टील कागज पर कोई सामग्री नहीं छोड़ती क्योंकि उनके परमाणु मजबूती से जुड़े होते हैं।
- Graphite's layers of **graphene** slide off easily, transferring carbon onto the paper, allowing the pencil to write.
ग्रेफाइट की ग्रेफीन परतें आसानी से उतरकर कागज पर कार्बन स्थानांतरित करती हैं, जिससे पेंसिल लिख पाती है।
- **Graphene** was first discovered by sticking **cellophane tape** to graphite and observing carbon layers under a microscope.
ग्रेफीन का पहली बार पता तब चला जब सेलोफेन टेप को ग्रेफाइट पर चिपकाया गया और माइक्रोस्कोप के तहत कार्बन की परतों को देखा गया।
- As the pencil is used, more **layers of carbon** are transferred to the paper, which is visible to the human eye as **black and shiny** marks.
जैसे-जैसे पेंसिल का उपयोग होता है, अधिक कार्बन की परतें कागज पर स्थानांतरित होती हैं, जो मानव आंख से काले और चमकदार निशान के रूप में दिखाई देती हैं।

Condensed Matter Physics

संघनित पदार्थ भौतिकी

- The arrangement of **carbon atoms** in graphite and diamond leads to completely different properties, even though both are made of the same element.
कार्बन परमाणुओं की व्यवस्था ग्रेफाइट और हीरे में पूरी तरह से अलग गुण उत्पन्न करती है, हालांकि दोनों उसी तत्व से बने होते हैं।
- These differences in material properties are based on how **electrons** shared by carbon atoms behave.
इन भौतिक गुणों के अंतर का कारण यह है कि इलेक्ट्रॉन्स, जो कार्बन परमाणुओं द्वारा साझा किए जाते हैं, कैसे व्यवहार करते हैं।
- The behavior of individual elements or organisms can change dramatically when they interact in **groups**, a principle explored in **condensed matter physics**.
व्यक्तिगत तत्वों या जीवों का व्यवहार तब बदल सकता है जब वे समूहों में इंटरैक्ट करते हैं, यह सिद्धांत संघनित पदार्थ भौतिकी में अध्ययन किया जाता है।



- To explore **condensed matter physics**, consider pursuing an **undergraduate degree in physics**.
संघनित पदार्थ भौतिकी का अध्ययन करने के लिए, आप भौतिकी में एक अंडरग्रेजुएट डिग्री प्राप्त करने पर विचार कर सकते हैं।
- The next time you have free time, consider picking up a pencil, **sharpen it well**, and enjoy the process of **sketching**.
अगली बार जब आपके पास कुछ फुर्सत हो, तो पेंसिल उठाने, उसे अच्छे से शार्प करने, और स्केचिंग के प्रक्रिया का आनंद लेने पर विचार करें।
- As you sketch, remember the **hundreds of carbon atoms** sliding off at your will.
जब आप स्केच करते हैं, तो याद रखें कि सैकड़ों कार्बन परमाणु आपकी इच्छा पर उतर रहे हैं।

At G-20 summit, India, China discuss resumption of flights, visa issuance

External Affairs Minister S. Jaishankar and Chinese counterpart Wang Yi meet for the first time since LAC disengagement agreement last month and a meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping

GS Paper II: India-China

Suhasini Haidar
NEW DELHI

A month after India and China announced that they would disengage their troops along the Line of Actual Control, the two countries have agreed to discuss the “next steps” in their relationship, including the resumption of direct flights, visas, journalist permissions, river-data sharing and allowing Indian pilgrims to Kailash Mansarovar.

This announcement was made after External Affairs Minister S. Jaishankar met with Chinese Foreign Minister Wang Yi on the sidelines of the G-20 summit in Rio de Janeiro on Monday, their first interaction since the LAC disengagement agreement on October 21, and a meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping in Russia.

“The Ministers recognised that the disengagement in our border areas had contributed to the



Warmer times: External Affairs Minister S. Jaishankar meets China's Foreign Minister Wang Yi in Rio de Janeiro on Monday. ANI

maintenance of peace and tranquillity,” the Ministry of External Affairs (MEA) said in a statement on Tuesday. “It was agreed that a meeting of the Special Representatives and of the Foreign Secretary-Vice Minister mechanism will take place soon,” it added, referring to talks on the boundary question between National Security Adviser Ajit Doval and Mr. Wang, as well as between Foreign Secretary Vikram Misri and his counterpart.

The Ministry said India had been “principled”, “consistent”, and independent in its actions, and was “against unilateral approaches to establish dominance”.

On the global stage

Discussing their role on the international stage, Mr. Jaishankar and Mr. Wang referred to the “constructive” engagement between India and China at BRICS, the Shanghai Cooperation Organization, and G-20.

The meeting came as Mr. Modi and Mr. Xi arrived in Rio to address the G-20 summit being hosted by Brazil. Mr. Modi held bilateral talks with the leaders of a number of countries, including Brazil, Indonesia, Italy, the United Kingdom, and Australia, while exchanging greetings with others on the sidelines of the summit. Officials said, however, that no formal bilateral meeting had been scheduled with the Chinese President.

The two Foreign Ministers last met during the BRICS summit in Kazan, accompanying their leaders, and had held talks in June and July that are believed to have set the pace for military and diplomatic talks to resolve the impasse at the LAC.

‘Practical progress’

According to a separate statement by the Chinese Ministry of Foreign Affairs (MFA), Mr. Wang had said that “China-India relations have been restarted and relaunched” after the Modi-

Xi meeting in Kazan on October 23, and that the two sides should “send more positive signals” after this. In particular, he mentioned the lack of direct flights, which were originally suspended during the COVID-19 pandemic, but were never restored due to the tensions at the LAC, and called for Delhi and Beijing to plan to commemorate the 75th year of their diplomatic engagement in 2025.

“We should strive to make practical progress as soon as possible in the resumption of direct flights, mutual assignment of journalists and visa facilitation,” the readout by the Chinese MFA said. “Next year will mark the 75th anniversary of the establishment of diplomatic relations between China and India, and the two sides should plan commemorative activities and encourage exchanges and visits in all fields and at all levels to enhance understanding and mutual trust,” it added.



At G-20 summit, India, China discuss resumption of flights, visa issuance

जी-20 शिखर सम्मेलन में भारत और चीन ने यात्राएं फिर से शुरू करने और वीजा जारी करने पर चर्चा की

External Affairs Minister S. Jaishankar and Chinese counterpart Wang Yi meet for the first time since LAC disengagement agreement last month and a meeting between Prime Minister Narendra Modi and Chinese President Xi Jinping

विदेश मंत्री एस. जयशंकर और चीनी समकक्ष वांग यी ने पिछले महीने एलएसी पर सैनिकों के पीछे हटने के समझौते और प्रधानमंत्री नरेंद्र मोदी और चीनी राष्ट्रपति शी जिनपिंग के बीच बैठक के बाद पहली बार मुलाकात की।

India and China Discuss Next Steps in Bilateral Relations

भारत और चीन ने द्विपक्षीय संबंधों में अगले कदमों पर चर्चा की

- A month after **India** and **China** agreed to disengage their troops along the **Line of Actual Control (LAC)**, the two countries have decided to discuss the next steps in their relationship.
भारत और चीन ने लाइन्स ऑफ़ एक्टुअल कंट्रोल (LAC) के साथ अपनी सेनाओं को अलग करने के एक महीने बाद, अपने रिश्तों में अगले कदमों पर चर्चा करने का निर्णय लिया है।
- The discussion will cover issues such as the **resumption of direct flights, visa matters, journalist permissions, river-data sharing**, and allowing **Indian pilgrims** to visit **Kailash Mansarovar**.
यह चर्चा प्रत्यक्ष उड़ानों की फिर से शुरुआत, वीजा मामले, पत्रकार अनुमति, नदी-डेटा साझेदारी, और भारतीय तीर्थयात्रियों को कैलाश मानसरोवर जाने की अनुमति देने जैसे मुद्दों को कवर करेगी।
- This announcement was made after **External Affairs Minister S. Jaishankar** met with **Chinese Foreign Minister Wang Yi** during the **G-20 summit in Rio de Janeiro**, marking their first interaction since the LAC disengagement agreement on **October 21**.
यह घोषणा विदेश मंत्री एस. जयशंकर के चीन के विदेश मंत्री वांग यी से रियो डी जनेरियो में G-20 शिखर सम्मेलन के दौरान मुलाकात के बाद की गई, जो LAC disengagement समझौते के बाद उनका पहला संवाद था, जो 21 अक्टूबर को हुआ था।
- The meeting also followed a discussion between **Prime Minister Narendra Modi** and **Chinese President Xi Jinping** in **Russia**.
यह बैठक प्रधानमंत्री नरेंद्र मोदी और चीनी राष्ट्रपति शी जिनपिंग के रूस में संवाद के बाद भी हुई।
- The **Ministry of External Affairs (MEA)** stated that both ministers recognized that the disengagement contributed to the **maintenance of peace and tranquillity** at the border.





विदेश मंत्रालय (MEA) ने कहा कि दोनों मंत्रियों ने यह माना कि disengagement ने सीमा पर शांति और सुकून बनाए रखने में योगदान दिया।

- The ministers agreed that a meeting of the **Special Representatives** and the **Foreign Secretary-Vice Minister mechanism** would take place soon to discuss the boundary question.

मंत्रियों ने सहमति जताई कि विशेष प्रतिनिधियों और विदेश सचिव-सहायक मंत्री तंत्र की एक बैठक जल्द ही होगी, जिसमें सीमा के मुद्दे पर चर्चा की जाएगी।

- India has been **principled, consistent, and independent** in its approach, against any **unilateral attempts to establish dominance**.
भारत अपनी प्रारंभिक, स्थिर और स्वतंत्र नीति के तहत है और एकतरफा प्रभुत्व स्थापित करने के प्रयासों के खिलाफ है।

India and China on the Global Stage

भारत और चीन का वैश्विक मंच पर रुख

- During their meeting, **Jaishankar** and **Wang** highlighted the **constructive engagement** between India and China at **BRICS**, the **Shanghai Cooperation Organization (SCO)**, and **G-20**.

अपनी मुलाकात के दौरान, जयशंकर और वांग ने **BRICS**, **शांघाई सहयोग संगठन (SCO)** और **G-20** में भारत और चीन के बीच रचनात्मक जुड़ाव को प्रमुखता दी।

- **Prime Minister Modi** held bilateral talks with leaders from **Brazil, Indonesia, Italy**, the **United Kingdom**, and **Australia** at the G-20 summit, but no formal meeting was scheduled with **Chinese President Xi Jinping**.

प्रधानमंत्री मोदी ने G-20 शिखर सम्मेलन में ब्राजील, इंडोनेशिया, इटली, यूनाइटेड किंगडम, और ऑस्ट्रेलिया के नेताओं से द्विपक्षीय बातचीत की, लेकिन चीनी राष्ट्रपति शी जिनपिंग के साथ कोई औपचारिक बैठक निर्धारित नहीं की गई।

- The two foreign ministers had previously met during the **BRICS summit in Kazan** and in **June-July** to discuss military and diplomatic talks to resolve the **LAC impasse**.

दोनों विदेश मंत्रियों ने पहले कज़ान में **BRICS शिखर सम्मेलन** और जून-जुलाई में मिलकर **LAC गतिरोध** को सुलझाने के लिए सैन्य और कूटनीतिक वार्ताओं पर चर्चा की थी।

Practical Progress in India-China Relations

भारत-चीन संबंधों में व्यावहारिक प्रगति

- **Chinese Foreign Minister Wang Yi** stated that after the **Modi-Xi meeting in Kazan** on **October 23**, **China-India relations** were restarted, with a focus on sending **positive signals** moving forward.

चीनी विदेश मंत्री वांग यी ने कहा कि 23 अक्टूबर को मोदी-शी बैठक के बाद भारत-चीन संबंधों को फिर से शुरू किया गया, और आगे बढ़ने के लिए सकारात्मक संकेतों पर ध्यान दिया गया।

- Wang highlighted the lack of **direct flights**, which were suspended during the **COVID-19 pandemic**, and called for the resumption of flights, **journalist assignments**, and **visa facilitation** between the two countries.

वांग ने प्रत्यक्ष उड़ानों की कमी को उजागर किया, जो **COVID-19 महामारी** के दौरान निलंबित हो





गई थीं, और दो देशों के बीच उड़ानों की फिर से शुरुआत, पत्रकारों की नियुक्ति और वीजा सुविधा की अपील की।

- He also proposed that both countries plan to commemorate the **75th anniversary of diplomatic relations** between **China and India** in **2025** by encouraging **exchanges and visits**.

उन्होंने यह भी प्रस्तावित किया कि दोनों देशों को **2025 में भारत-चीन के कूटनीतिक संबंधों की 75वीं वर्षगांठ** मनाने की योजना बनानी चाहिए, जिसमें **विनिमय और यात्राओं** को बढ़ावा दिया जाए।

- Wang emphasized the importance of making **practical progress** in these areas as soon as possible.

वांग ने इन क्षेत्रों में जितनी जल्दी हो सके **व्यावहारिक प्रगति** करने की महत्त्वता को रेखांकित किया।

Air Quality Index (AQI)

वायु गुणवत्ता सूचकांक (AQI)

Introduction

- The **Air Quality Index (AQI)** is a tool used to communicate the quality of air and its potential impact on human health.
- It simplifies complex air quality data into a single number, range, or color code.
- It was **introduced in 2014** by the Ministry of Environment, Forest, and Climate Change (MoEFCC), Government of India, under the **National Air Quality Monitoring Program (NAMP)**.
- **वायु गुणवत्ता सूचकांक (AQI)** एक उपकरण है जिसका उपयोग हवा की गुणवत्ता और उसके मानव स्वास्थ्य पर संभावित प्रभाव को व्यक्त करने के लिए किया जाता है।
- यह जटिल वायु गुणवत्ता डेटा को एक संख्या, श्रेणी, या रंग कोड में सरल करता है।
- इसे **2014** में भारत सरकार के **पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (MoEFCC)** द्वारा **राष्ट्रीय वायु गुणवत्ता निगरानी कार्यक्रम (NAMP)** के तहत पेश किया गया था।

Parameters of AQI

AQI is calculated based on the concentration of **eight pollutants**, namely:

1. Particulate Matter (**PM10**)
2. Particulate Matter (**PM2.5**)
3. Nitrogen Dioxide (**NO₂**)
4. Sulfur Dioxide (**SO₂**)
5. Carbon Monoxide (**CO**)
6. Ozone (**O₃**)
7. Ammonia (**NH₃**)
8. Lead (**Pb**)





AQI को आठ प्रदूषकों के सांद्रण के आधार पर मापा जाता है:

1. कण पदार्थ (PM10)
2. कण पदार्थ (PM2.5)
3. नाइट्रोजन डाइऑक्साइड (NO₂)
4. सल्फर डाइऑक्साइड (SO₂)
5. कार्बन मोनोऑक्साइड (CO)
6. ओज़ोन (O₃)
7. अमोनिया (NH₃)
8. सीसा (Pb)

AQI Categories and their Impact

The AQI is divided into **six categories**, each indicating a different level of health concern:

AQI Range	Category	Health Impact
0–50	Good	Minimal impact
51–100	Satisfactory	Minor breathing discomfort for sensitive groups
101–200	Moderate	Breathing discomfort for people with lungs or heart conditions
201–300	Poor	Respiratory discomfort in the general public
301–400	Very Poor	Increased respiratory illnesses
401–500	Severe	Serious health impacts, emergency conditions

AQI को छह श्रेणियों में विभाजित किया गया है, जो विभिन्न स्वास्थ्य चिंताओं को दर्शाती हैं:

AQI सीमा	श्रेणी	स्वास्थ्य पर प्रभाव
0–50	अच्छा	न्यूनतम प्रभाव





51-100	संतोषजनक	संवेदनशील समूहों में मामूली सांस की परेशानी
101-200	मध्यम	फेफड़े या हृदय रोगियों में सांस की परेशानी
201-300	खराब	आम जनता में श्वसन समस्याएं
301-400	बहुत खराब	श्वसन संबंधी बीमारियों में वृद्धि
401-500	गंभीर	गंभीर स्वास्थ्य प्रभाव, आपातकालीन स्थिति

Recent Updates on AQI

- GRAP (Graded Response Action Plan):** Implemented in Delhi-NCR to tackle pollution. Measures such as banning construction activities and regulating vehicle usage are applied based on **AQI levels**.
ग्रेड (ग्रेडेड रिस्पांस एक्शन प्लान): दिल्ली-एनसीआर में प्रदूषण से निपटने के लिए लागू। AQI स्तरों के आधार पर निर्माण गतिविधियों पर रोक और वाहन उपयोग को नियंत्रित किया जाता है।
- World Air Quality Report 2023:** India was home to **39 of the world's 50 most polluted cities**, with Delhi ranked as the most polluted capital globally.
विश्व वायु गुणवत्ता रिपोर्ट 2023: भारत में दुनिया के 50 सबसे प्रदूषित शहरों में से **39 शहर** स्थित थे, और दिल्ली को सबसे प्रदूषित राजधानी के रूप में स्थान दिया गया।
- Policy Interventions:** The National Clean Air Programme (NCAP) targets a **20-30% reduction** in PM2.5 and PM10 concentrations by 2024 compared to 2017 levels.
नीति हस्तक्षेप: राष्ट्रीय स्वच्छ वायु कार्यक्रम (NCAP) का लक्ष्य **2017** के स्तरों की तुलना में **2024** तक PM2.5 और PM10 सांद्रण में **20-30% की कमी** लाना है।

Commission for Air Quality Management (CAQM)

- The Commission for Air Quality Management (CAQM) was established to tackle air pollution in the National Capital Region (NCR) and adjoining areas.
- The commission, set up by the Government of India, is tasked with a comprehensive approach to managing and controlling air quality issues in this region.
- Its creation underscores India's commitment to combating air pollution, especially in high-density areas prone to severe pollution episodes.



- वायु गुणवत्ता प्रबंधन आयोग (CAQM) को राष्ट्रीय राजधानी क्षेत्र (NCR) और आसपास के क्षेत्रों में वायु प्रदूषण से निपटने के लिए स्थापित किया गया था।
- सरकार द्वारा स्थापित इस आयोग का उद्देश्य इस क्षेत्र में वायु गुणवत्ता प्रबंधन और नियंत्रण की एक समग्र दृष्टिकोण अपनाना है।
- इसका गठन विशेष रूप से उच्च घनत्व वाले क्षेत्रों में गंभीर प्रदूषण समस्याओं से निपटने के भारत के संकल्प को दर्शाता है।
- The **CAQM was formed in October 2020** through an ordinance that was later formalized as the "**Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021.**"
- This act dissolved other bodies like the **Environment Pollution (Prevention and Control) Authority (EPCA)**, giving CAQM the authority to address air pollution in a comprehensive manner.
- **CAQM का गठन अक्टूबर 2020** में एक अध्यादेश के माध्यम से किया गया था, जिसे बाद में "राष्ट्रीय राजधानी क्षेत्र और आसपास के क्षेत्रों में वायु गुणवत्ता प्रबंधन आयोग अधिनियम, 2021" के रूप में औपचारिक रूप से लागू किया गया।
- इस अधिनियम ने पर्यावरण प्रदूषण (रोकथाम और नियंत्रण) प्राधिकरण (EPCA) जैसी अन्य निकायों को भंग कर दिया, जिससे CAQM को वायु प्रदूषण से निपटने का व्यापक अधिकार मिला।

Mandate and Powers

- **Jurisdiction and Coverage:** CAQM oversees air quality issues across Delhi, Punjab, Haryana, Uttar Pradesh, and Rajasthan.
- **Legal Authority:** The commission has the power to issue directions to state governments on pollution control measures. It **can levy fines and enforce penalties for non-compliance, granting it considerable regulatory powers.**
- **Coordination and Policy Implementation:** CAQM works with **state pollution control boards, central agencies, and local authorities** to implement policies, action plans, and pollution control technologies.
- **Public Engagement and Awareness:** CAQM engages with citizens and the media to raise awareness on air pollution, its sources, and its health impacts.

कार्यादेश और शक्तियां

- **अधिकार क्षेत्र और कवरेज:** CAQM दिल्ली, पंजाब, हरियाणा, उत्तर प्रदेश और राजस्थान में वायु गुणवत्ता से संबंधित मामलों की निगरानी करता है।
- **कानूनी अधिकार:** आयोग के पास राज्य सरकारों को प्रदूषण नियंत्रण उपायों पर दिशा-निर्देश देने का अधिकार है। यह अनुपालन न करने पर जुर्माना और दंड लगाने की शक्ति भी रखता है, जिससे इसे काफी व्यापक नियामक शक्तियां प्राप्त हैं।



- **समन्वय और नीति कार्यान्वयन:** CAQM राज्य प्रदूषण नियंत्रण बोर्ड, केंद्रीय एजेंसियों और स्थानीय अधिकारियों के साथ मिलकर नीतियों, कार्य योजनाओं और प्रदूषण नियंत्रण प्रौद्योगिकियों को लागू करने का कार्य करता है।
- **सार्वजनिक भागीदारी और जागरूकता:** CAQM नागरिकों और मीडिया के साथ जुड़ता है ताकि वायु प्रदूषण, इसके स्रोतों और स्वास्थ्य पर इसके प्रभावों के बारे में जागरूकता फैलाई जा सके।

Key Strategies and Initiatives

- **Graded Response Action Plan (GRAP):** Implemented in NCR to tackle high pollution levels with specific measures depending on pollution levels (e.g., banning construction or increasing public transport).
- **Promotion of Clean Energy:** CAQM advocates for clean energy sources and has urged industries to switch from fossil fuels to cleaner alternatives.
- **Stubble Burning Control:** Collaborates with agricultural bodies and state governments, especially during harvest seasons, to reduce stubble burning in Punjab and Haryana, which significantly affects Delhi's air quality.
- **Technology and Data Use:** Emphasizes the use of real-time data, satellite monitoring, and artificial intelligence for forecasting and monitoring pollution levels.

मुख्य रणनीतियाँ और पहल

1. **ग्रेडेड रिस्पांस एक्शन प्लान (GRAP):** NCR में उच्च प्रदूषण स्तर से निपटने के लिए विशेष उपायों के साथ लागू किया गया है, जो प्रदूषण स्तर के आधार पर लागू होते हैं (जैसे निर्माण कार्य पर प्रतिबंध या सार्वजनिक परिवहन बढ़ाना)।
2. **स्वच्छ ऊर्जा का प्रचार:** CAQM स्वच्छ ऊर्जा स्रोतों के उपयोग का समर्थन करता है और उद्योगों को जीवाश्म ईंधन से स्वच्छ विकल्पों की ओर स्विच करने का आग्रह करता है।
3. **पराली जलाने का नियंत्रण:** कृषि निकायों और राज्य सरकारों के साथ सहयोग करता है, विशेष रूप से फसल के मौसम के दौरान, पंजाब और हरियाणा में पराली जलाने को कम करने के लिए, जो दिल्ली की वायु गुणवत्ता को प्रभावित करता है।
4. **प्रौद्योगिकी और डेटा का उपयोग:** प्रदूषण स्तर की निगरानी और पूर्वानुमान के लिए वास्तविक समय के डेटा, उपग्रह मॉनिटरिंग और कृत्रिम बुद्धिमत्ता के उपयोग पर जोर देता है।

Recent Updates and Developments

- **New Action Plans:** CAQM has introduced action plans for 2024 to reduce industrial and vehicular emissions in NCR.
- **Increased Monitoring:** More monitoring stations and sensors are being installed across NCR for real-time air quality tracking.
- **Legal Actions:** Recently, CAQM has imposed fines on several construction companies and industries found violating air quality norms.





हालिया अपडेट और विकास

- **नए कार्य योजनाएँ:** CAQM ने NCR में औद्योगिक और वाहन उत्सर्जन को कम करने के लिए 2024 की कार्य योजनाओं को पेश किया है।
- **बढ़ी हुई निगरानी:** NCR में वास्तविक समय में वायु गुणवत्ता की निगरानी के लिए अधिक निगरानी स्टेशनों और सेंसर की स्थापना की जा रही है।
- **कानूनी कार्रवाइयाँ:** हाल ही में, CAQM ने वायु गुणवत्ता मानकों का उल्लंघन करने वाले कई निर्माण कंपनियों और उद्योगों पर जुर्माना लगाया है।

Graded Response Action Plan (GRAP)

- The **Graded Response Action Plan (GRAP)** was implemented in Delhi-NCR to control air pollution through a systematic, stage-based response to worsening air quality.
- This action plan, introduced in 2017 by the **Environment Pollution (Prevention & Control) Authority (EPCA)** under directives from the **Supreme Court of India**, aims to mitigate air pollution by enacting specific measures at each defined level of air quality.
- GRAP is activated based on the **Air Quality Index (AQI)**, with particular steps corresponding to categories from 'Poor' to 'Severe+'.

Stages of GRAP

1. **Stage I (AQI: Poor)** – Measures include ensuring mechanical sweeping of roads, prohibiting open burning of waste, and discouraging diesel generators in NCR, except for essential services.
2. **Stage II (AQI: Very Poor)** – Additional measures are implemented, such as banning diesel generators except for essential and emergency services, increasing the frequency of water sprinkling, and regulating construction activities.
3. **Stage III (AQI: Severe)** – Actions include a ban on construction activities (except for essential projects) and the restriction of truck entry into Delhi, excluding essential goods.
4. **Stage IV (AQI: Severe+)** – This stage, often implemented in extreme cases, includes shutting down industries using non-clean fuels, closing brick kilns and hot mix plants, and banning entry of trucks and private vehicles.

Important Facts and Recent Updates

- GRAP is managed by the **Commission for Air Quality Management (CAQM)** and uses a dynamic model incorporating **IMD** and **IITM** forecasts to assess upcoming AQI levels and adjust measures accordingly.





- The National Capital Territory (NCT) of Delhi is a key focus due to its high vehicular density, industrial emissions, and stubble burning in neighboring states, particularly during the winter months.
- **NCAP** (National Clean Air Programme) complements GRAP by targeting a **20-30% reduction** in PM levels by 2024 from a baseline of 2017.

'India's vision for free, open maritime network is finding resonance across the world'

GS Paper II: India's foreign Policy

NEW DELHI



Stating that oceans are a shared heritage for nations and societies, as well as the lifeline for international trade, Prime Minister Narendra Modi has said that over the last decade, the capacity of the country's ports has been doubled.

"By enhancing port efficiency, reducing turnaround times and strengthening last-mile connectivity through expressways, railways and riverine networks, we have transformed India's shoreline," Mr. Modi said in a message from his camp office in Nigeria delivered on Tuesday at the ongoing inaugural edition of the thought leadership summit 'Sagarmanthan: The Great Oceans Dialogue' organised by the Union Ministry of Ports, Shipping and waterways in partnership with Observer Research

By enhancing port efficiency, reducing turnaround times and strengthening last-mile connectivity, we have transformed India's shoreline

NARENDRA MODI
Prime Minister

Foundation (ORF).

Today, the security and prosperity of nations is intimately connected to oceans, and recognising the potential of oceans, several transformative steps have been taken to bolster India's maritime capabilities, the Prime Minister said.

"Our vision for a free, open and secure maritime network – be it the Indian Ocean or the Indo-Pacific region – is finding resonance across the world.

The 'Indo Pacific Oceans Initiative' envisions marine resources as a key pillar for growth for nations. This dialogue on oceans further strengthen the rules-based world order and enhance peace, trust and friendship between nations."

Maritime traditions

Highlighting India's rich maritime legacy and steps taken to build the sector, Mr. Modi said India's maritime tradition goes back several millennia and is among the richest in the world.

The thriving port cities of Lothal and Dholavira, the fleets of the Chola dynasty, the exploits of Chhatrapati Shivaji Maharaj are great inspirations, he added.

The two-day dialogue that started on Monday saw over 1,700 participants, including over 215 delegates from 60 countries.

'India's vision for free, open maritime network is finding resonance across the world'

'भारत का मुक्त, खुला समुद्री नेटवर्क का दृष्टिकोण दुनिया भर में प्रतिध्वनित हो रहा है'

Oceans as Shared Heritage and Lifeline for Trade

महासागरों को साझा धरोहर और व्यापार के लिए जीवन रेखा मानना

- Prime Minister **Narendra Modi** stated that **oceans are a shared heritage for nations and societies**, and they serve as the **lifeline for international trade**.

प्रधानमंत्री नरेन्द्र मोदी ने कहा कि महासागर देशों और समाजों के लिए साझा धरोहर हैं,

और ये अंतर्राष्ट्रीय व्यापार के लिए जीवन रेखा के रूप में कार्य करते हैं।

- Over the last decade, **India's port capacity has been doubled**. पिछले दशक में, **भारत की बंदरगाह क्षमता दोगुनी हो गई है।**
- By enhancing **port efficiency**, reducing **turnaround times**, and strengthening **last-mile connectivity** through **expressways**, **railways**, and **riverine networks**, India has **transformed its shoreline**.

बंदरगाह दक्षता बढ़ाने, टर्नअराउंड समय घटाने, और आखिरी मील कनेक्टिविटी को एक्सप्रेसवे, रेलवे,





और नदी नेटवर्क के माध्यम से मजबूत करने से भारत ने अपनी तटीय रेखा का रूप बदल दिया है।

- The statement was made during the ongoing inaugural edition of the ‘Sagarmanthan: The Great Oceans Dialogue’, organized by the **Union Ministry of Ports, Shipping and Waterways** in partnership with **Observer Research Foundation (ORF)**.
यह बयान ‘सागरमंथन: द ग्रेट ओशनस डायलॉग’ की उद्घाटन संस्करण के दौरान दिया गया, जो संघ मंत्रालय (पोर्ट्स, शिपिंग और जलमार्ग) और ऑब्जरवर रिसर्च फाउंडेशन (ORF) के साझे में आयोजित किया गया था।

Security and Prosperity Tied to Oceans

महासागरों से जुड़ी सुरक्षा और समृद्धि

- **Prime Minister Modi** emphasized that the **security and prosperity of nations** is closely tied to **oceans**, and recognizing their potential, India has taken several **transformative steps** to enhance its maritime capabilities.
प्रधानमंत्री मोदी ने बल दिया कि देशों की सुरक्षा और समृद्धि महासागरों से गहरे जुड़े हुए हैं, और उनके संसाधनों की पहचान करते हुए, भारत ने अपनी सामुद्रिक क्षमताओं को बढ़ाने के लिए कई क्रांतिकारी कदम उठाए हैं।
- India’s vision for a **free, open, and secure maritime network** in the **Indian Ocean and Indo-Pacific region** is finding resonance globally.
भारत का मुक्त, खुले और सुरक्षित समुद्री नेटवर्क के लिए भारतीय महासागर और इंडो-पैसिफिक क्षेत्र में दृष्टिकोण वैश्विक स्तर पर प्रतिध्वनित हो रहा है।
- The **Indo-Pacific Oceans Initiative** envisions **marine resources** as a key pillar for the **growth of nations**.
इंडो-पैसिफिक ओशनस इनिशिएटिव समुद्री संसाधनों को देशों की वृद्धि का एक प्रमुख स्तंभ मानता है।
- This dialogue on oceans aims to strengthen a **rules-based world order** and promote **peace, trust, and friendship** between nations.
महासागरों पर यह संवाद नियम-आधारित विश्व व्यवस्था को मजबूत करने और देशों के बीच शांति, विश्वास और दोस्ती को बढ़ावा देने का उद्देश्य रखता है।

India’s Rich Maritime Legacy

भारत की समृद्ध समुद्री धरोहर

- India’s **maritime tradition** goes back several millennia and is considered **one of the richest in the world**.
भारत की समुद्री परंपरा कई सहस्राब्दियों पुरानी है और इसे दुनिया की सबसे समृद्ध परंपराओं में से एक माना जाता है।
- The thriving port cities of **Lothal** and **Dholavira**, the fleets of the **Chola dynasty**, and the exploits of **Chhatrapati Shivaji Maharaj** are great inspirations for India’s maritime legacy.



भारत की समुद्री धरोहर के लिए लोथल और धोलवीरा के समृद्ध बंदरगाह नगर, चोल वंश की बेड़े, और छत्रपति शिवाजी महाराज की वीरताएँ महान प्रेरणाएँ हैं।

The Sagarmanthan Dialogue

सागरमंथन संवाद

- The **two-day dialogue** began on **Monday** and saw participation from over **1,700 participants**, including **215 delegates from 60 countries**.
दो दिवसीय संवाद सोमवार को शुरू हुआ और इसमें 1,700 से अधिक प्रतिभागियों की भागीदारी रही, जिनमें 60 देशों के 215 प्रतिनिधि शामिल थे।

India and Italy to negotiate defence industrial road map, focus on maritime sector

GS Paper II: India-Italy

Dinakar Peri

NEW DELHI

India and Italy agreed to negotiate a defence industrial road map, and agreement for the mutual protection and exchange of classified information as also an agreement on cooperation in the maritime and port sector. This was stated in the Joint Strategic Action Plan 2025-29, which outlines their vision for the next five years.

“Negotiate a defence industrial road map, between the two Ministries of Defence and promote a Memorandum of Understanding between the Society of Indian Defence Manufacturers and the Italian Industries Federation for Aerospace, Defence and Security,” the joint action plan said. “Welcome interactions between respective Armed Forces in the framework of Italy’s growing interest in the Indo-



The Joint Strategic Action Plan 2025-29 was released outlining both countries’ vision. ANI

Pacific Region, aimed at increasing interoperability and cooperation, including negotiations of any useful arrangement supporting such interactions.”

On G-20 sidelines

The action plan was issued after the meeting between Prime Minister Narendra Modi and his Italian counterpart Giorgia Meloni on the sidelines of the G-20 summit on Monday in Brazil. “Our talks centred

around deepening ties in defence, security, trade and technology. We also talked about how to boost cooperation in culture, education and other such areas,” Mr. Modi said on X after the meeting.

They also agreed to explore avenues of enhanced partnerships and dialogue among public and private stakeholders, focusing on “technology collaboration, co-production and co-development of defence platforms and equipment”.

In the last few years, there has been an increase in military-to-military visits between the two countries’ armed forces. In a historic maritime engagement, the navies of India and Italy carried out their maiden exercise by Carrier Strike Groups (CSG) off the Goa coast. The sea phase was led by *INS Vikramaditya* and *ITS Cavour* along with *INS Visakhapatnam* and *ITS Alpino*.





India and Italy to negotiate defence industrial road map, focus on maritime sector

भारत और इटली रक्षा औद्योगिक रोडमैप पर बातचीत करेंगे, समुद्री क्षेत्र पर ध्यान केंद्रित करेंगे

India and Italy Defence and Maritime Cooperation

भारत और इटली की रक्षा और समुद्री सहयोग

- India and Italy agreed to **negotiate a defence industrial road map** and establish an **agreement for mutual protection and exchange of classified information**.
भारत और इटली ने रक्षा औद्योगिक रोड मैप पर चर्चा करने और गोपनीय जानकारी के आपसी सुरक्षा और आदान-प्रदान के लिए समझौता करने पर सहमति जताई।
- An agreement on **cooperation in the maritime and port sector** was also included in the discussions.
समुद्री और बंदरगाह क्षेत्र में सहयोग पर भी बातचीत की गई।
- The agreements were part of the **Joint Strategic Action Plan 2025-29**, which outlines the vision for the next five years.
यह समझौते जॉइंट स्ट्रैटेजिक एक्शन प्लान 2025-29 का हिस्सा थे, जो अगले पांच वर्षों के लिए दृष्टिकोण को स्पष्ट करता है।
- The action plan included the promotion of a **Memorandum of Understanding (MoU)** between the **Society of Indian Defence Manufacturers** and the **Italian Industries Federation for Aerospace, Defence and Security**.
एक्शन प्लान में भारतीय रक्षा निर्माता समाज और इतालवी उद्योग महासंघ (एयरोस्पेस, रक्षा और सुरक्षा) के बीच सहमतिपत्र (MoU) को बढ़ावा देने की बात की गई।
- The plan also welcomed **interactions between respective armed forces** to enhance **interoperability and cooperation**, especially in the context of **Italy's growing interest in the Indo-Pacific Region**.
इस योजना में संबंधित सशस्त्र बलों के बीच इंटरएक्शन का स्वागत किया गया, ताकि इंटरऑपरेबिलिटी और सहयोग को बढ़ावा दिया जा सके, विशेष रूप से इंडो-पैसिफिक क्षेत्र में इटली की बढ़ती रुचि के संदर्भ में।

G-20 Summit and Bilateral Talks

G-20 शिखर सम्मेलन और द्विपक्षीय वार्ता

- The action plan was released following a meeting between **Prime Minister Narendra Modi** and **Italian Prime Minister Giorgia Meloni** on the **sidelines of the G-20 summit in Brazil on Monday**.





यह एक्शन प्लान प्रधानमंत्री नरेन्द्र मोदी और इतालवी प्रधानमंत्री जॉर्जिया मेलोनी के बीच ब्राज़ील में G-20 शिखर सम्मेलन के दौरान सोमवार को हुई बैठक के बाद जारी किया गया।

- **Prime Minister Modi** stated that the talks focused on **deepening ties in defence, security, trade, and technology**, as well as boosting cooperation in **culture, education, and other sectors**.

प्रधानमंत्री मोदी ने कहा कि वार्ता का केंद्र रक्षा, सुरक्षा, व्यापार और प्रौद्योगिकी में संबंधों को गहरा करना था, साथ ही संस्कृति, शिक्षा और अन्य क्षेत्रों में सहयोग बढ़ाने पर भी चर्चा की गई।

- Both leaders agreed to explore avenues of **enhanced partnerships and dialogue** among **public and private stakeholders**, with a focus on **technology collaboration, co-production, and co-development** of **defence platforms and equipment**.

दोनों नेताओं ने सार्वजनिक और निजी हितधारकों के बीच सुधारित साझेदारी और संवाद के रास्ते तलाशने पर सहमति जताई, जिसका फोकस प्रौद्योगिकी सहयोग, सह-निर्माण और सह-विकास पर था, विशेष रूप से रक्षा प्लेटफार्मों और उपकरणों के।

Military-to-Military Cooperation

सैन्य-से-सैन्य सहयोग

- In recent years, there has been a noticeable **increase in military-to-military visits** between the armed forces of both countries.

पिछले कुछ वर्षों में, दोनों देशों के सैन्य बलों के बीच सैन्य-से-सैन्य यात्रा में वृद्धि देखी गई है।

- A **historic maritime engagement** took place, where the **navies of India and Italy** conducted their **first exercise** involving **Carrier Strike Groups (CSG)** off the coast of **Goa**.

एक ऐतिहासिक समुद्री सहयोग हुआ, जिसमें भारत और इटली की नौसेनाओं ने गोवा तट के पास कैरीयर स्ट्राइक ग्रुप्स (CSG) के साथ अपनी पहली अभ्यास की।

- The exercise was led by **INS Vikramaditya** and **ITS Cavour**, along with **INS Visakhapatnam** and **ITS Alpino**.

यह अभ्यास **INS विक्रमादित्य** और **ITS कावूर** द्वारा नेतृत्व किया गया, साथ ही **INS विशाखापत्तनम** और **ITS अल्पिनो** भी इसमें शामिल थे।



Govt. allows self-survey for Phase 2 of PM Awas Yojana

GS Paper II: Government Scheme

NEW DELHI

For the first time since the beginning of the flagship rural housing scheme – Pradhan Mantri Awas Yojana-Gramin – in 2016, the Union Rural Development Ministry is allowing “self-survey” for beneficiaries. For the second phase of the PMAY-G programme, which has a target of 2 crore houses, the Centre is conducting a survey to identify the beneficiaries. As part of this, training of 2.6 lakh surveyors was completed last week.

“This is to ensure that no one is left behind. It also leaves little ground for complaints that a surveyor did not include a household because of bias or prejudice,” an official at the Ministry said.

The government is using mobile application, Awaas+, for recording the data. The limitation for the self survey is that multiple applications or beneficiaries cannot be surveyed using one phone.

In August, the Union Cabinet had sanctioned a total outlay of ₹3,06,137 crore for the second phase of the scheme.

Govt. allows self-survey for Phase 2 of PM Awas Yojana

सरकार ने प्रधानमंत्री आवास योजना के दूसरे चरण के लिए स्व-सर्वेक्षण की अनुमति दी

Pradhan Mantri Awas Yojana-Gramin: Self-Survey Introduction

प्रधानमंत्री आवास योजना-ग्रामीण: स्व-सर्वेक्षण की शुरुआत

• For the first time since the launch of Pradhan Mantri Awas Yojana-Gramin (PMAY-G) in 2016, the Union Rural Development Ministry is allowing a self-survey for beneficiaries.

2016 में शुरू हुई प्रधानमंत्री आवास योजना-ग्रामीण (PMAY-G) के तहत पहली बार केंद्र सरकार की ग्रामीण विकास मंत्रालय ने लाभार्थियों के लिए स्व-सर्वेक्षण की अनुमति दी है।

• The second phase of PMAY-G aims to build 2 crore houses, and the Centre is conducting a survey to identify the beneficiaries.

PMAY-G के दूसरे चरण में 2 करोड़ मकानों का निर्माण लक्ष्य रखा गया है, और केंद्र सरकार एक सर्वेक्षण कर रही है ताकि लाभार्थियों की पहचान की जा सके।

• As part of the survey, the training of 2.6 lakh surveyors was completed last week.

सर्वेक्षण के हिस्से के रूप में, 2.6 लाख सर्वेयरों का प्रशिक्षण पिछले सप्ताह पूरा किया गया।

• A government official mentioned that the self-survey ensures that no one is left behind and reduces the chances of complaints about bias or prejudice during the survey.

सरकारी अधिकारी ने कहा कि स्व-सर्वेक्षण यह सुनिश्चित करता है कि कोई भी पीछे न छूटे और सर्वेक्षण में पक्षपाती या भेदभाव की शिकायतों की संभावना को कम करता है।

• The government is using the mobile application Awaas+ for recording the survey data.

सर्वेक्षण डेटा रिकॉर्ड करने के लिए सरकार आवास+ मोबाइल एप्लिकेशन का उपयोग कर रही है।

• The limitation of the self-survey is that multiple beneficiaries cannot be surveyed using one phone.

स्व-सर्वेक्षण की एक सीमा यह है कि एक फोन का उपयोग करके कई लाभार्थियों का सर्वेक्षण नहीं किया जा सकता।

• In August 2024, the Union Cabinet sanctioned a total outlay of ₹3,06,137 crore for the second phase of the scheme.



अगस्त 2024 में केंद्र सरकार ने योजना के दूसरे चरण के लिए ₹3,06,137 करोड़ का कुल बजट स्वीकृत किया।

Paying 'huge costs' for climate action, says India at COP29

Countries have entered into final week of negotiations; India says that developed countries must show leadership in mitigation actions

GS Paper III: Environment

Jacob Koshy
NEW DELHI

As part of India's official statement on Tuesday at the Conference of Parties (COP29) in Baku, Union Minister of State Kirti Vardhan Singh said "huge costs" were being levied upon India for the voluntary "climate action" it was undertaking.

Countries have entered into the final week of negotiations and are expected to decide on a new financial target that would facilitate the global transition away from a fossil fuel economy.

"COP29 is the COP for Climate Finance – the New Collective Quantified Goals on Climate Finance for mobilising climate finance for meeting the needs and priorities of developing countries. We all need to appreciate that huge costs are being imposed on a developing country like ours for undertaking climate actions," India submitted.



Bold remark: Union Minister of State for Environment Kirti Vardhan Singh during the COP29 event in Baku on Tuesday. AP

Countries are expected to update next year their voluntary commitments to curb emissions from the use of fossil fuel, known as Nationally Determined Contributions (NDC), the upper limit of carbon emissions that the atmosphere can support, to have a shot at preventing temperatures from going past the 1.5 degrees Celsius mark, it was likely to be breached by the end of the decade, India noted.

"It is imperative, therefore, that the developed countries show leadership in mitigation actions, as re-

quired under Paris Agreement, by not just advancing their net zero targets but providing enough carbon space for developing countries like ours to develop," the statement added.

Despite not being a contributor to the problem, countries in the Global South are bearing a huge financial burden on account of climate actions for mitigation on the one hand, and losses and damages caused by climate change on the other, thus severely limiting their capacity to meet their developmental needs, India underlined.

Paying 'huge costs' for climate action, says India at COP29

जलवायु कार्रवाई के लिए 'भारी कीमत'

चुका रहा है भारत,

COP29 में कहा

Countries have entered into final week of negotiations; India says that developed countries must show leadership in mitigation actions

देशों ने वार्ता के अंतिम सप्ताह में प्रवेश कर लिया

है; भारत का कहना है कि

विकसित देशों को शमन

कार्यों में नेतृत्व दिखाना

चाहिए

Study on Drug Treatment Optimisation for Blood Pressure in India

भारत में रक्तचाप के लिए दवाओं के उपचार अनुकूलन पर अध्ययन

- The Centre for Chronic Disease Control (CCDC), a non-profit organisation, announced the completion of a study on drug treatment optimisation for blood





pressure in **India** on **Tuesday**.

केंद्रीय विकार नियंत्रण केंद्र (CCDC), एक गैर-लाभकारी संगठन, ने भारत में रक्तचाप के लिए दवाओं के उपचार अनुकूलन पर अध्ययन के पूरा होने की घोषणा मंगलवार को की।

- The research tested the effectiveness of **three double anti-hypertensive pill combinations** in **South Asian populations** with **uncontrolled hypertension**.
अधिकारियों ने अविकसित उच्च रक्तचाप वाले दक्षिण एशियाई जनसंख्या में तीन डबल एंटी-हाइपरटेंसिव गोलियों के संयोजन की प्रभावशीलता की जांच की।
- The study was conducted over **two years** in collaboration with the **All India Institute of Medical Sciences (AIIMS)** and **Imperial College, London**.
यह अध्ययन दो वर्षों तक ऑल इंडिया इंस्टिट्यूट ऑफ मेडिकल साइंसेज (AIIMS) और इम्पीरियल कॉलेज, लंदन के साथ मिलकर किया गया।
- The study showed that all three combinations (**amlodipine and perindopril, amlodipine and indapamide, perindopril and indapamide**) were **equally effective** and **safe** in regulating blood pressure.
अध्यान में यह देखा गया कि तीनों संयोजन (एम्लोडिपिन और पेरिंडोप्रिल, एंलोडिपिन और इंडापामाइड, पेरिंडोप्रिल और इंडापामाइड) समान रूप से प्रभावी और सुरक्षित थे रक्तचाप को नियंत्रित करने में।
- The study revealed that **South Asians** account for **25% of the global population**, and **India alone** has over **300 million individuals** with high blood pressure.
अध्यान में यह खुलासा किया गया कि दक्षिण एशियाई वैश्विक जनसंख्या का **25%** हिस्सा हैं, और भारत में अकेले **300 मिलियन** से अधिक लोग उच्च रक्तचाप से पीड़ित हैं।
- This is the **first randomised study** to test the choice of anti-hypertensive drugs in South Asian populations.
यह पहला यादृच्छिक अध्ययन है जो दक्षिण एशियाई जनसंख्या में एंटी-हाइपरटेंसिव दवाओं के चयन को परीक्षण करता है।
- The key findings indicate that **blood pressure control was achieved** in approximately **70%** of the participants, with BP levels falling to **less than 140/90 mmHg**.
मुख्य निष्कर्ष बताते हैं कि **70%** प्रतिभागियों में रक्तचाप नियंत्रण प्राप्त किया गया, जिसमें रक्तचाप स्तर **140/90 mmHg** से कम हुआ।
- This is **five times the current BP control rates in India** with just a single pill.
यह भारत में वर्तमान रक्तचाप नियंत्रण दरों से पांच गुना अधिक है, जब केवल एक गोली का इस्तेमाल किया गया।
- All three combinations showed an **excellent safety profile**, with **less than 3%** of participants withdrawing due to **adverse effects**, proving the **tolerability** of the study drugs.
तीनों संयोजनों ने उत्कृष्ट सुरक्षा प्रोफाइल दिखाया, जिसमें **3%** से कम प्रतिभागियों ने प्रतिकूल प्रभावों के कारण वापसी की, जो अध्ययन दवाओं की सहिष्णुता को प्रमाणित करता है।



T.N. has highest number of women councillors: report

GS Paper I: Society

The Hindu Bureau

NEW DELHI

Nearly 46% of the councillors in India are women, and in 19 out of the 21 capital cities that have active urban local bodies, including Patna, Shimla, Ranchi and Bhubaneswar, the figure goes well over 60%.

Among the States, Tamil Nadu has the highest number of women councillors, according to a road map on urban transformation in India released on Tuesday.

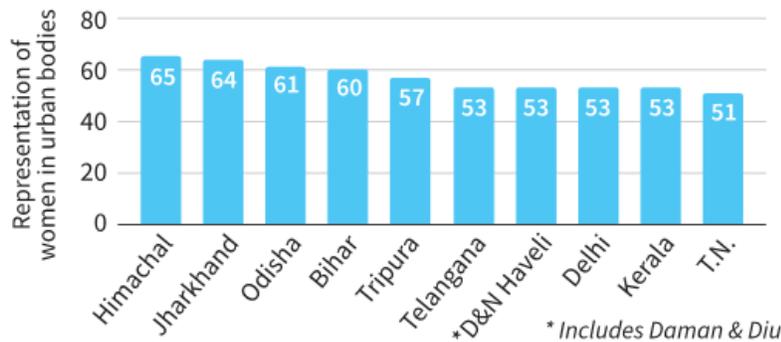
The other States in the top 10 are Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Uttar Pradesh, Kerala, Bihar and Chhattisgarh.

According to the report "Road map for India's city-systems reforms" by Janaagraha, a not-for-profit organisation, 17 States have legislated for 50% women's quota, over the constitutional minimum of 33%.

The road map offers three pathways for India's urban transformation, namely place-based gover-

Breaking the glass ceiling

Himachal Pradesh has the highest representation of women in urban local bodies (%)



nance of India's cities, decentralised participatory governance, and building State capacities.

It makes a strong case for implementing a rural-urban transition policy to facilitate planned urbanisation of fast-urbanising villages, highlighting that approximately 1,000 of them have already transitioned to cities since Census 2011.

In order to embed place-based governance in the governments, it makes an important recommendation to reimagine the Ministry of Housing and Ur-

ban Affairs and State Urban departments as Ministries or departments for regional economies and local governments, which are organised around regions and focused on strengthening local self-government institutions, and not just around sectors, schemes, and funding sources.

It reiterates the significance of strengthening local governments and facilitating citizen participation through the amendment and implementation of the 74th constitutional amendment.





T.N. has highest number of women councillors: report तमिलनाडु में सबसे ज्यादा महिला पार्षद हैं: रिपोर्ट

Women Councillors in India: Representation and Growth

भारत में महिला पार्षद: प्रतिनिधित्व और विकास

- **46%** of councillors in India are **women**, with **over 60%** women councillors in **19 out of 21 capital cities** that have active urban local bodies, including **Patna, Shimla, Ranchi,** and **Bhubaneswar**.

भारत में 46% पार्षद महिलाएं हैं, और 21 प्रमुख शहरों में से 19 शहरों में जहां शहरी स्थानीय निकाय सक्रिय हैं, 60% से अधिक महिला पार्षद हैं, जिनमें पटना, शिमला, रांची, और भुवनेश्वर शामिल हैं।

- Among states, **Tamil Nadu** has the highest number of women councillors.
राज्यों में, तमिलनाडु में सबसे अधिक महिला पार्षद हैं।
- The other states in the top 10 for women councillors are **Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Uttar Pradesh, Kerala, Bihar,** and **Chhattisgarh**.

महिला पार्षदों के मामले में शीर्ष 10 राज्यों में राजस्थान, मध्यप्रदेश, महाराष्ट्र, आंध्रप्रदेश, कर्नाटका, उत्तरप्रदेश, केरल, बिहार, और छत्तीसगढ़ शामिल हैं।

- According to the report "Road Map for India's City Systems Reforms" by **Janaagraha**, **17 states** have legislated for **50% women's quota**, over the constitutional minimum of **33%**.

जनाग्रह की रिपोर्ट "भारत के शहर-प्रणाली सुधारों के लिए रोड मैप" के अनुसार, 17 राज्यों ने 50% महिला कोटा का कानून बनाया है, जो संविधानिक न्यूनतम 33% से अधिक है।

- The roadmap offers **three pathways for urban transformation**:

1. **Place-based governance of India's cities,**
2. **Decentralised participatory governance,**
3. **Building state capacities.**

रोडमैप शहरी परिवर्तन के लिए तीन रास्ते प्रस्तुत करता है:

4. **भारत के शहरों का स्थान-आधारित शासन,**
5. **विकेन्द्रीकृत सहभागिता आधारित शासन,**
6. **राज्य की क्षमताओं का निर्माण।**

- It advocates for implementing a **rural-urban transition policy** to facilitate **planned urbanisation** of fast-urbanising villages, highlighting that approximately **1,000 villages** have already transitioned to cities since the **2011 Census**.

यह ग्रामीण-शहरी संक्रमण नीति को लागू करने का समर्थन करता है ताकि तेजी से शहरीकरण हो रहे गांवों का योजनाबद्ध शहरीकरण हो सके, और यह बताता है कि 2011 की जनगणना के बाद लगभग 1,000 गांव पहले ही शहरों में बदल चुके हैं।

- The roadmap recommends reimagining the **Ministry of Housing and Urban Affairs** and state urban departments as **ministries or departments for regional economies and local governments**, focusing on **regional organization** and strengthening **local self-government institutions**.



रोडमैप में आवास और शहरी मामले मंत्रालय और राज्य शहरी विभागों को क्षेत्रीय अर्थव्यवस्थाओं और स्थानीय सरकारों के मंत्रालयों या विभागों के रूप में पुनः कल्पना करने की सिफारिश की गई है, जो क्षेत्रीय संगठन पर ध्यान केंद्रित करते हैं और स्थानीय स्व-सरकार संस्थानों को मजबूत करते हैं।

- The report also emphasizes the importance of **strengthening local governments** and **facilitating citizen participation** through the amendment and implementation of the **74th constitutional amendment**.

रिपोर्ट में स्थानीय सरकारों को मजबूत करने और नागरिकों की भागीदारी को बढ़ावा देने के महत्व पर भी जोर दिया गया है, जो 74वें संविधान संशोधन के जरिए किया जाएगा।

Daniel Barenboim and Ali Abu Awwad presented Indira Gandhi Peace Prize

PCS
Kallol Bhattacharjee
NEW DELHI

The Indira Gandhi Prize for Peace, Disarmament, and Development for 2023 was presented to classical pianist and conductor Daniel Barenboim and Palestinian peace activist Ali Abu Awwad on Tuesday.

Mr. Barenboim was selected for his contribution to foster peace through musical and cultural dialogue initiatives and Mr. Awwad for his advocacy for dialogue through his organisation Roots, an outfit that he started after spending time in jail.

Accepting the prize, Mr. Awwad recounted that he was imprisoned in Israel in 1990 when he and his mother carried out a hunger strike for 17 days. "What makes us human is our ability to recognise each other and protect dignity. This is what makes us human," he said.



The Indira Gandhi Peace Prize was presented to Daniel Barenboim, left, and Ali Abu Awwad on Tuesday. SPECIAL ARRANGEMENT

He recounted that he was hurt when his brother was shot and killed by Israeli soldiers but he decided not to seek revenge. "Because I was strong enough to let go."

He recounted his meetings with Israeli victims who had died because of Palestinian attacks, and said that he found humanity among the Jewish victims of violence as well.

"I realised that my enemies were not just enemies. There was a tremen-

dous humanity behind. I could see the Jewish humanity," he said, adding, "Our non violence struggle for Palestinian struggle has to pass through Jewish hearts and not through Jewish bodies."

In his remark, Shivshankar Menon, former Foreign Secretary and member of the Indira Gandhi Memorial Trust, described the initiatives by Mr. Barenboim and Mr. Awwad as "exemplary". The event was held in virtual mode.

Daniel Barenboim and Ali Abu Awwad presented Indira Gandhi Peace Prize डैनियल बरेनबोइम और अली अबू अव्वाद ने इंदिरा गांधी शांति पुरस्कार प्रदान किया

Indira Gandhi Prize for Peace, Disarmament, and Development 2023

इंदिरा गांधी शांति, निरस्त्रीकरण और विकास पुरस्कार 2023

- The Indira Gandhi Prize for Peace, Disarmament, and Development for 2023 was awarded to classical pianist and conductor Daniel Barenboim and Palestinian peace activist Ali Abu Awwad on Tuesday.

2023 के लिए इंदिरा गांधी शांति, निरस्त्रीकरण और विकास पुरस्कार

क्लासिकल पियानोवादक और कंडक्टर

डैनियल बरेंबोइम और फिलिस्तीनी शांति कार्यकर्ता अली अबू अव्वाद को मंगलवार को प्रदान किया गया।





- **Daniel Barenboim** was selected for his efforts to foster peace through **musical and cultural dialogue** initiatives.
डैनियल बारेंबॉइम को संगीत और सांस्कृतिक संवाद के माध्यम से शांति को बढ़ावा देने के उनके प्रयासों के लिए चुना गया।
- **Ali Abu Awwad** was recognized for his advocacy for **dialogue** through his organization **Roots**, which he founded after spending time in jail.
अली अबू अwwाद को उनके संगठन रूट्स के माध्यम से संवाद के लिए पहचाना गया, जिसे उन्होंने जेल में समय बिताने के बाद स्थापित किया।
- While accepting the prize, Mr. **Awwad** recounted his imprisonment in **Israel in 1990** when he and his mother carried out a **17-day hunger strike**.
पुरस्कार स्वीकार करते हुए, श्री अwwाद ने 1990 में इज़राइल में अपनी गिरफ्तारी का उल्लेख किया, जब उन्होंने और उनकी मां ने 17 दिन का अनशन किया था।
- He emphasized that what makes us human is our ability to recognize each other and protect **dignity**.
उन्होंने कहा कि जो हमें इंसान बनाता है वह एक-दूसरे को पहचानने और आदर की रक्षा करने की हमारी क्षमता है।
- He recalled the pain of his brother being killed by **Israeli soldiers**, but he chose not to seek revenge, stating, "**I was strong enough to let go.**"
उन्होंने अपने भाई के इज़राइली सैनिकों द्वारा मारे जाने का दर्द याद किया, लेकिन उन्होंने प्रतिशोध न लेने का फैसला किया, और कहा, "मैं इतना मजबूत था कि छोड़ दिया।"
- Mr. **Awwad** also shared his meetings with **Israeli victims** of Palestinian attacks, and stated that he found **humanity** even among the **Jewish victims of violence**.
श्री अwwाद ने फिलिस्तीनी हमलों के इज़राइली पीड़ितों से अपनी मुलाकातों के बारे में भी साझा किया, और कहा कि उन्होंने हिंसा के शिकार यहूदी पीड़ितों के बीच भी मानवता पाई।
- He stated, "Our **non-violence** struggle for Palestinian freedom must pass through **Jewish hearts**, not through **Jewish bodies**."
उन्होंने कहा, "हमारा अहिंसा संघर्ष फिलिस्तीनी स्वतंत्रता के लिए यहूदी दिलों से होकर गुजरना चाहिए, यहूदी शरीरों से नहीं।"
- **Shivshankar Menon**, former Foreign Secretary and member of the **Indira Gandhi Memorial Trust**, described the initiatives by Mr. Barenboim and Mr. Awwad as "**exemplary**".
शिवशंकर मेनन, पूर्व विदेश सचिव और इंदिरा गांधी मेमोरियल ट्रस्ट के सदस्य, ने श्री बारेंबॉइम और श्री अwwाद की पहलों को "उदाहरणीय" बताया।
- The award ceremony was conducted in **virtual mode**.
यह पुरस्कार समारोह वर्चुअल मोड में आयोजित किया गया।



Bima Sugam will help curb insurance mis-selling: IRDAI chief

GS Paper III: Banking Sector

The Hindu Bureau
MUMBAI

A day after Finance Minister Nirmala Sitharaman flagged 'forced selling' of insurance products by banks, the chairperson of the Insurance Regulatory and Development Authority of India (IRDAI) Debasish Panda said that the new Bima Sugam platform would help resolve the issue to an extent.

Bima Sugam, backed by the IRDAI, is a digital platform showcasing insurance products for customers to choose from.

Mr. Panda, however, maintained that selling insurance through banks was a "useful system."

"Banks, with a long-standing and continuous



Debasish Panda

relationship with customers, offer a unique opportunity to build trust and enhance distribution efficiency, creating a robust ecosystem for inclusion," he said on the second day of the SBI Banking and Economics Conclave 2024, here on Tuesday. He, however, admitted there were glitches in the system that required attention.

करेगा।

- **Bima Sugam**, supported by the IRDAI, is a digital platform that showcases insurance products for customers to choose from.
बीमा सुगम, जिसे IRDAI द्वारा समर्थन प्राप्त है, एक डिजिटल प्लेटफॉर्म है जो ग्राहकों को चुनने के लिए बीमा उत्पाद प्रदर्शित करता है।
- Mr. Panda emphasized that selling insurance through banks was a "useful system". श्री पांडा ने जोर दिया कि बैंकों के माध्यम से बीमा बेचना एक "उपयोगी प्रणाली" है।
- He added that banks, with their longstanding relationships with customers, offer a unique opportunity to build trust and improve distribution efficiency, creating a robust ecosystem for inclusion.

Bima Sugam will help curb insurance mis-selling: IRDAI chief

बीमा सुगम से बीमा की गलत बिक्री पर लगाम लगेगी:

IRDAI प्रमुख

Finance Minister Flags 'Forced Selling' of Insurance Products

वित्त मंत्री ने बीमा उत्पादों की 'मजबूरी में बिक्री' का मुद्दा उठाया

• Finance Minister Nirmala Sitharaman flagged the issue of "forced selling" of insurance products by banks.

वित्त मंत्री निर्मला सीतारमण ने बैंकों द्वारा बीमा उत्पादों की 'मजबूरी में बिक्री' का मुद्दा उठाया।

• In response, the chairperson of the Insurance Regulatory and Development Authority of India (IRDAI), Debasish Panda, said that the new Bima Sugam platform would help address the issue to some extent.

इसके जवाब में, भारतीय बीमा विनियामक और विकास प्राधिकरण (IRDAI) के अध्यक्ष देबाशीष पांडा ने कहा कि नया बीमा सुगम प्लेटफॉर्म इस समस्या को कुछ हद तक हल करने में मदद





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उन्होंने जोड़ा कि बैंक, जो ग्राहकों के साथ दीर्घकालिक संबंध रखते हैं, विश्वास बनाने और वितरण दक्षता में सुधार करने का एक अद्वितीय अवसर प्रदान करते हैं, जिससे समावेशन के लिए एक मजबूत पारिस्थितिकी तंत्र बनता है।

- Mr. Panda was speaking on the second day of the **SBI Banking and Economics Conclave 2024** held on Tuesday.
- श्री पांडा **SBI बैंकिंग और इकोनॉमिक्स कॉन्क्लेव 2024** के दूसरे दिन मंगलवार को बोल रहे थे।
- He acknowledged that there were **glitches** in the system that required attention.
- उन्होंने स्वीकार किया कि प्रणाली में कुछ **गड़बड़ियाँ** थीं जिन्हें ध्यान देने की आवश्यकता थी।

Second Baltic Sea telecom cable damaged, says Sweden

PCS

Agence France-Presse
STOCKHOLM

A Swedish government minister said on Tuesday that the country was investigating a damaged telecommunications undersea cable linking Lithuania and Sweden, a day after the announcement that a cable linking Finland and Germany was cut in what Berlin considers “sabotage”.

Minister for Civil Defence Carl-Oskar Bohlin said in a written statement that it was “crucial to clarify why we currently have

Germany and Finland said they launched a probe into damage, warning of the threat of ‘hybrid warfare’

two cables in the Baltic Sea that are not working”.

Mr. Bohlin added that “relevant Swedish authorities are investigating the events”.

The “Arelion” submarine cable between the Swedish island of Gotland and Lithuania has been damaged since Sunday

morning, a spokesperson for the Lithuanian branch of the operator Telia said on Tuesday.

Internet traffic has been redirected to other international links, Audrius Stasiulaitis said.

On Monday, Finnish operator Cinia reported that a cable connecting Helsinki and the German port of Rostock had been cut for unknown reasons.

Germany and Finland subsequently said they had launched a probe into the damage, warning of the threat of “hybrid warfare”.

Second Baltic Sea telecom cable damaged, says Sweden

स्वीडन ने कहा कि बाल्टिक सागर में दूसरी दूरसंचार केबल क्षतिग्रस्त हो गई है

Website: patrioticias.in
Telegram Channel: <https://t.me/patrioticIAS>





Sweden Investigates Damaged Telecommunications Cable

स्वीडन ने क्षतिग्रस्त दूरसंचार केबल की जांच शुरू की

- A **Swedish government minister** announced that Sweden is investigating a **damaged telecommunications undersea cable** linking **Lithuania** and **Sweden**.
स्वीडन के एक सरकारी मंत्री ने घोषणा की कि स्वीडन लिथुआनिया और स्वीडन को जोड़ने वाले दूरसंचार केबल के समुद्र के नीचे के लिंक की जांच कर रहा है।
- This announcement came a day after the discovery that a cable linking **Finland** and **Germany** was **cut**, which **Berlin** considers an act of **“sabotage”**.
यह घोषणा उस दिन के बाद आई जब यह पता चला कि **फिनलैंड** और **जर्मनी** को जोड़ने वाला एक केबल **कट** कर दिया गया था, जिसे **बर्लिन** ने **“विध्वंस”** का कृत्य माना है।
- **Carl-Oskar Bohlin**, the **Minister for Civil Defence**, stated that it was **“crucial to clarify why we currently have two cables in the Baltic Sea that are not working”**.
कार्ल-ऑस्कर बोह्लिन, नागरिक सुरक्षा मंत्री, ने कहा कि यह **“महत्वपूर्ण है कि हम स्पष्ट करें कि क्यों वर्तमान में बाल्टिक सागर में दो केबल काम नहीं कर रहे हैं”**।
- **Mr. Bohlin** confirmed that **relevant Swedish authorities** are investigating the events.
श्री बोह्लिन ने पुष्टि की कि संबंधित स्वीडिश प्राधिकरण इन घटनाओं की जांच कर रहे हैं।
- The **Arelion submarine cable**, linking the Swedish island of **Gotland** and **Lithuania**, has been damaged since **Sunday morning**.
एरेलियन सबमरीन केबल, जो स्वीडन के द्वीप **गोटलैंड** और **लिथुआनिया** को जोड़ता है, **रविवार सुबह** से क्षतिग्रस्त है।
- A spokesperson for the Lithuanian branch of **Telia**, the operator of the cable, reported that **Internet traffic** has been redirected to other international links.
टेलिया के लिथुआनियाई शाखा के एक प्रवक्ता ने रिपोर्ट किया कि **इंटरनेट ट्रैफिक** को अन्य अंतरराष्ट्रीय लिंक पर पुनर्निर्देशित किया गया है।
- On **Monday**, **Finnish operator Cinia** reported that a cable connecting **Helsinki** and the German port of **Rostock** had been **cut** for unknown reasons.
सोमवार को, **फिनिश ऑपरेटर सीनिया** ने रिपोर्ट किया कि **हेलसिंकी** और जर्मन बंदरगाह **रोस्टॉक** को जोड़ने वाला एक केबल **कट** गया था, इसके कारण अज्ञात थे।
- Both **Germany** and **Finland** have launched an investigation into the damage, warning of the threat of **“hybrid warfare”**.
जर्मनी और **फिनलैंड** दोनों ने नुकसान की जांच शुरू की है, और **“हाइब्रिड युद्ध”** के खतरे की चेतावनी दी है।



Act fast to mitigate a disaster in Teesta Valley, groups urge PM, CMs

Two community-based organisations, Save The Hills and the Darjeeling Himalaya Initiative, said the Teesta river poses serious threats to both Sikkim and West Bengal each monsoon season. However, the two States have limited their responses to within their borders instead of approaching disasters at a landscape level

GS Paper III: Disaster Management

Rahul Karmakar
GUWAHATI

The Teesta Valley has only six months before the 2025 monsoon aggravates the damage wrought by the disastrous glacial lake outburst flood (GLOF) in October 2023, two community-based green Himalayan organisations have warned the government.

The 2023 GLOF and the subsequent NHPC, Ltd. power project dam breach claimed more than a hundred lives, disrupted livelihoods, and destroyed assets and critical military installations, apart from ecological devastation in its wake across Sikkim and West Bengal.

The two governments have allegedly been working in silos, concerned only about areas within their respective boundaries instead of treating it as a larger issue at a landscape level.

"With only six months remaining before the 2025 monsoon, there is an urgent need to implement both structural and non-structural mitigation measures throughout the Teesta Valley," a memorandum by the Kalimpong-based Praful Rao of 'Save The Hills' and Roshan Rai of the Darjeeling Himalaya Initiative (DHI) said on November 18. "The implementation of effective measures in Sikkim and West Bengal now can significantly reduce the impact of future floods."

A copy each was addressed to Prime Minister Narendra Modi, Sikkim Chief Minister Prem Singh Tamang, and his West Bengal counterpart Mamata Banerjee. The memorandum bears the signatures of 290 citizens working to raise awareness about landslides in the Darjeeling-Sikkim Himalaya.

"Central assistance will be imperative because the scale and complexity of the problem cannot be tackled at the State level," they said.

Call for a joint committee

The duo lamented that the response from the State and Central authorities to the GLOF has been inadequate despite the scale of the disaster, especially for long-term rehabilitation and restorative interventions at the relief, infrastructure, and ecological levels.

They said the Teesta River poses serious threats to both Sikkim and West Bengal each monsoon season. The two States thus need to approach disasters at a landscape level instead of limiting their focus to within their respective boundaries.

"A Sikkim-West Bengal joint committee could address common issues and implement coordinated disaster management strategies that benefit both the States and areas beyond," Mr. Rao, also a member of the DHI, told *The Hindu*.

Mr. Rao and Mr. Rai suggested the formation of a task force of experts drawn



A view of Teesta Bazaar in West Bengal, which has been sinking further into the ground since the glacial lake outburst flood in 2023. SPECIAL ARRANGEMENT

from geo-hydrology, environmental science, engineering, and sociology to address the multiple challenges brought about by the GLOF. "This task force must develop a comprehensive action plan that includes technical, financial, and social solutions for restoring and fortifying the region," they said.

They cited the case of 65 families in the Teesta Valley, in the Kalimpong district of West Bengal, that were displaced by the GLOF-induced flash floods and continue to reside in relief camps.

"For these people who depended on the river for their survival, displacement has worsened their economic stability, and everyday existence becomes a struggle for survival. Prolonged uncertainty worsens their mental distress, highlighting the urgent need for targeted interventions to restore their houses and livelihoods," they said.

They added that several areas along the Teesta River have been sinking since the 2023 disaster. Among the most vulnerable is Teesta Bazaar in West Bengal.

"The NHIO, the lifeline of Kalimpong and Sikkim, remains perilously unstable for much of the monsoon season and diversion of traffic via alternative routes adds avoidable burden on transport services, infrastructure as well as the communities along the route," they said.

"These vulnerabilities were exposed again almost throughout the 2024

The 2023 GLOF and subsequent power project dam breach claimed more than a hundred lives, disrupted livelihoods, and destroyed assets and critical military installations in its wake across Sikkim and West Bengal

monsoon season and have severely reduced the tourist traffic to the region impacting the economy of the Sikkim and Darjeeling Himalayas."

Stress on land-use planning

Mr. Rao and Mr. Rai suggested sustainable engineering solutions to protect low-lying areas from river overflow and re-channelising the Teesta River – disrupted by debris built up by the GLOF – to prevent further damage to urban areas and infrastructure. The NHPC's technical expertise can be instrumental in deepening, widening, and redirecting the river to safer channels, they added.

The duo underscored the need to repair and strengthen damaged roads and bridges that have cut off many communities, hindering both economic activity and disaster relief efforts.

They also suggested that the reinforcement of evacuation centres and relief camps with backup solar power to ensure they remain operational in the

event of future emergencies.

The duo stressed land-use planning and zoning as "certain low-lying areas will remain high-risk zones even with structural protections" in place. "These areas should be designated for potential evacuation and resettlement of at-risk communities. Adequate compensation as decided by the expert group should be provided to affected victims and necessary support given to those relocating," they said.

"Non-structural mitigation measures such as early warning systems and communication networks are no less important," Mr Rao said.

"Installing automated flood early warning systems that deliver real-time alerts through sirens and mobile networks is crucial. Backup communication methods, such as ham radios and walkie-talkies operated by trained personnel, should also be implemented to ensure effective communication during emergencies," he said.

Other measures suggested included awareness and risk management campaigns to build capacities and resilience during disasters, post-disaster financial recovery support, and an aggressive afforestation programme to restore the valley's ecosystem, prevent soil erosion, and help regulate the river's flow.

THE GIST

The Sikkim and West Bengal governments have allegedly been working in silos, concerned only about areas within their respective boundaries instead of treating it as a larger issue at a landscape level

Kalimpong-based Praful Rao of 'Save The Hills' and Roshan Rai of the Darjeeling Himalaya Initiative said the Teesta River poses serious threats to both Sikkim and West Bengal each monsoon season

They added that several areas along the Teesta River have been sinking since the 2023 disaster. Among the most vulnerable is Teesta Bazaar in West Bengal





Act fast to mitigate a disaster in Teesta Valley, groups urge PM, CMs

तीस्ता घाटी में आपदा को कम करने के लिए तेजी से कार्रवाई करें, समूहों ने प्रधानमंत्री और मुख्यमंत्रियों से किया आग्रह

Two community-based organizations, Save The Hills and the Darjeeling Himalaya Initiative, said the Teesta river poses serious threats to both Sikkim and West Bengal each monsoon season. However, the two States have limited their responses to within their borders instead of approaching disasters at a landscape level

दो समुदाय-आधारित संगठनों, सेव द हिल्स और दार्जिलिंग हिमालय इनिशिएटिव ने कहा कि तीस्ता नदी हर मानसून के मौसम में सिक्किम और पश्चिम बंगाल दोनों के लिए गंभीर खतरा पैदा करती है। हालांकि, दोनों राज्यों ने आपदाओं से निपटने के लिए भू-दृश्य स्तर पर कदम उठाने के बजाय अपनी प्रतिक्रिया को अपनी सीमाओं के भीतर ही सीमित रखा है।

Teesta Valley Faces Urgent Need for Mitigation Measures

तीस्ता घाटी में तुरंत उपायों की आवश्यकता

- The **Teesta Valley** has only **six months** before the **2025 monsoon** aggravates the damage caused by the **glacial lake outburst flood (GLOF)** in **October 2023**.
**तीस्ता घाटी के पास केवल छह महीने हैं इससे पहले कि 2025 का मानसून अक्टूबर 2023 में हुए ग्लेशियल लेक आउटबर्स्ट फ्लड (GLOF) द्वारा हुए नुकसान को और बढ़ा दे।
- The **2023 GLOF** and the subsequent breach of the **NHPC Ltd. power project dam** resulted in more than **100 deaths**, disrupted livelihoods, and caused damage to critical **military installations** in **Sikkim and West Bengal**.
2023 का GLOF और उसके बाद **NHPC लिमिटेड पावर प्रोजेक्ट डैम** का टूटना, **100 से अधिक मौतों**, आजीविका का नुकसान, और **सिक्किम और पश्चिम बंगाल** में महत्वपूर्ण सैन्य प्रतिष्ठानों को हुए नुकसान का कारण बना।
- The governments of both states have allegedly been working **in silos**, focusing only on areas within their boundaries, instead of treating the issue at a larger **landscape level**.
दोनों राज्यों की सरकारों पर आरोप है कि वे **साइलो में काम कर रही हैं**, केवल अपनी सीमाओं के भीतर के क्षेत्रों पर ध्यान केंद्रित कर रही हैं, बजाय कि इसे एक बड़े **लैंडस्केप स्तर** पर देखने के।
- A memorandum by **Praful Rao** of **Save The Hills** and **Roshan Rai** of the **Darjeeling Himalaya Initiative (DHI)** warned of the urgent need for **structural and non-structural mitigation measures** across the Teesta Valley.





'सेव द हिल्स' के प्रफुल राव और दार्जिलिंग हिमालय इनिशिएटिव (DHI) के रोशन राय द्वारा एक स्मारक पत्र में तीस्ता घाटी में संरचनात्मक और गैर-संरचनात्मक उपायों की तत्काल आवश्यकता की चेतावनी दी गई।

- The memorandum, addressed to **Prime Minister Narendra Modi, Sikkim Chief Minister Prem Singh Tamang, and West Bengal Chief Minister Mamata Banerjee**, also highlighted the involvement of **290 citizens** working on **landslide awareness**. यह स्मारक पत्र प्रधानमंत्री नरेंद्र मोदी, सिक्किम के मुख्यमंत्री प्रेम सिंह तामांग, और पश्चिम बंगाल की मुख्यमंत्री ममता बनर्जी को संबोधित किया गया, जिसमें **290 नागरिकों** की भागीदारी को भी उजागर किया गया जो **landslide जागरूकता** पर काम कर रहे हैं।
- The two organisations emphasized that **central assistance** is essential as the **scale and complexity** of the issue cannot be managed at the **state level** alone. दोनों संगठनों ने **केंद्रीय सहायता** की आवश्यकता को प्रमुख रूप से बताया क्योंकि समस्या के **आकार और जटिलता** को केवल **राज्य स्तर** पर हल नहीं किया जा सकता।
- The response from both **state and central authorities** to the GLOF disaster has been **inadequate**, particularly for **long-term rehabilitation and restorative interventions**. राज्य और केंद्रीय प्राधिकरणों से GLOF आपदा पर प्रतिक्रिया अपर्याप्त रही है, खासकर दीर्घकालिक पुनर्वास और पुनर्स्थापना उपायों के लिए।
- The **Teesta River** poses a serious threat each monsoon season to both **Sikkim and West Bengal**. The two states need to address disasters **at a landscape level**, not just within their own borders. तीस्ता नदी प्रत्येक मानसून सीजन में **सिक्किम और पश्चिम बंगाल** दोनों के लिए गंभीर खतरा उत्पन्न करती है। दोनों राज्यों को आपदाओं का समाधान **लैंडस्केप स्तर** पर करना चाहिए, न कि केवल अपनी सीमाओं के भीतर।
- The organisations proposed the formation of a **joint committee** between **Sikkim and West Bengal** to address common issues and implement coordinated **disaster management strategies**. संगठनों ने **सिक्किम और पश्चिम बंगाल** के बीच एक **संयुक्त समिति** बनाने का प्रस्ताव दिया है, जो सामान्य मुद्दों को हल करने और समन्वित आपदा प्रबंधन रणनीतियाँ लागू करने में मदद करेगी।
- A **task force** consisting of experts from **geo-hydrology, environmental science, engineering, and sociology** should be created to tackle the challenges caused by the GLOF, with a comprehensive **action plan**. GLOF द्वारा उत्पन्न समस्याओं से निपटने के लिए **भू-जलविज्ञान, पर्यावरण विज्ञान, इंजीनियरिंग, और सामाजिक विज्ञान** के विशेषज्ञों से बनी एक **टास्क फोर्स** बनाई जानी चाहिए, जिसके पास एक व्यापक क्रियावली योजना हो।

Displacement and Vulnerabilities in Teesta Valley

तीस्ता घाटी में विस्थापन और संवेदनशीलताएँ

- **65 families** in the **Teesta Valley** of **Kalimpong district, West Bengal** were displaced by the **GLOF-induced flash floods** and are still residing in **relief camps**.





सिक्किम के कैलिमपोंग जिले, पश्चिम बंगाल के 65 परिवार GLOF-प्रेरित बाढ़ों से विस्थापित हो गए थे और वे अभी भी राहत शिविरों में रह रहे हैं।

- Displacement has worsened the **economic stability** of these families, and their **daily existence has become a struggle for survival**. Prolonged uncertainty is also causing **mental distress**.

विस्थापन ने इन परिवारों की **आर्थिक स्थिति** को और खराब कर दिया है, और उनका **दैनिक जीवन अस्तित्व के संघर्ष** में बदल चुका है। लंबी अनिश्चितता से **मानसिक तनाव** भी बढ़ रहा है।

- There is an **urgent need for targeted interventions** to restore their homes and livelihoods.

इनके घरों और आजीविकाओं को फिर से स्थापित करने के लिए **लक्षित उपायों की तत्काल आवश्यकता** है।

- Several areas along the **Teesta River** have been sinking since the **2023 GLOF**, with **Teesta Bazaar** in **West Bengal** being one of the most vulnerable areas.

2023 GLOF के बाद **तीस्ता नदी** के किनारे कई क्षेत्र **डूब रहे हैं**, जिसमें **पश्चिम बंगाल का तीस्ता बाजार** सबसे संवेदनशील क्षेत्र है।

- **NH10**, the lifeline for **Kalimpong** and **Sikkim**, remains **unstable** for most of the monsoon season, causing **traffic diversions** and placing a burden on **transport services** and **infrastructure**.

NH10, जो **कैलिमपोंग** और **सिक्किम** की जीवनरेखा है, अधिकांश मानसून सीजन के लिए **अस्थिर** रहता है, जिससे **यातायात डायवर्सन** और **परिवहन सेवाओं** और **बुनियादी ढांचे** पर अतिरिक्त दबाव पड़ता है।

- These vulnerabilities were exposed again in the **2024 monsoon**, which significantly reduced **tourist traffic**, impacting the economy of the **Sikkim** and **Darjeeling Himalayas**.

2024 के **मानसून** में इन **संवेदनशीलताओं** का फिर से खुलासा हुआ, जिससे **पर्यटक यातायात** में कमी आई और **सिक्किम** और **दार्जिलिंग हिमालय** की अर्थव्यवस्था पर प्रतिकूल प्रभाव पड़ा।

Stress on Land-Use Planning and Engineering Solutions

भूमि उपयोग योजना और इंजीनियरिंग उपायों पर ध्यान केंद्रित

- **Sustainable engineering solutions** are needed to protect **low-lying areas** from river overflow, including the **re-channeling of the Teesta River**, which was disrupted by debris from the GLOF.

नदी के अधिक बहाव से बचाने के लिए सतत इंजीनियरिंग उपायों की आवश्यकता है, जिसमें **तीस्ता नदी** का फिर से **चैनलाइजेशन** शामिल है, जो GLOF से जमा मलबे द्वारा बाधित हो गई थी।

- The **NHPC's technical expertise** can play a crucial role in **deepening, widening, and redirecting the river** to safer channels.

NHPC की तकनीकी विशेषज्ञता **नदी को गहरा करने, चौड़ा करने और उसे सुरक्षित चैनलों की ओर मोड़ने** में महत्वपूर्ण भूमिका निभा सकती है।

- There is a need to repair and strengthen **damaged roads** and **bridges** that have isolated many communities, hindering both **economic activities** and **disaster relief**





efforts.

नुकसान पहुंचे रास्तों और पुलों को मरम्मत और मजबूती देने की आवश्यकता है, जो कई समुदायों को अलग-थलग कर चुके हैं, जिससे आर्थिक गतिविधियाँ और आपदा राहत प्रयास बाधित हो रहे हैं।

- **Reinforcing evacuation centers and relief camps with backup solar power** is suggested to ensure they remain operational during future emergencies.

निकासी केंद्रों और राहत शिविरों को बैकअप सौर ऊर्जा से मजबूत करने का सुझाव दिया गया है ताकि वे भविष्य की आपात स्थितियों में कामकाजी बने रहें।

- Land-use planning and zoning are essential, as certain **low-lying areas** will remain **high-risk zones**, even with structural protections.
भूमि उपयोग योजना और जोनिंग महत्वपूर्ण हैं, क्योंकि कुछ निचले क्षेत्रों में उच्च-जोखिम क्षेत्र रहेंगे, भले ही संरचनात्मक सुरक्षा मौजूद हो।
- **Evacuation and resettlement** of at-risk communities should be planned for high-risk zones. **Adequate compensation**, as decided by an expert group, should be provided to affected victims.

उच्च-जोखिम क्षेत्रों में विस्थापित और पुनर्वास की योजना बनानी चाहिए। प्रभावित पीड़ितों को विशेषज्ञ समूह द्वारा तय की गई उचित मुआवजा दी जानी चाहिए।

Non-Structural Mitigation and Early Warning Systems

गैर-संरचनात्मक उपाय और प्रारंभिक चेतावनी प्रणाली

- **Non-structural mitigation measures**, such as **early warning systems** and **communication networks**, are crucial for disaster preparedness.
गैर-संरचनात्मक उपाय, जैसे प्रारंभिक चेतावनी प्रणालियाँ और संचार नेटवर्क, आपदा की तैयारी के लिए महत्वपूर्ण हैं।
- Installing **automated flood early warning systems** that provide real-time alerts through **sirens** and **mobile networks** is essential. Backup communication tools, like **ham radios** and **walkie-talkies**, should also be used during emergencies.
स्वचालित बाढ़ प्रारंभिक चेतावनी प्रणाली स्थापित करना, जो सायरन और मोबाइल नेटवर्क के माध्यम से वास्तविक समय में अलर्ट प्रदान करती है, आवश्यक है। आपात स्थितियों में हैम रेडियो और वाकी-टॉकी जैसे बैकअप संचार उपकरणों का भी उपयोग किया जाना चाहिए।
- Awareness and **risk management campaigns** are important to build **disaster resilience**. Post-disaster **financial recovery support** and a focused **afforestation program** to restore the valley's ecosystem are also suggested.

**जागरूकता और जोखिम प्रबंधन अभियान आपदा से लचीलापन बनाने के लिए महत्वपूर्ण हैं। आपदा के बाद वित्तीय पुनर्प्राप्ति समर्थन और घाटी के पारिस्थितिकी तंत्र को पुनर्स्थापित करने के लिए एक केंद्रित वृक्षारोपण कार्यक्रम भी सुझाया गया है।



Trouble standing still



The base of a two wheeler is very narrow, hence any slight disturbance will push the **line of action** outside base area, leading to the vehicle becoming imbalanced. KSL

GS Paper III: S&T



Q: Why is it difficult to balance a stationary two-wheeler?

A: Stationary objects experience only the gravitational force. Such objects can be balanced

only when the line of action — the line connecting the centre of gravity of the object towards the earth — touches the ground at a point within the base of the object. If the base area is large, slight deviations due to external forces such as the wind will not push this point out of the base. So it is easy to balance such objects. In the case of a two wheeler, the base is very narrow, limited to the thin strip connecting the two points where the wheels touch the ground. Hence any slight disturbance will push the line of action outside the base area,

leading to the vehicle becoming imbalanced.

When the two-wheeler is moving, the situation is entirely different. In addition to gravity there is another force exerted by the engine, acting in the forward direction.

The resultant of these two forces is still in the forward direction and thus the vehicle moves forward independent of where the line of action touches the ground. This is why it's easier to balance a moving vehicle.

For feedback and suggestions

for 'Science', please write to science@thehindu.co.in with the subject 'Daily page'

गुरुत्वाकर्षण केंद्र से पृथ्वी तक की रेखा) ज़मीन पर वस्तु के आधार क्षेत्र के भीतर टकराती है।

- A large base area can absorb slight disturbances, such as **wind**, without pushing the point of action outside the base, making it easier to balance the object.

एक बड़ा आधार क्षेत्र हल्की हलचलों, जैसे हवा, को अवशोषित कर सकता है, बिना क्रिया बिंदु को आधार से बाहर धकेलने के, जिससे वस्तु को संतुलित करना आसान हो जाता है।

- In contrast, the base of a **two-wheeler** is very narrow, limited to the thin strip connecting the two points where the wheels touch the ground.

इसके विपरीत, एक दोपहिया वाहन का आधार बहुत संकीर्ण होता है, जो दो बिंदुओं को जोड़ने वाली पतली पट्टी तक सीमित होता है, जहां पहिए ज़मीन से टकराते हैं।

- Any slight disturbance, such as wind or a shift in weight, can push the line of action outside the base area, making the vehicle become **imbalanced**.

किसी भी हल्की हलचल, जैसे हवा या वजन में बदलाव, क्रिया रेखा को आधार क्षेत्र से बाहर धकेल सकती है, जिससे वाहन असंतुलित हो जाता है।

Trouble standing still

स्थिर खड़े रहने में परेशानी

Why is it difficult to balance a stationary two-wheeler?

स्थिर दोपहिया वाहन को संतुलित करना क्यों मुश्किल होता है?

- Stationary objects experience only the **gravitational force**. These objects can be balanced only when the **line of action** (the line connecting the center of gravity of the object to the Earth) touches the ground within the **base area** of the object.

स्थिर वस्तुएं केवल गुरुत्वाकर्षण

बल का अनुभव करती हैं। ऐसी

वस्तुएं तब ही संतुलित की जा

सकती हैं जब क्रिया रेखा (वस्तु के





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Why it's easier to balance a moving two-wheeler?

चलते हुए दोपहिया वाहन को संतुलित करना क्यों आसान है?

- When the two-wheeler is moving, in addition to gravity, the engine exerts a **forward force**.
जब दोपहिया वाहन चल रहा होता है, तो गुरुत्वाकर्षण के अलावा, इंजन एक **आगे की दिशा में बल** डालता है।
- The resultant of the **gravitational force** and the **forward force** is still in the forward direction, allowing the vehicle to move forward regardless of where the line of action touches the ground.
गुरुत्वाकर्षण बल और आगे के बल का संयुक्त परिणाम अभी भी आगे की दिशा में होता है, जिससे वाहन आगे बढ़ता है, चाहे क्रिया रेखा ज़मीन पर कहां भी टकराए।
- This forward motion allows for **easier balance** because the vehicle doesn't rely solely on the narrow base area for stability.
यह आगे की गति **आसान संतुलन** को सक्षम बनाती है क्योंकि वाहन केवल संकीर्ण आधार क्षेत्र पर स्थिरता के लिए निर्भर नहीं रहता।

