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Daily News Feed

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Rain fury causes massive damage in Kerala's Idukki

Water level in Mullaperiyar dam rises overnight, prompting T.N. to open all 13 shutters; flash floods and landslips were reported at many places; rescue operations save people trapped inside houses

Sandeep Vellaram
IDUKKI

The high-range villages of the hill district of Kerala's Idukki witnessed extremely heavy rainfall on Friday night and Saturday morning, causing widespread damage. The water level rose by nearly 6 ft in the Mullaperiyar dam, prompting Tamil Nadu to open all 13 shutters.

The rain that began on Friday night caused flash floods, landslips, and mudslides in Kumily, Chakkupallam, Vandanmedu, Karunapuram, and Nedumkandam panchayats, as well as the Kattappana municipality.

Heavy rain flooded many shops and houses in the district, including at Cumbummettu, Balagram, Thookkupalam, Kumily, Balanpillai City, and Koottar. A reported landslip at Puttady, near Puliyanmala, disrupted traffic on the Kumily-Munnar route. Widespread damage was reported from Kunthalampara, near Kattappana, following a landslip.

On Friday night, the Kottarakkara-Dindigul National Highway was inundated at Kumily. A four-member family trapped in a waterlogged house at Kumily was rescued after sig-



Rain havoc: A vehicle being washed away after water level rose in the Koottar river. SPECIAL ARRANGEMENT

nificant efforts. At Mundi-yeruma in Nedumkandam, local people rescued another family trapped in a waterlogged house.

Five vehicles, including a parked one, were washed away at Koottar, near Nedumkandam, after the water level rose in the Koottar river. A bridge was also damaged in the area.

Brimming water level

The water level in the Mullaperiyar dam, which stood at 132.9 ft at 11 p.m. on Friday, rose to 136 ft by 3 a.m. on Saturday. It further increased to 137.7 ft at 7 a.m. Tamil Nadu opened all 13 spillway shutters of the dam, releasing 7,305 cusecs into the Periyar riv-

er. The water level in the dam was 138.9 ft at 5 p.m.

The water level in the Idukki reservoir on Saturday morning stood at 2,381.82 ft. The upper rule level is 2,398.96 ft. The shutters for the Kallar, Pambala, and Kallarkutty dams were also opened.

According to the district administration, Udumbanchola taluk received rainfall of 82.8 mm, Peerumade taluk 28 mm, Devikulam taluk 35.4 mm, Idukki taluk 38.8 mm, and Thodupuzha taluk 85.4 mm in the past 24 hours.

High range areas hit

The high-range areas of Pathanamthitta, Ernakulam, and Kozhikode dis-

tricts also witnessed heavy rainfall, resulting in flooding at many places. As a precautionary measure, the shutters of the Kallarkutty dam were raised, releasing around 500 cusecs. In addition, four shutters of the Kallar dam were raised by 60 cm, releasing 1,063 cusecs.

Authorities have alerted people living along the banks of the Kallar and Chinnar rivers about rising water levels.

Four shutters of the Malankara diversion dam also remained open. The inflow to the dam depends on the water released after power generation at the Kerala State Electricity Board's Moolamattom plant.

Extreme rainfall triggered flash floods and landslides across Kerala's Idukki district, raising the Mullaperiyar dam's water level sharply. All 13 shutters were opened, flooding nearby areas. Rescue operations were carried out to save trapped families.

Relevance: Illustrates India's vulnerability to extreme weather events and highlights the need for better dam management and early-warning systems.

Hindi Summary:

केरल के इडुक्की जिले में अत्यधिक वर्षा से बाढ़ और भूस्खलन हुए। मुल्लपेरियार बांध का जलस्तर बढ़ने पर तमिलनाडु ने सभी 13 गेट खोले। प्रशासन ने बचाव कार्य चलाकर कई लोगों को निकाला।

प्रासंगिकता: आपदा प्रबंधन एवं जल-संसाधन नीति से संबंधित अध्ययन हेतु महत्वपूर्ण।

How are India-Taliban relations changing?

Is India's Afghanistan policy changing? What did the Muttaqi visit achieve? With India deciding to reopen its embassy in Kabul, is it inching closer to recognising a Taliban-led government? Did the restrictions imposed on women by the Taliban come up during talks?

Suhasini Haidar

The story so far:

The Indian government framed the visit by Acting Foreign Minister of Afghanistan, Amir Khan Muttaqi, and the warm welcome it extended to the Taliban leader, as an outreach to the "people of Afghanistan". The visit coincided with violent clashes on the Afghanistan-Pakistan border.

How has India grown links with the Taliban?

After years of being seen as "too slow" to engage with the Taliban, the government has gone to considerable lengths in recent months to build ties with the group that controls Afghanistan. In January this year, Foreign Secretary Vikram Misri made the first such contact, meeting Mr. Muttaqi in Dubai, and discussed increasing trade between both countries. On May 16, just days after the India-Pakistan conflict ended in a ceasefire, External Affairs Minister S. Jaishankar spoke to Mr. Muttaqi over the telephone, thanking Afghanistan for its support and condolences over the Pahalgam terror attack. In August, India approached the UN Security Council to request permission from its Sanctions Committee for a visit by the Taliban FM to India. Mr. Muttaqi is on the UNSC's consolidated sanctions list since January 2001, and requires a waiver to travel internationally. The request was denied, but when the request was repeated a month later, it came through, allowing the visit from October 9 to 16. India doesn't recognise the "Islamic Emirate of Afghanistan", as the Taliban that took control of Kabul in 2021 renamed it. Even so, Mr. Jaishankar met Mr. Muttaqi with full protocol and held delegation-level meetings with him at the official venue, Hyderabad House, and

The Afghan side joined India in condemning terrorism in the region

the visitor was accorded security and hospitality any other foreign minister would receive.

What transpired during the talks?

During the talks, Mr. Jaishankar announced India's plans to upgrade its technical mission in Kabul to an embassy, and is expected to appoint diplomats to be posted there shortly. He also handed over the keys to 20 ambulances being donated to Afghanistan, and promised health infrastructure projects, water projects and humanitarian aid. For its part, the Afghan side joined India in condemning terrorism in the region and committed that it would not allow Afghan soil to be used by groups inimical to India. In 2022, UN reports said Jaish-e-Mohammad and Lashkar-e-Taiba maintained camps in Eastern Afghan provinces.

Why has cooperation been enhanced?

Mr. Muttaqi's visit began just as clashes broke out between Pakistan and Afghanistan. Pakistan launched airstrikes on Kabul in retaliation for terror attacks by the Tehreek-e-Taliban Pakistan (TTP) that Pakistan claims is sheltered by the Taliban. The timing suggests India is getting closer to its "enemy's enemy" in an effort to upset Pakistan with a pincer movement months after Operation Sindoor, but there are many other reasons for such an outreach. The first is to neutralise any threat from the Taliban in an increasingly volatile neighbourhood, with governments losing power to protesters; India losing stable partners in South Asia; and China making inroads. Another reason is to build connectivity for trade as land routes are closed. Pakistan refuses to allow transit trade, and the U.S. has now re-imposed sanctions for projects at Iran's Chabahar port, which was being developed by India as an alternate route. In the broader Eurasian region, Russia has officially recognised the Taliban government, the first country to do so, and others like China, Pakistan, Iran, Gulf and the Central Asian states, that have already allowed Taliban embassies, could follow. India cannot afford to be cut out. India has also maintained that working with the regime in power is the only way for it to continue its humanitarian aid to Afghan men and women, and to secure more than \$3 billion in investments that it made between 2001-2021, when the Taliban was out of power. Four years since it took over, the Taliban regime appears stable, with little political or insurgent opposition to its control of the country, and has been able to impose a very strict form of the Islamic Sharia law, that prohibits women from education, work, forces them into burkhas, and bans them from public parks and buildings.

Despite the situation, Mr. Jaishankar's opening remarks and the joint statement contained no mention of the restrictions on women, another indicator that New Delhi has decided that the Taliban is here to stay for the foreseeable future.

Is India preparing to recognise the Taliban?

The rapid growth of Delhi's ties with the Taliban, and the setting up of an embassy in Kabul, have raised speculation that India could, like Russia, break with the UN and western countries to give recognition to the Taliban government. This may seem unlikely soon, but much will depend on the next steps New Delhi takes, and the seniority level at which it establishes the embassy. Mr. Muttaqi said once Indian diplomats are sent to Kabul, he expects India to receive Taliban-appointed diplomats in Delhi. This will be significant, as thus far the Afghanistan embassy in Delhi has remained loyal to the previous democratically-elected Islamic Republic of Afghanistan government. As a result, they resisted Mr. Muttaqi's visit to the embassy, and at the two press conferences he held there, tried unsuccessfully, to stop the Taliban delegation from placing the black and white flags of the Emirate there. The black, green and red tricolour of the Republic is still hoisted at the front of the embassy for now, but India's decision to upgrade missions has cast a cloud over its future and that of the staff members there, who now fear for their lives. The Ministry of External Affairs did not protest when Mr. Muttaqi held a press conference on October 10, inviting nearly 20 journalists, all male, to the embassy. However, after public outrage, the Taliban delegation held a second press conference, inviting all journalists without restrictions. There, they faced hard questions on the condition of women, although Mr. Muttaqi maintained that women were "free" and girls were receiving an education in religious madrassas, statements which are clearly untrue.

Can a Taliban led-Afghanistan go from being India's enemy's enemy and become a friend?

India has much to gain from a friendly government in Kabul, with influence based on its historic friendship with the Afghan people during the 2001-2021 period. India was Afghanistan's first strategic partner; built an air corridor to increase bilateral trade; and worked on a number of development and infrastructure projects there. While the Taliban's current conflict with Pakistan will only enhance New Delhi's role, it must be remembered that the Taliban in power now have had very close ties with Pakistan's military in the past. In addition, the Taliban leadership in Kabul and Kandahar have differences, and as Afghanistan's economy continues to suffer, they may face challenges to the regime's control. For India, building a tactical relationship with Kabul is vital, but a friendship based on shared values and common worldviews seem impossible at present.



Changing ties: External Affairs Minister S. Jaishankar and his Afghan counterpart Amir Muttaqi during a meeting in New Delhi on October 10, 2021. AFP

GS Paper: GS Paper II – International Relations (India and its Neighborhood – Afghanistan)

□ English Summary

1. Background

India recently hosted *Amir Khan Muttaqi*, the Acting Foreign Minister of Afghanistan's Taliban government. The meeting marks India's gradual diplomatic outreach towards the Taliban regime — a shift from its earlier “no-contact” policy since 2021. The engagement is being projected as an outreach to the “people of Afghanistan”.

2. India's Growing Engagement

- For years, India viewed the Taliban as too radical to engage with.
- In 2024–25, India initiated backchannel contacts:
 - **Foreign Secretary Vinay Kwatra** met Muttaqi in Dubai.
 - **EAM S. Jaishankar** held telephonic talks expressing condolences for terrorist attacks.
 - India sought **UN permission** to host Muttaqi in New Delhi despite his sanctions listing under UNSC (since 2001).
 - India re-opened its embassy in Kabul, signalling readiness to normalize limited diplomatic presence.

3. Outcomes of Muttaqi's Visit

- India handed over keys to **20 ambulances** and promised more humanitarian and infrastructure aid (water, power projects).
- The Taliban joined India in condemning terrorism in the region — a rare alignment on security narrative.
- However, Taliban's human rights record, especially restrictions on **women's education and employment**, was not directly addressed.

4. Why the Shift in Policy?

- Regional realities forced pragmatism:
 - Pakistan's instability and Taliban–Pakistan tensions gave India an opportunity.
 - China's increasing influence in Afghanistan pushed India to secure its strategic space.
 - Western disengagement left a vacuum.
- India seeks to:
 - Prevent cross-border terrorism from Afghan soil.
 - Revive stalled connectivity projects (like **Chabahar Port**).
 - Counter Pakistan's regional narrative by engaging directly.

5. Strategic Implications

- India has **not formally recognized** the Taliban regime yet but is *practically engaging*.
- Recognition may depend on the Taliban's domestic inclusivity and conduct.
- This outreach helps India gather intelligence, safeguard its infrastructure projects, and maintain regional leverage vis-à-vis China and Pakistan.

6. Key Takeaway

India's Afghanistan policy is evolving from “isolation” to “**strategic engagement without recognition**.”

The aim: protect India's long-term interests and regional stability while upholding its democratic and human rights principles.

IN Hindi Summary (हिंदी सारांश)

1. पृष्ठभूमि

भारत ने हाल ही में अफगानिस्तान के तालिबान सरकार के कार्यवाहक विदेश मंत्री *अमीर खान मुत्ताकी* का स्वागत किया। यह कदम भारत की अफगान नीति में परिवर्तन का संकेत देता है — जहाँ पहले भारत तालिबान से दूरी बनाए रखता था, अब सीमित संवाद की नीति अपनाई जा रही है।

2. भारत-तालिबान संपर्क के नए चरण

- 2024-25 में भारत ने धीरे-धीरे संपर्क बढ़ाया —
 - विदेश सचिव **विनय कात्रा** और मुत्ताकी की दुबई में मुलाकात।
 - विदेश मंत्री **डॉ. एस. जयशंकर** ने टेलीफोनिक बातचीत में तालिबान को शोक-संदेश भेजा।
 - भारत ने संयुक्त राष्ट्र से अनुमति लेकर मुत्ताकी की यात्रा संभव की।
 - काबुल में भारतीय दूतावास दोबारा खोला गया।

3. मुत्ताकी की यात्रा के प्रमुख परिणाम

- भारत ने **20 एम्बुलेंस सौंपीं** और बुनियादी ढांचा सहयोग का आश्वासन दिया।
- तालिबान ने **क्षेत्रीय आतंकवाद की निंदा** करते हुए भारत के साथ साझा बयान दिया।
- महिलाओं पर लगाए गए प्रतिबंधों का मुद्दा औपचारिक वार्ता में नहीं उठा, लेकिन यह भारत की सावधानीपूर्ण नीति का संकेत है।

4. नीति परिवर्तन के कारण

- पाकिस्तान-तालिबान तनाव से भारत के लिए रणनीतिक अवसर बना।
- चीन का बढ़ता प्रभाव भारत के लिए चिंता का विषय है।
- भारत अपने पुराने विकास परियोजनाओं जैसे **चाबहार बंदरगाह** को पुनर्जीवित करना चाहता है।
- उद्देश्य – अफगान धरती से भारत-विरोधी आतंक गतिविधियों को रोकना।

5. रणनीतिक प्रभाव

- भारत ने अभी तक तालिबान सरकार को औपचारिक मान्यता नहीं दी है, पर **व्यावहारिक संवाद** शुरू किया है।
- भविष्य में मान्यता का निर्णय तालिबान की नीति और महिला अधिकारों के प्रति उसके व्यवहार पर निर्भर करेगा।
- यह संपर्क भारत की **इंटेलिजेंस पहुंच** और **क्षेत्रीय प्रभाव** को बनाए रखने में मदद करेगा।

6. निष्कर्ष

भारत की अफगान नीति “दूरी बनाकर आलोचना” से आगे बढ़कर “संवाद के माध्यम से संतुलन” की ओर जा रही है।
लक्ष्य — भारत के दीर्घकालिक रणनीतिक हितों की रक्षा और दक्षिण एशिया में स्थिरता सुनिश्चित करना।

Exam Relevance

Aspect	GS Paper	Key Topics
India-Afghanistan Relations	GS Paper II	Neighborhood Policy, Regional Security, Strategic Autonomy
Taliban Engagement	GS Paper II	International Recognition, Human Rights
India's Role in West Asia	GS Paper II	Connectivity Projects, Chabahar Port, Pakistan Factor

The most ancient Indian wolf is set to be a new species

Divyaa Gandhi

A discreet, charismatic denizen of scrubland and grasslands, the Indian wolf (*Canis lupus pallipes*), whose population has dwindled to just around 3,000 individuals in India and Pakistan, is likely to be classified as a new species by the International Union for Conservation of Nature (IUCN).

The Indian wolf was first placed within the umbrella genus of the grey wolf that

roamed swathes of Asia. However, it has the oldest living lineage of the world's wolves.

The canine has also been listed as “vulnerable”, bringing it much-needed attention as well as incentives to protect it and conserve its rapidly shrinking habitat.

This animal faces many threats, Y.V. Jhala, former dean of the Wildlife Institute of India and now a senior scientist of the Indian National Science Academy,

explained. They are poisoned for preying on livestock, their natural prey base is vastly depleted in its fragile habitat, and the semi-arid areas they inhabit are destroyed by highways and renewable energy projects, Dr. Jhala told *The Hindu*.

“A den site I studied in Kutch is now engulfed by the Adani Solar Farm.”

The wolf's persecution is curious, as they aren't known to attack humans. “There have been two re-

cent spates of wolf-human conflict, one in 1996 and the other last year in Bahrach district [in Uttar Pradesh],” Dr. Jhala said.

According to reports, since September, six people, including four children, were killed and 30 others were injured in wolf attacks in Bahrach. Meanwhile, almost the entire pack was shot to death.

“There has been a call for over two decades to have it be declared a distinct species,” Abi Vanak,

director of the Centre for Policy Design at the Ashoka Trust for Research in Ecology, Bengaluru, told *The Hindu*.

‘Best models’

“The Indian wolf is already under Schedule 1 of the Wildlife Protection Act. The wolf, like the bustards and other denizens of the open natural ecosystems, do not need strict protected areas. Rather they serve as the best models for co-existence, and this is what

needs to be incentivised. With the downgrading of the wolf to ‘vulnerable’ (I don't call it upgrading), hopefully more international attention and funds can flow towards its conservation, and the protection of its habitats.”

Going forward, Dr. Jhala said, it's important to acknowledge the IUCN assessment by developing a national policy and management plan for the unique, ancient Indian wolf.

English Summary

1. Background

The **Indian wolf (*Canis lupus pallipes*)** — a shy, highly adaptable predator inhabiting India's scrublands and grasslands — is likely to be recognized as a **distinct species** by the *International Union for Conservation of Nature (IUCN)*.

Its population is now reduced to around **3,000 individuals** across India and Pakistan.

2. Evolutionary Significance

- The Indian wolf represents **the oldest surviving lineage** among wolves globally.
 - It diverged from other grey wolves **hundreds of thousands of years ago**, making it an *evolutionary relic* of immense scientific value.
 - This unique genetic identity strengthens the case for its recognition as a separate species.
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3. Conservation Status

- Currently listed as “**Vulnerable**” under the *IUCN Red List*.
 - In India, it already enjoys **Schedule I protection** under the *Wildlife Protection Act, 1972* — the same level as tigers and elephants.
 - However, despite legal protection, its **semi-arid habitats** are under threat from:
 - **Poisoning** by livestock owners,
 - **Habitat destruction** due to highways, solar farms, and renewable energy projects,
 - **Decline of natural prey base**,
 - **Wolf-human conflicts** in regions like **Bahraich (Uttar Pradesh)** and **Kutch (Gujarat)**.
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4. Human-Wildlife Conflict

- Notably, wolves rarely attack humans.
- Yet, in retaliation for livestock predation, entire packs are exterminated.
- Recent incidents (1996 and 2024) in UP highlight the growing tension between conservation and rural livelihoods.

Microbial link between arsenic in soil, lower rice yield uncovered

New research reveals that rice paddy microbes, and not soil arsenic levels alone, dictate arsenic toxicity and crop losses; managing microbial balance may thus be key to protecting the yield and its safety

Ashmita Gupta

Research published in *Proceedings of the National Academy of Sciences* recently has warned that the type of microbes in rice paddies can determine whether arsenic, a notorious carcinogen and plant toxin, builds up in rice grains and triggers drastic crop losses.

The study has identified an important balance between arsenic-methylating bacteria, which convert inorganic arsenic into the toxic organic forms, versus demethylating archaea, which can undo this process. Where the methylating bacteria dominate, rice plants absorb the compound dimethylarsinic acid (DMA) and its more toxic derivative, dimethylated monothioarsenate (DMMTA). These compounds pose health risks to humans as well as induce straighthead disease.

"Straighthead needs to be considered as a physiological disorder rather than a disease in the absence of any infectious agent," rice pathologist Sridhar Ranganathan, who wasn't involved in the study, said.

"The symptoms are erect panicles with unfilled grains, often remaining green. Due to empty grains affecting the weight of the panicles, the ear-bearing tillers don't droop down and remain green and upright, as can be seen with unaffected healthy plants bearing normally filled matured grains in which the plants droop down showing symptoms of initiation of senescence

Arsenic whisperers

Scientists identify 17 key microbes whose abundance can accurately predict rice arsenic risk

- A study has found that microbe composition in rice paddies affects whether toxic arsenic compounds accumulate in rice grains

- Arsenic-methylating bacteria increase levels of DMA and its derivative DMMTA, causing straighthead disease

- A new study has found soils younger than 700 years have more methylating microbes while older soils host protective demethylating archaea

- When the ratio of methylating to demethylating microbes exceeds 1.5, straighthead disease risk was found to rise

- Newly cultivated paddies in the US, southern Europe, and northeast China were found to face heightened arsenic vulnerability

- The study's authors urge monitoring of arsenic speciation and microbial balance alongside interventions like midseason drainage



of the leaves and the grains."

While long dismissed as a local agronomic issue, straighthead disease is now recognised as a global threat. In parts of the US and China, farmers have reported significant outbreaks, often in newly established or rotated paddies. West Bengal in India and Bangladesh have also previously reported straighthead disease.

The condition can result in up to 70% yield losses in severely affected areas. It occurs even when the total arsenic level in the soil is relatively low because the real problem is arsenic speciation, i.e. the chemical form arsenic takes in the soil and plant. The new study has found that the microbial communities that dominate in the paddies determine this specia-

tion. The research team, led by Peng Wang at Nanjing Agricultural University in China, analysed rice paddies of different ages in China, unearthing a surprising pattern. Soils younger than 700 years were dominated by arsenic-methylating bacteria, so the rice grown there accumulated more DMA and DMMTA and the fields were more prone to straighthead disease outbreaks. Soils older than 700 years had more demethylating archaea, which broke down DMA and reduced the compounds' buildup.

The researchers combined these field data with controlled soil incubation tests, genetic analyses, and a global survey of 801 paddy soil microbiomes. Eventually, they identified 11 methylating microbes and

six demethylating archaea whose abundance could accurately predict arsenic risk.

In the paper, the team also reported that newly cultivated paddy regions like the U.S., southern Europe, and northeast China showed high ratios of methylating to demethylating microbes, rendering them particularly vulnerable to straighthead outbreaks. Ancient rice-growing regions had stronger demethylating communities instead. When the ratio of methylating to demethylating microbes exceeded 1.5, the risk of straighthead disease was found to rise sharply.

India is the world's second-largest producer and consumer of rice. While much of the farming occurs in old, legacy paddies with relatively balanced

microbial communities, several States have had new or reclaimed paddy fields established in the last few decades. These fields may be at greater risk, per the new study.

Experts said the research also intersects with climate change. Higher temperatures and altered flooding regimes are expected to increase the soils' arsenic content (whether from natural sources or anthropogenic), and could tip the microbial balance towards the more harmful varieties. For a country where rice contributes nearly 40% of the population's caloric intake, the crop's safety and productivity are crucial.

Dr. Ranganathan said that even if the crop can't be saved in a single cropping season, agronomic interventions can mitigate risks. According to the research paper, draining the rice fields midseason can 'suppress' the methylating microbes by reintroducing oxygen into the soils. Silicon fertilisation has also been known to reduce rice plants' arsenic uptake. He also said crop rotation strategies can be adjusted to avoid destabilising microbial communities.

At the policy level, the findings highlight the need to monitor arsenic speciation, and not just total arsenic levels, as part of food safety regulations. Current standards, including those of the UN Food and Agriculture Organisation's 'Codex Alimentarius', focus on inorganic arsenic, leaving gaps around methylated species like DMMTA.

Ashmita Gupta is a science writer

GS Paper: GS Paper III – Environment, Agriculture, Science & Technology, and Food Security

□ English Summary 1. Background

A new study published in the *Proceedings of the National Academy of Sciences (PNAS)* reveals that **microbes in rice paddies** — not just the amount of arsenic in soil — determine **arsenic toxicity levels** in rice and influence **crop yields**.

This discovery connects **soil microbiology, toxicology, and agriculture** and has major implications for India and other rice-producing countries.

2. Key Findings

- **Microbial Balance Matters:**

The ratio of two microbial groups — *arsenic-methylating* (which convert inorganic arsenic into toxic forms) and *demethylating* (which detoxify arsenic) — determines how much arsenic rice plants absorb.

- **Soil Age and Microbes:**

Soils younger than 700 years had more methylating microbes and produced **arsenic-rich rice**. Older soils (over 700 years) had more demethylating microbes and **lower arsenic accumulation**.

- **Toxic Compounds Identified:**

Methylating microbes produce toxic arsenic compounds like **dimethylarsinic acid (DMA)** and **monomethylarsonate (MMA)**, which can cause **straighthead disease** — a condition that leads to empty or deformed rice grains.

3. Straighthead Disease

- This physiological disorder causes **reduced yield** and **poor grain filling**, even in the absence of pathogens.
 - Found in regions of **West Bengal, eastern India, and Bangladesh**, it is linked to arsenic contamination in rice paddies.
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4. Implications for India

- India's eastern Gangetic plains are at high risk, where both **arsenic contamination in groundwater** and **intensive rice cultivation** are widespread.
 - Since rice contributes nearly **40% of India's caloric intake**, the study warns of a looming **food safety and productivity crisis**.
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5. Agricultural & Environmental Insights

- **Drainage management:**

Periodic draining of rice fields suppresses methylating microbes, lowering arsenic uptake.

- **Fertilizer adjustments:**

Controlled fertilization and crop rotation can alter microbial communities.

- **Policy application:**

Findings align with UN FAO's "Code of Conduct for Arsenic Mitigation" — encouraging microbial interventions instead of chemical approaches.

6. Broader Scientific Relevance

- The study ties into **climate change** research: rising temperatures and erratic floods can alter soil microbial composition and arsenic mobility.
 - It also suggests **bioengineering soil microbes** as a long-term, sustainable mitigation strategy.
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7. Key Takeaway

Microbes are as critical as minerals in determining rice safety and yield.

Managing soil microbial ecosystems could become a cornerstone of **arsenic mitigation policy**, ensuring **food safety, environmental health, and agricultural sustainability**.

IN हिंदी सारांश (Bilingual Summary)

1. पृष्ठभूमि

प्रोसीडिंग्स ऑफ द नेशनल एकेडमी ऑफ साइंसेज़ (PNAS) में प्रकाशित एक नई शोध रिपोर्ट ने बताया कि धान के खेतों में पाए जाने वाले **सूक्ष्म जीव (microbes)** केवल मिट्टी में मौजूद आर्सेनिक की मात्रा ही नहीं बल्कि उसकी **विषाक्तता और**

फसल उत्पादन दोनों को प्रभावित करते हैं।

2. प्रमुख निष्कर्ष

• सूक्ष्मजीवों का संतुलन महत्वपूर्ण:

- *Arsenic-methylating bacteria* आर्सेनिक को जहरीले रूपों (DMA, MMA) में बदलते हैं।
- *Demethylating archaea* इन्हें निष्क्रिय बनाते हैं।
- इन दोनों के अनुपात से यह तय होता है कि धान के पौधे कितनी मात्रा में आर्सेनिक ग्रहण करेंगे।

• मिट्टी की उम्र का असर:

- 700 वर्ष से कम पुरानी मिट्टियों में methylating जीव अधिक होते हैं — इससे धान में आर्सेनिक अधिक जमा होता है।
- पुरानी मिट्टियाँ (700 वर्ष से अधिक) detoxifying जीवों से समृद्ध होती हैं — इससे विषाक्तता कम होती है।

3. स्ट्रेटहेड रोग (Straighthead Disease)

- यह रोग धान की बालियों में अनाज को अधूरा या खाली कर देता है।
- यह किसी संक्रमण से नहीं, बल्कि आर्सेनिक विषाक्तता के कारण होता है।
- भारत के पश्चिम बंगाल और बिहार क्षेत्रों में यह रोग तेजी से फैल रहा है।

4. भारत के लिए प्रभाव

- भारत में पूर्वी गंगा मैदानी क्षेत्र में भूमिगत जल में आर्सेनिक अधिक पाया जाता है, जिससे धान फसलें प्रभावित होती हैं।
- चूंकि धान भारत की 40% आबादी का प्रमुख खाद्य स्रोत है, यह समस्या खाद्य सुरक्षा और सार्वजनिक स्वास्थ्य दोनों के लिए गंभीर है।

5. नीति और समाधान

• जल निकासी (Drainage):

खेतों को बीच-बीच में सुखाने से methylating जीव कम होते हैं।

• खाद प्रबंधन:

नियंत्रित उर्वरक उपयोग और फसल चक्र परिवर्तन से सूक्ष्मजीव संतुलन सुधारा जा सकता है।

• नीतिगत महत्व:

यह शोध UN-FAO के “Code of Conduct for Arsenic Mitigation” के अनुरूप है और microbial management को प्राथमिकता देने की सिफारिश करता है।

6. निष्कर्ष

धान के खेतों में मिट्टी के सूक्ष्मजीव ही आर्सेनिक विषाक्तता और उत्पादन को नियंत्रित करते हैं।

यदि भारत को खाद्य सुरक्षा बनाए रखनी है, तो microbial ecology-based agriculture policy को अपनाना आवश्यक है।

Exam Relevance Table

Aspect	GS Paper	Key Topics
Arsenic Contamination in Rice	GS Paper III	Environmental Pollution, Food Security
Role of Soil Microbes	GS Paper III	Microbiology, Sustainable Agriculture
Straighthead Disease	GS Paper III	Crop Diseases, Public Health
Climate Link	GS Paper III	Climate Change & Soil Ecosystems
Policy Dimension	GS Paper III	FAO Guidelines, Arsenic Mitigation Strategies

Pakistan to hold talks with Taliban in Doha over cross-border violence

Qatar facilitates dialogue amid escalating Pak-Afghan border tensions; meeting follows Pak. air strikes in Afghanistan that killed several, including three cricketers; strikes come after TTP-claimed attack in Pakistan's North Waziristan district

Press Trust of India
ISLAMABAD/NEW DELHI

The Pakistan government on Saturday confirmed that a high-level delegation led by Pakistan Defence Minister Khawaja Asif will hold talks with representatives of the Afghan Taliban in Doha, where Qatar is facilitating dialogue between the two sides amid rising border tensions.

The meeting, scheduled later in the day, comes amidst Pakistan launching fresh air strikes targeting terrorist hideouts in Afghanistan on Friday, hours after Islamabad and Kabul extended their two-day ceasefire that had temporarily halted hostilities between the two sides.



Afghan relatives offer prayers at the funeral ceremony of victims killed in Pakistani strikes in Paktika province on Saturday. AFP

Three Afghan cricketers were among several people killed in the strikes, which followed a terror attack at a military installation in North Waziristan, claimed by Tehreek-e-Taliban Pakistan (TTP).

The negotiations led by Mr. Asif will primarily fo-

cus on "immediate measures to end cross-border terrorism emanating from Afghanistan and restore peace and stability along the Pak-Afghan border", the Foreign Office said in a social media post.

"Pakistan does not seek escalation," it said, urging

the Afghan Taliban to address Pakistan's security concerns by taking verifiable action against terrorist entities, including the TTP and BLA (Balochistan Liberation Army)."

Taliban spokesperson Zabiullah Mujahid, in a social media post, said that a high-level delegation of the Islamic Emirate, led by Defence Minister Maulvi Muhammad Yaqub Mujahid, has left for Doha.

Kabul denies charge

Islamabad has urged the Taliban government to prevent terrorist groups from using Afghan territory for cross-border attacks. Kabul, however, denies these allegations, insisting that Afghan soil is not being used against any neigh-

bouring country.

According to Afghan sources, Pakistani military has violated Afghanistan's border over 1,200 times and breached its airspace on 710 occasions in the last four years.

Pakistani breach

Sharing details of Pakistani actions, They said from the beginning of 2024 until now, 102 civilians and Afghan border guards have been killed and 139 others wounded in the attacks.

The situation deteriorated between the two neighbours after repeated terrorist attacks by TTP, allegedly using the Afghan soil, including one in the restive Khyber Pakhtunkhwa, which claimed lives of 11 military personnel.

GS Paper: GS Paper II – International Relations (India and Its Neighbourhood, Regional Security, Terrorism, Foreign Policy)

□ English Summary

1. Context & Background

The **Pakistan government** has confirmed that a **high-level delegation led by Defence Minister Khawaja Asif** will hold talks with representatives of the **Afghan Taliban** in **Doha, Qatar**, facilitated by **Qatari mediation**.

The dialogue comes amid escalating **Pakistan-Afghanistan border tensions** following a series of **Pakistani airstrikes inside Afghanistan**, which Islamabad claimed targeted **Tehreek-e-Taliban Pakistan (TTP)** hideouts.

2. Triggering Events

- Pakistan carried out **airstrikes in Paktika province** after a **terrorist attack on a military installation** in North Waziristan (Pakistan) claimed by the **TTP**.
- Several civilians, including **three Afghan cricketers**, were killed in the strikes.
- The violence erupted **just days after a two-day ceasefire** between Islamabad and Kabul ended.

3. Objectives of the Doha Talks

- The **talks aim to:**
 - Restore **peace and stability** along the Pakistan-Afghanistan border.
 - End **cross-border terrorism** emanating from Afghan soil.
 - Ensure **verifiable Taliban action** against terror groups operating in Afghanistan, including **TTP and BLA (Balochistan Liberation Army)**.

4. Divergent Positions

- **Pakistan's stance:** Kabul must take *immediate and visible* action against TTP and allied outfits using Afghan territory for attacks.
- **Taliban's response:** The Afghan side **denied Pakistan's allegations**, accusing Islamabad of violating Afghan sovereignty.
 - Afghan officials claimed Pakistan violated Afghanistan's border **over 1,200 times** and its airspace **710 times** in the last four years.
 - From early 2024, **102 civilians and Afghan guards** have reportedly been killed in such incidents.

5. Regional Implications

- The border violence marks a **rapid deterioration** in **Pakistan-Taliban relations**, despite earlier cooperation after the Taliban's 2021 takeover.
- It also exposes the **fracture in Pakistan's security doctrine**, which once viewed the Taliban as a strategic ally.
- Instability threatens South Asia's **counter-terrorism architecture**, **China-Pakistan Economic Corridor (CPEC)** security, and **regional trade routes**.
- Qatar's mediation reaffirms its emerging role as a neutral facilitator in **Afghan peace diplomacy**.

6. Strategic Relevance for India

- India must closely monitor these developments because:
 - **TTP-Taliban collaboration** could strengthen extremist networks along South Asia's western frontier.
 - Deterioration in Pak-Afghan ties could alter **terror dynamics** in **Kashmir and Central Asia**.
 - India's **re-engagement with Taliban** (e.g., recent Muttaqi visit) is influenced by such shifting alignments.

7. Key Takeaway

The **Doha dialogue** symbolizes both opportunity and uncertainty — a test of whether regional diplomacy can contain **cross-border militancy** and whether the **Taliban government** can assert control over non-state actors operating from its soil.

IN हिंदी सारांश (Bilingual Summary)

1. पृष्ठभूमि

पाकिस्तान सरकार ने पुष्टि की है कि उसके रक्षा मंत्री **ख्वाजा आसिफ** के नेतृत्व में एक उच्च-स्तरीय प्रतिनिधिमंडल **दोहा (कतर)** में **अफगान तालिबान** के साथ वार्ता करेगा।

यह बैठक दोनों देशों के बीच बढ़ते **सीमा तनाव** के बीच हो रही है, जहाँ पाकिस्तान ने हाल में **अफगानिस्तान के भीतर हवाई हमले** किए थे।

2. विवाद की शुरुआत

- पाकिस्तान ने **पक्तीका प्रांत** में टीटीपी (Tehreek-e-Taliban Pakistan) के ठिकानों पर हमला किया।
- इन हमलों में **तीन अफगान क्रिकेटरों सहित कई नागरिक मारे गए**।
- यह घटना **दो-दिवसीय युद्धविराम** समाप्त होने के तुरंत बाद हुई।

3. वार्ता के उद्देश्य

- सीमा पर **शांति और स्थिरता** बहाल करना।
- अफगान भूमि से होने वाले **आतंकी हमलों** को समाप्त करना।
- टीटीपी और **बलूच लिबरेशन आर्मी (BLA)** जैसे आतंकी संगठनों के विरुद्ध **ठोस कार्रवाई** की मांग।

4. पाकिस्तान-अफगान रुख

- **पाकिस्तान का रुख:** तालिबान को अपने क्षेत्र से टीटीपी को समाप्त करना चाहिए।
- **तालिबान का जवाब:** पाकिस्तान पर **अफगान सीमा के उल्लंघन** का आरोप लगाया गया है —

- पिछले चार वर्षों में **1,200 बार सीमा उल्लंघन** और **710 बार हवाई क्षेत्र का अतिक्रमण**।
- 2024 की शुरुआत से अब तक **102 अफगान नागरिक और सुरक्षा कर्मी** मारे गए।

5. क्षेत्रीय महत्व

- यह स्थिति पाकिस्तान-तालिबान संबंधों में गंभीर गिरावट को दर्शाती है।
- दक्षिण एशिया की **आतंक-विरोधी संरचना, CPEC सुरक्षा, और क्षेत्रीय व्यापार मार्गों** पर इसका नकारात्मक प्रभाव पड़ सकता है।
- **कतर** एक बार फिर *अफगान शांति-वार्ता* में **मध्यस्थ देश** के रूप में उभर रहा है।

6. भारत के लिए प्रासंगिकता

- भारत के लिए यह स्थिति महत्वपूर्ण है क्योंकि:
 - **टीटीपी और तालिबान गठजोड़** क्षेत्र में उग्रवाद को बढ़ा सकता है।
 - पाकिस्तान-अफगान संबंधों में अस्थिरता का प्रभाव **भारत की पश्चिमी सीमा और मध्य एशिया नीति** पर पड़ेगा।
 - भारत की **तालिबान से कूटनीतिक पुनःसंवाद नीति** इन परिवर्तनों से प्रभावित हो सकती है।

7. निष्कर्ष

दोहा में होने वाली यह वार्ता केवल पाकिस्तान-अफगान संबंधों की परीक्षा नहीं बल्कि दक्षिण एशिया की **सुरक्षा स्थिरता** और **आतंक-विरोधी सहयोग** की भी कसौटी है।

Exam Relevance Table

Aspect	GS Paper	Key Topics
Pakistan–Taliban Talks in Doha	GS Paper II	International Relations, Regional Security
Cross-Border Terrorism	GS Paper II	Terrorism, Border Management
Qatar’s Mediation	GS Paper II	Peace Diplomacy, Third-Party Negotiation
India’s Regional Implications	GS Paper II / Paper III (Internal Security)	Strategic Autonomy, Afghanistan Policy

Manufacturers pass on GST cut benefits across 54 daily use items: Finance Minister

Jagriti Chandra

NEW DELHI

Two-wheelers, four-wheelers, and consumer durable items, including television sets, are among the 54 items of daily use where manufacturers have passed on the benefit of GST (Goods and Services Tax) cuts, Union Finance Minister Nirmala Sitharaman said on Saturday.

“Since September 22, we have been getting information from zonal teams on all items, of which we have been monitoring 54 items, where we wanted to ensure that the tax benefit is reaching the consumer. Not even in one item has the tax benefit not been passed to the consumer,” Ms. Sitharaman said at a press conference on the ‘GST Bachat Utsav’ (savings festival).

Three-wheeler despatches grew by 5.5% to 84,000 units from 79,000 units, year-on-year. Two-wheeler sales increased by 21.60 lakh units, with Hero MotoCorp Limited reporting the highest monthly sales. Passenger vehicle despatches touched 3.72 lakh units in September, and tractor sales more than doubled, she said.

Effective September 22, the government simplified the GST regime, reducing the four existing tax slabs – 5%, 12%, 18%, and 28% – to



Nirmala Sitharaman, with Piyush Goyal and Ashwini Vaishnaw, addressing a press conference, in New Delhi, on Saturday. ANI

two main slabs of 5% and 18%, with a special 40% rate for certain goods.

“There has been a flurry of buying and selling in those nine days,” the Finance Minister said, speaking of the nine days of Navaratri that culminate in Dasara.

Dealers in consumer durables reported doubling of sales on the very first day, that is, September 22. Manufacturers indicated that pre-bookings had begun and enquiries had surged. TV manufacturers reported 30%-35% increase in sales, as did makers of FMCG (fast moving consumer goods), including in personal care and nutrition items.

The actual decrease in some items was over and beyond the GST rate cuts, including in table and kitchen items, and utensils too, she said.

There was a 20% to 25%

growth in television sales, sparked by a growth in demand, and electronics manufacturing was now seeing double digit growth, the Union Minister for Electronics and Information Technology Ashwini Vaishnaw said. “In fact, there is now food deflation of about -2%,” he added.

The GST reform, along with major relief announced in Income Tax on February 1 this year, was a significant step towards encouraging savings and increasing disposable income for the people, Union Commerce Minister Piyush Goyal said.

“When infrastructure development and daily essentials become more affordable, the combined push from both supply and demand sides helps the economy grow faster, making India the fastest-growing large economy in the world,” Mr. Goyal said.

GS Paper: GS Paper III – Indian Economy (Taxation, Inclusive Growth, Government Reforms, Consumption Patterns)

□ English Summary

1. Context

Union Finance Minister **Nirmala Sitharaman** announced that the **benefits of GST (Goods and Services Tax) reduction** have been successfully passed on by manufacturers across **54 daily-use items**, including:

- Two-wheelers, four-wheelers, and three-wheelers,
- Consumer durables (TVs, kitchen items, utensils),
- Fast-Moving Consumer Goods (FMCG).

This was revealed during the “**GST Bachat Utsav**” (**Savings Festival**) press conference in New Delhi.

2. GST Rate Simplification

- On **September 22**, the government **simplified GST slabs**, reducing four categories — **5%, 12%, 18%, and 28%** — into **two main slabs: 5% and 18%**, with a **special 40% rate** for luxury goods.
 - This aimed to **enhance consumer savings** and **revive consumption** during the festive season.
-

3. Economic Impact

- **Consumer Boost:**
 - Strong sales surge during Navratri and Dasara; double-digit growth in vehicle and durable sales.
 - TV and electronics sales rose **30–35%**, FMCG sales (personal care & nutrition items) also surged.
 - Two-wheeler sales hit **21.6 lakh units**, with Hero MotoCorp reporting record highs.
 - **Agriculture & Rural Demand:**
 - Tractor sales more than doubled, showing **rural recovery** post-monsoon.
 - **Inflation Control:**
 - Union Minister Ashwini Vaishnaw reported **food deflation of -2%**, indicating easing inflationary pressure.
-

4. Broader Fiscal Significance

- The **GST reform** complements earlier **Income Tax reliefs (Feb 2025)**, reinforcing **disposable income and consumption growth**.
 - The **combined effect** of supply-chain efficiency and increased demand is pushing India toward being **the world's fastest-growing large economy**, according to **Piyush Goyal** (Union Commerce Minister).
-

5. Policy Relevance

This marks a **shift from revenue-oriented GST administration** to a **consumer-centric GST governance model**, focusing on:

- **Ease of doing business** for MSMEs and manufacturers.
 - **Price stability and affordability** for households.
 - **Fiscal discipline with social equity**, aligning with India's **inclusive growth model**.
-

6. Key Takeaway

The government's strategy of tax rationalization under GST demonstrates that **lower tax rates can lead to higher consumption, formalization, and compliance**, stimulating both **economic growth and consumer confidence**.

IN हिंदी सारांश (Bilingual Summary)

1. पृष्ठभूमि

केंद्रीय वित्त मंत्री **निर्मला सीतारमण** ने घोषणा की कि **जीएसटी दरों में कटौती का लाभ** देशभर में **54 आवश्यक**

वस्तुओं पर उपभोक्ताओं तक पहुँचा दिया गया है।

इन वस्तुओं में शामिल हैं –

दोपहिया/चारपहिया वाहन, टीवी, घरेलू उपकरण, बर्तन, और एफएमसीजी उत्पाद (जैसे पर्सनल केयर व पोषण वस्तुएं)।

2. जीएसटी सुधार

- 22 सितंबर से सरकार ने **जीएसटी दरों को सरल** किया:
पुरानी चार दरें — 5%, 12%, 18%, और 28% — घटाकर **दो मुख्य दरें (5% और 18%)** रखी गईं।
- इसका उद्देश्य **उपभोक्ताओं को राहत देना** और **त्योहारी सीजन में मांग बढ़ाना** था।

3. आर्थिक प्रभाव

- बिक्री में भारी वृद्धि:**
 - नवरात्रि के दौरान वाहनों और इलेक्ट्रॉनिक्स की बिक्री में **30-35% वृद्धि**।
 - दोपहिया बिक्री 21.6 लाख तक पहुँची; ट्रैक्टर बिक्री **दोगुनी** हुई।
 - एफएमसीजी और टीवी निर्माताओं में रिकॉर्ड प्री-बुकिंग।
- मुद्रास्फीति नियंत्रण:**
 - केंद्रीय मंत्री **अश्विनी वैष्णव** ने बताया कि खाद्य मुद्रास्फीति **-2% (deflation)** तक घटी है।
- कर सुधार का असर:**
 - आयकर में पहले दी गई छूट और जीएसटी में सरलीकरण से उपभोक्ता खर्च बढ़ा है।

4. नीतिगत महत्व

- यह सुधार भारत की **समावेशी आर्थिक वृद्धि नीति** को समर्थन देता है।
- सरकार अब **राजस्व संग्रह** से आगे बढ़कर **उपभोक्ता हित और क्रय-शक्ति बढ़ाने** पर ध्यान दे रही है।
- इससे **एमएसएमई क्षेत्र**, **घरेलू मांग**, और **औपचारिक अर्थव्यवस्था** को बल मिला है।

5. निष्कर्ष

जीएसटी दरों में कमी ने दिखाया कि **कम कर दरें भी राजस्व बढ़ा सकती हैं**, जब उपभोक्ता विश्वास और खर्च में वृद्धि होती है।

यह भारत की **विकासशील, संतुलित और उपभोक्ता-केंद्रित अर्थव्यवस्था** की दिशा में एक बड़ा कदम है।

Exam Relevance Table

Aspect	GS Paper	Key Topics
GST Rate Rationalisation	GS Paper III	Tax Reforms, Fiscal Policy
Consumption Growth	GS Paper III	Demand Revival, Inflation Control
Economic Governance	GS Paper III	Ease of Doing Business, MSME Support
Inclusive Growth	GS Paper III	Income Redistribution, Fiscal Prudence