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Sarnath added to UNESCO Heritage List

Press Trust of India

NEW DELHI

India's ancient Buddhist site of Sarnath in Uttar Pradesh was on Saturday inscribed on the UNESCO World Heritage List. The decision was taken during the ongoing meeting of the UNESCO World Heritage Committee's 48th session in Busan, South Korea.

"New inscription on the @UNESCO #WorldHeritage List: Ancient Buddhist Site of Sarnath, #India," UNESCO posted on X. This is India's 45th site to join the list.

PM Narendra Modi hailed the inscription, stating that the site has a deep connection with Lord Buddha, whose timeless message of wisdom, compassion, and harmony inspires the world.

UNESCO adds West Bank site, Lebanese castles to Heritage List

Associated Press

Seoul, July 24

UNITED NATIONS committee voted Friday to inscribe a major archaeological site in the West Bank and a set of castles in southern Lebanon as World Heritage sites, despite objections from Israel, which had urged the committee to reject the bids.

The decision at a UN Educational, Scientific and Cultural Organization meeting in South Korea came days after Israel's Foreign Ministry urged committee to reject efforts to designate the small West Bank town of Sebastia and the Lebanese castles, calling nominations a "weaponization of cultural heritage."

At their meeting in Busan, members of the UNESCO com-

mittee decided to place Sebastia and five castles in Lebanon's Mount Amel area on both the World Heritage List and the List of World Heritage in Danger after reviewing the nominations on an emergency basis, citing ongoing conflicts in West Asia.

Sebastia, a hilltop town about 10 kilometers (6 miles) northwest of Nablus in the Israeli-occupied West Bank, is identified by scholars as ancient Samaria, capital of the biblical Kingdom of Israel.

The five castles in Mount Amel are recognized for their layered architectural heritage, combining Crusader, Ayyubid, Mamluk and local influences, reflecting the evolution of fortified architecture over nine centuries, as per UNESCO description.

1. Context (GS I- Art& Culture)

At the **48th Session of the UNESCO World Heritage Committee, held in Busan, South Korea**, UNESCO inscribed three new World Heritage

Sites: i. **Ancient Buddhist Site of Sarnath (India)**

ii. **Sebastia (West Bank, Palestine)**

iii. **Five Castles of Mount Amel (Lebanon)**

With the inscription of Sarnath, **India now has 45 UNESCO World Heritage Sites**. The sites in West Bank and Lebanon were also included in the List of World Heritage in Danger due to the ongoing conflict in West Asia.

2. Sarnath

i. **Location**: Near Varanasi, Uttar Pradesh.

ii. **Why is it famous?**

* Lord Buddha delivered his first sermon (Dharmachakra Pravartana) here.

* One of the four major Buddhist pilgrimage sites.

* Famous for the Dhamek Stupa and the Ashokan Lion Capital.

3. Sebastia & Mount Amel Castles

i. **Sebastia (West Bank)**

* **Location**: Northwest of Nablus, West Bank.

* **Famous for**: Ancient city of Samaria, with remains from the Iron Age, Roman, Byzantine and Islamic periods.

ii. **Five Castles of Mount Amel (Lebanon)**

* **Location**: Southern Lebanon.

* **Famous for**: A group of five medieval castles representing Crusader, Ayyubid and Mamluk architecture; also listed as World Heritage in Danger.

India's rice fields rank among world's top methane sources

India is the world's top rice producer, with its area under paddy cultivation covering 55% of its rainfed harvested area; continuous irrigation, incorporating residues and increasing use of nitrogen fertilizers has increased emissions

Sharmila Vaidyanathan

Greenhouse gas (GHG) emissions from paddy fields have doubled since the 1960s, a new study in *Nature Food* has found. In 2011-2020, paddy fields worldwide produced around 1.1 billion tonnes of carbon dioxide-equivalent (CO₂-e) emissions every year, up 90.4% from annual emissions in 1961-1980.

Per the study, around half the increase was driven by the loss of soil organic carbon. In 1961-1980, paddy fields removed 289 million tonnes of CO₂-e emissions annually. But by the 2010s, over a third of paddy fields worldwide had begun losing carbon.

Methane from paddy fields was also a significant driver. Flooded fields develop low-oxygen conditions where methane-producing microbes thrive. And paddy fields in eastern India were among the global methane hotspots.

"Most previous studies have focused on a single greenhouse gas, a specific management practice or a particular region," Hanqin Tian, co-author of the study and director and institute professor, Department of Earth and Environmental Sciences, Boston College, the U.S., said. "Our study provides a much more comprehensive assessment by integrating a global meta-analysis of more than 1,200 field experiments, process-based ecosystem modelling, and artificial intelligence approaches to quantify GHG emissions from rice cultivation worldwide."

Dirty rice

India's irrigated paddy fields release more methane in a year than all of Germany



Rice is crucial for India's food security. STEVE DOUGLAS/UNSPASH

■ Global greenhouse gas emissions from paddy fields have nearly doubled since the 1960s, a new study has found

■ Half of the emissions increase stems from the loss of soil organic carbon in paddy fields worldwide

■ High methane levels result from flooded fields, continuous irrigation, and heavy use of nitrogen fertilizers

■ Better irrigation and residue management could reduce global rice emissions by 10% by the year 2050

■ However, adopting new techniques is often constrained by labour shortages and a lack of technical knowledge among farmers

■ Crop diversification and limiting paddy expansion are essential to meeting regional environmental and climate goals

India is the world's top rice producer. Its area under paddy cultivation has increased by around 25% since the 1970s, currently covering 55% of India's rainfed harvested area. This together with continuous irrigation, incorporating residues such as leftover stalks, leaves, and stubble, and increasing use of nitrogen fertilizers, has increased emissions.

"Our analysis indicates that a combination of improved irrigation, optimised fertilizer use, residue management, and reduced tillage could reduce global rice-related greenhouse gas emissions by about 10% by mid-century, even under a warming climate," Dr. Tian said.

The study also projected that between 2031 and 2050, annual emissions will increase by a quarter, fuelled by global warming, erratic rainfall, and the intense use of agricultural inputs. Irrigated paddy fields

in India already release 3.9 million tonnes of methane a year, a little more than the annual methane emissions of Germany.

While India has not set up goals to reduce emissions from agriculture, some techniques and incentives are available to farmers. The National Innovations in Climate Resilient Agriculture (NICRA) project suggests – among others – the 'System for Rice Intensification' technique: young seedlings are transplanted precisely and fields are not continuously flooded during irrigation, reducing emissions.

However, the methods don't address the emission reduction potentials varying widely between States. Apart from demonstrations of alternatives across districts under NICRA, several national and State-level policies and incentives are designed to encourage farmers to adopt the alternative methods. However,

farmers remain reluctant, including due to labour shortages, lack of technical knowledge, and changes in rainfall patterns.

Prakashan Chellattan Veetil, senior agricultural and behavioural economist at the International Rice Research Institute (IRRI), New Delhi, said a regional approach that considers topography, soil, and irrigation conditions plus the farmers' needs is crucial. Dr. Veetil is the IRRI lead in the KERA-AWD project to establish processes to cultivate low-emission rice systems in Kerala's Thrissur kole lands and Palakkad Malampuzha canal regions.

"Using a multi-pronged approach, which includes increasing soil organic carbon, understanding the hydrology and aligned irrigation systems, agricultural inputs, residue management protocols, soil microbes and farmer preferences, we are working on

identifying low-emission packages, where a combination of these factors can help reduce emissions for various paddy varieties," Dr. Veetil said.

He shared the example of lime that farmers use to neutralise the State's acidic soil. "We have observed that replacing a portion of the lime with phosphogypsum has a positive impact on emissions in the subsoil surface. We are also experimenting with different formulations and application methods for nitrogen fertilizers."

Ashwini Chhatre, associate professor of public policy and executive director at the Bharti Institute of Public Policy, Hyderabad, said that depending on a region's suitability for paddy, farmers should have support to opt for low-emission techniques or grow alternative local crop varieties. In his research, Dr. Chhatre found that farmers still dedicate large areas of their farmlands to paddy. "As a general strategy, there is no way forward without crop diversification," he said. "Despite the agro-climatic diversity in the country, paddy has the largest area under cultivation at the cost of regional indigenous crops."

"An integrated intervention for alternative grains is crucial," Dr. Chhatre continued, adding that it "must include" extension and training services, involve self-help groups, and provide procurement support. "Policies must also prevent further expansion of paddy fields to curb emissions."

(Sharmila Vaidyanathan is an independent journalist from Bengaluru)

1. **Context (GS III – Environment & Ecology; Prelims – Environment & Current Affairs)**

A Nature Food study, reported by The Hindu, found that GHG emissions from paddy fields have nearly doubled since the 1960s. As the world's largest rice producer, India is among the largest methane emitters from rice cultivation due to flooded fields, crop residue incorporation and intensive fertilizer use. The study recommends improved irrigation and crop management to reduce emissions.

2. **Methane (CH₄)**

i. **About**

- * A potent greenhouse gas (GHG); ~28× more warming than CO₂ (100-year period).
- * Produced under anaerobic (oxygen-deficient) conditions.

ii. **Major Sources**

- * Wetlands (natural)
- * Paddy fields
- * Livestock
- * Landfills
- * Oil & gas and coal mining

iii. **Indian Context**

- * World's largest rice producer.
- * Paddy covers 55% of India's rainfed harvested area.
- * Irrigated paddy fields emit ~3.9 million tonnes of methane/year.
- * Key drivers: continuous flooding, crop residues and nitrogen fertilizers.

iv. **Mitigation**

- * Alternate Wetting and Drying (AWD)
- * System of Rice Intensification (SRI)
- * Better fertilizer and residue management
- * Crop diversification

Union govt. circulates Bill to strengthen anti-cheating law

Centre to introduce the Bill in Parliament on Monday; it proposes to introduce mandatory two-month investigation deadlines, designated Special Fast Track Courts, steep financial penalties

Maitri Porecha
NEW DELHI

In a move to strengthen the anti-cheating law, the Union government has proposed the Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026, a copy of which was circulated among members of Parliament on Saturday.

Union Minister Dr. Jitendra Singh will introduce the Bill in the Lok Sabha on Monday.

The proposed legislation significantly toughens the penalties established under the 2024 Act, introduces mandatory two-month investigation deadlines, along with designated Special Fast Track Courts, and steep financial penalties reaching up to ₹10 crore for organised crime networks.

Maximum imprisonment sentences for individual and institutional offenders have been increased, alongside a steep hike in financial penalties, according to the proposed Bill.

Specialised Enforcement Units enable the Un-

Tougher rules, bigger fines

The Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026 significantly escalates the cost of committing or facilitating exam malpractices

■ **Under Section 10(1)**
(General offences): **Jail:** 5-10 years (from 3-5 years); **Fine:** up to ₹50 lakh (from ₹10 lakh)

■ **Under Section 10(2)**
(Service provider fines): **Fine:** up to ₹5 crore (from ₹1 crore)

■ **Under Section 10(2)**
(Service provider directors/management): **Jail:** 3-10 years;

Fine: ₹5 crore (from ₹1 crore)

■ **Under Section 10(3)**
(In-charge personnel): **Jail:** 5-10 years (from 3-10 years); **Fine:** ₹5 crore (from ₹1 crore)

■ **Under Section 11(1)**
(Organised crime): **Minimum jail:** 7 years (from 5 years); **Fine:** up to ₹10 crore (from ₹1 crore)



ion government to constitute dedicated Special Task Forces (STF) to take exclusive charge of investigation efforts.

All investigations – whether conducted by local police, Central Investigating Agencies, or an STF – must be concluded within 60 days.

State governments and Union Territory administrations will designate Sessions Courts to conduct trials on a continuous, day-to-day basis. Trials must wrap up within three months of the chargesheet being filed. High Court appeals will be heard by a Di-

vision Bench (two judges) and must also be resolved within a three-month period.

To address prolonged legal delays, the Bill introduces Sections 12A and 12B, establishing an uninterrupted procedural pipeline.

Courts cannot grant adjournments beyond the following day without writing explicit, exceptional reasons.

Transfer of cases

All ongoing cases under the 2024 Act will immediately transfer to the newly designated Special Fast

Track Courts and must be completed within three months of transfer.

States and Union Territories are mandated to appoint Special Public Prosecutors under the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023 to handle these trials exclusively.

Appeals against bail orders, judgments, or sentences must be filed within 30 days (with a strict absolute ceiling of 90 days for special delays) and will be adjudicated by a two-judge High Court Bench.

Recent incidents of paper leaks and malpractices have necessitated urgent structural overhauls to safeguard transparent and merit-based selections.

“The objective of the Act is to bring greater transparency, fairness, and credibility, and to inspire confidence in the public examination system, Dr. Jitendra Singh noted.

“The amendments ensure time-bound investigations, speedy trials, and enhanced deterrence against organised crime groups and institutions,” he said.

1. **Context (GS II – Governance; Polity & Constitution; Prelims – Current Affairs)**

The Union Government has circulated the Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026 to strengthen the anti-cheating framework introduced under the 2024 Act. The Bill proposes stricter penalties, time-bound investigations and trials, and dedicated fast-track mechanisms to curb paper leaks and organised examination malpractices.

2. **Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026**

i. **Objective**

- * To ensure fair, transparent and merit-based public examinations.
- * To deter organised exam fraud through stricter enforcement.

ii. **Key Provisions**

- * Investigation to be completed within 60 days.
- * Establishment of Special Fast Track Courts for speedy disposal of cases.
- * Creation of Special Task Forces (STFs) for investigation.
- * Appointment of Special Public Prosecutors by States/UTs.
- * Time-bound appeals and restrictions on unnecessary adjournments.

iii. **Enhanced Penalties**

- * General offences: 5–10 years imprisonment and fine up to ₹50 lakh.
- * Service providers/in-charge personnel: Fine up to ₹5 crore and imprisonment up to 10 years.
- * Organised crime: Minimum 7 years imprisonment and fine up to ₹10 crore.

iv. **Significance**

- * Strengthens deterrence against paper leaks and organised cheating.
- * Promotes faster investigation, trial and disposal of examination-related offences.
- * Aims to restore public confidence in the examination system.

Why India must modernise the way govt. publishes laws and regulations

India's legal publishing system remains fragmented and dependent on PDFs, making it difficult for citizens, lawyers and even courts to access, track laws and amendments in force; adopting open legal publishing standards would make laws more accessible and strengthen democratic participation

Sushant Sinha

When the Transvaal government enacted the notorious "Black Act" against Indians in 1906, Mahatma Gandhi's first act was not to protest but to translate the ordinance and publish it in full in his newspaper, *Indian Opinion*, so that ordinary Indians could read for themselves exactly what was being done to them. Gandhi understood that a community cannot defend its rights against a law it cannot read.

Today a variety of laws govern us: Acts and their amendments, rules, regulations, BIS standards, road standards, circulars, municipal bylaws, and more. Yet there is no single place to find out what the law actually is – it lies scattered across multiple websites. The rule of law requires that Bills presented before Parliament or a State Assembly be made known to the people in advance, that citizens are aware of the laws and amendments in force, and that the judiciary knows the state of the law it adjudicates. In reality, Bills are often not placed in the public domain before they are introduced. Citizens struggle to find the law in force, and even when they locate a copy, determining what the law was on a given date is a battle of its own.

Lost in the gazettes

As a legal publisher, we were incorporating the changes made by the Code of Criminal Procedure

Govt. uses gazettes as its primary means of publishing laws and bringing them into force. These gazettes are published as PDFs, a format created in the early 1990s

(Amendment) Act, 2005 into the principal Act. The amendment left it to the government to decide when its various sections would come into force, so we began searching the gazettes for the notifications bringing them into effect. To our surprise, we could find no gazette notifying Sections 16, 25, 28(a), 28(b), 38, 42(a), 42(b), 42(f)(iii) and (iv), and 44(a). We filed an RTI application with the Ministry of Home Affairs, which confirmed that these sections have never been notified. In other words, more than two decades later, they are still not valid law.

The government uses gazettes as its primary means of publishing laws and bringing them into force. These gazettes are published as PDFs, a format created in the early 1990s to ensure that a digital document looks identical on every device by embedding fonts and images. While this makes PDFs easy to share and print, it also makes it very hard to extract the structure and meaning of a legal document. A law is inherently hierarchical – chapters, parts, sections, subsections – but a PDF exposes none of that hierarchy. Many gazettes published in regional languages contain proprietary fonts, which look fine on a PDF viewer

but cannot be searched in regional language or read on any websites.

Learning from global standards

Governments in several countries have moved to publishing laws in markup languages that properly capture their structure, semantics and the local languages. Many African countries have adopted the Akoma Ntoso standard, a markup language specifically designed for legal documents. They use an open-source legal publishing platform called Indigo, which allows users to add or edit laws. You can apply amendments to an Act and see precisely what changed across successive amendments – and what the law was at any given point in time. Subordinate rules and regulations can also be tagged to their principal Act and amended in the same way.

The United States publishes its laws in a variant of Akoma Ntoso called USLM (United States Legislative Markup). Every law and amendment is published in USLM, while the PDF and HTML versions are generated automatically from it using a stylesheet. All past issues of the Federal Register have also been converted and are available for bulk download. As a result, not only commercial legal vendors but also nonprofits, think tanks and others can use them to help citizens better engage with their democracy.

The United Kingdom publishes its legislation at legislation.gov.uk, run by The National Archives. The base format for the content is the Crown Legislation

Markup Language (CLML), another modified version of Akoma Ntoso. The National Archives has stated that it aims to move towards Akoma Ntoso because it is emerging as the international standard, is less complex, and is supported by a wider pool of experts and suppliers.

Making the law accessible

While the rest of the world has moved away from PDF publishing, we remain dependent on a standard that was built more than three decades back. Until we upgrade the government's legal publishing software stack, access to the law will remain unnecessarily difficult for citizens, lawyers, judges and other stakeholders in a democracy.

The Internet itself was built on open standards. People came together to standardise communication protocols, which every stakeholder then adopted. Dr. B.R. Ambedkar often reminded us that a democracy needs more than a government "for the people"; it needs a government "by the people." Laws are the raw material of our democracy, and leaving their publication to a handful of contractors will only deepen the obscurity. If instead the government consults its citizens and standardises legal publishing, it could transform how the state communicates with the people and make them an active part of democracy. (Sushant Sinha did his PhD in Computer Science from University of Michigan and is the founder of legal search engine, Indian Kanoon)

1. Context (GS II – Governance & Polity; Prelims – Governance & Current Affairs)

India's legal publishing system continues to rely largely on PDF-based Gazette notifications for publishing laws and regulations. This fragmented system makes it difficult to access, search, track amendments and identify the law in force. Adopting open, machine-readable legal publishing standards can improve transparency, legal certainty, ease of compliance and democratic participation.

2. Modernising India's Legal Publishing System

i. Key Issues

- * Laws, rules and amendments are scattered across multiple platforms.
- * Gazette notifications are mainly in PDF format, limiting searchability and version tracking.
- * Difficult to identify amendments and the law applicable on a given date.
- * Regional-language gazettes are often not digitally searchable.

ii. Proposed Reforms

- * Adopt machine-readable legal publishing standards instead of PDF-only publication.
- * Enable searchable laws, amendment history and cross-linking between Acts and subordinate legislation.
- * Improve accessibility for citizens, lawyers, judges and researchers.

iii. Global Best Practices

- * Akoma Ntoso – International open standard for legislative documents.
- * USLM (United States Legislative Markup) – Used by the USA for digital publication of laws.
- * legislation.gov.uk – Provides updated and consolidated legislation in the UK.
- * India's National Archives is exploring Common Legislative Markup Language (CLML).

iv. Significance

- * Enhances transparency, accessibility and legal certainty.
- * Improves judicial efficiency and ease of compliance.
- * Strengthens the Rule of Law and promotes informed citizen participation in governance.

India scaling new heights in defence production: PM

India is continuously strengthening its technological capabilities, says Modi in *Mann Ki Baat* address; he lauds Indian sportspersons, students for their achievements in respective fields

The Hindu Bureau
NEW DELHI

India is continuously scaling new heights in defence production, defence exports, and political cooperation with friendly nations, Prime Minister Narendra Modi said on Sunday in the latest episode of *Mann Ki Baat*, his monthly radio address.

Mr. Modi also paid tributes to the soldiers who sacrificed their lives during the Kargil War in 1999.

India was continuously strengthening its technological capabilities, he said. Citing the induction of *INS Mahendragiri* into the Indian Navy, he said the modern warship had been designed and built in India. More than 75% of the materials used in it are indigenous. "It is a symbol of the growing strength of an 'Atmanirbhar Bharat'." This very month, the Defence Research and Development Organisation (DRDO) also successfully tested the Pinaka Long-Range Guided Rocket. Behind this success lies the collective perseverance of our scientists and engineers. The DRDO



Whether it is defence production, defence exports, or political cooperation with friendly nations, India is continuously scaling new heights. Global confidence in India's defence equipment and technology is growing

NARENDRA MODI
Prime Minister



also successfully tested the Kusha missile," he said.

"Whether it is defence production, defence exports, or political cooperation with friendly nations, India is continuously scaling new heights. Earlier this month, I was in Indonesia, where a major agreement regarding Brahmos and Astra missiles was concluded. Global confidence in India's defence equipment and technology is growing," Mr. Modi said.

Remarkable feats

Wishing the Indian contingent the very best for the Commonwealth Games, which began in Glasgow a few days ago, the Prime Minister said people across the country hoped that the

players and athletes would perform exceptionally well and make the nation proud. "Our youth have achieved remarkable feats in sports recently. P.V. Sindhu has become the first Indian to win the Japan Open title in badminton; the entire nation is proud of this achievement of hers," he said.

He said the Indian women's cricket team had won the first-ever women's Test match at Lord's in London. "This is a historic victory. But that is not all. In the long history of Lord's, this was the first Test match played by a women's team. It was on this very ground that India won her first Cricket World Cup in 1983. Now, our 'Nari

Shakti' has brought glory to the nation there," he said.

Mr. Modi said "our young friends" were also bringing glory to India in the field of science. "Olympiads in Physics, Chemistry, Biology, and Mathematics were held just this month. The Indian contingent delivered a spectacular performance in these competitions. In the Physics Olympiad, all five of our students won gold medals, and India secured the top rank," he said.

"In the Chemistry Olympiad, too, all our students won gold medals. All our students also won medals in the Biology Olympiad, including a gold medal. In the Mathematics Olympiad, our students secured two gold and four silver medals. I am immensely proud of the nation's youth power. It is heartening to see the culture of Olympiads and Hackathons steadily growing in India. I am confident that more and more young people across the country will show interest in such forums and keep the flag of India flying high," he said.

1. Context (GS III – Defence & Security; Science & Technology; Prelims – Defence & Current Affairs)

India is strengthening its defence manufacturing and export capabilities under the Aatmanirbhar Bharat initiative through greater indigenous production, technological advancement and defence cooperation with friendly countries. Recent developments, including the induction of indigenous platforms and successful missile tests, reflect India's growing self-reliance and global credibility in the defence sector.

2. India's Progress in Defence Production

i. Key Developments

- * INS Mahendragiri inducted into the Indian Navy; over 75% indigenous content.**
- * DRDO successfully tested the Pinaka Long-Range Guided Rocket and Kusha missile.**
- * India signed an agreement with Indonesia for cooperation on BrahMos and Akash missiles.**
- * India's defence equipment and technology are gaining increasing global acceptance.**

ii. Significance

- * Strengthens Aatmanirbhar Bharat in defence.**
- * Reduces dependence on defence imports.**
- * Enhances military capability and technological self-reliance.**
- * Boosts defence exports and strategic partnerships.**
- * Promotes India's emergence as a global defence manufacturing hub.**



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