

India AI Impact Summit 2026: From Global Dialogue to Global Delivery

By Uday Kumar Varma

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The India AI Impact Summit 2026 opened today at Bharat Mandapam. Remarkable for its scale and wide participation, it will reportedly be attended by more than 24 heads of state and government, including French President Emmanuel Macron and Brazilian President Luiz Inácio Lula da Silva. The scale of representation underscores a simple reality: Artificial Intelligence is no longer a sectoral technology issue; it is a structural global priority.

But symbolism alone will not define the Summit's significance. Its importance lies in timing.

AI's global market is projected to exceed \$1 trillion in economic value within this decade, with estimates suggesting AI could contribute up to \$15 trillion to global GDP by 2030. At the same time, computing power remains highly concentrated, advanced foundation models are dominated by a handful of corporations, and energy consumption by large AI systems is rising sharply. The question confronting policymakers is not whether AI will reshape economies — it already is — but whether its benefits will be broadly shared or narrowly accumulated.

Previous global convenings — from Bletchley Park to Seoul, Paris and Kigali — focused significantly on safety, guardrails, and high-level principles. The India AI Impact Summit signals a pivot: from safeguarding against harm to ensuring measurable developmental impact.

A Framework Built on Equity

The Summit's architecture — organised around three guiding Sutras of People, Planet, and Progress, operationalised through seven thematic Chakras — reflects an attempt to structure AI governance around distributive justice as much as innovation.

Consider the Human Capital dimension. The World Economic Forum estimates that AI could displace tens of millions of jobs globally while creating new roles requiring advanced digital skills. For emerging economies with youthful demographics, this transition is both an opportunity and a risk. Without largescale reskilling, AI-driven productivity gains could exacerbate inequality rather than reduce it.

Similarly, the Democratising AI Resources Chakra addresses a fundamental asymmetry: access to large datasets, high-performance compute, and advanced models remains concentrated in a few nations. If left unaddressed, this imbalance could replicate the digital divides of previous technological revolutions — only at far greater speed.

By foregrounding inclusion and resource access, the Summit implicitly recognises that AI geopolitics is as much about infrastructure equity as it is about algorithmic innovation.

The Energy and Sustainability Imperative

Another analytical dimension often overlooked in public discourse is environmental cost. Training advanced AI systems requires enormous computational resources, with associated carbon footprints and water usage for data centre cooling. The Resilience, Innovation & Efficiency working group is therefore not peripheral; it is central. If AI is to serve the Planet, energy-efficient model development and frugal innovation must move from aspiration to engineering priority.

For countries in the Global South, where energy and water constraints are real, scalable yet resource-light AI systems will determine whether adoption is viable or exclusionary.

What Can a Summit Realistically Achieve?

Sceptics will argue — not without reason — those summits generate declarations more readily than implementation. AI development today is driven by private capital, venture ecosystems, and national strategic interests. Regulatory philosophies differ sharply across regions.

However, three realistic outcomes are within reach:

Norm Convergence: Agreement on baseline safety, transparency, and accountability principles.

Operational Collaboration: Cross-border partnerships in AI for health, agriculture, climate modelling, and education — sectors where impact is measurable.

Institutional Inclusion: Greater representation of Global South research institutions in AI science, data governance frameworks, and standards-setting bodies.

The participatory groundwork — including public consultations, pre-summit events across multiple geographies, and co-chaired working groups — gives this Summit procedural legitimacy. The test will be whether this consultative architecture evolves into durable institutional mechanisms.

The Road Ahead

AI governance will not be resolved in two days of plenaries. The Summit's real success will depend on follow-through: working group deliverables, measurable milestones, funding commitments, and periodic accountability.

India's role as host is therefore consequential. It positions the country not merely as an AI market, but as a convener shaping the ethical and developmental vocabulary of AI diplomacy.

If the India AI Impact Summit 2026 manages to align ambition with implementation — even partially — it could mark a turning point: the moment when AI governance moved beyond precautionary dialogue toward coordinated global delivery.

The age of AI is already here. The question is whether global stewardship will keep pace.

Pitfalls of Too Much “AI” In National Security

By Vappala Balachandran

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Artificial Intelligence (AI), if adopted in forecasting national security threat intelligence, will improve institutional memory. Collation and retrieval will become easier, making assessment more comprehensive.

At the same time too much reliance on AI could affect assessment and forecasting, which is the most important part of preventive intelligence. It could lead to plagiarism and unrealistic assessment, which if applied to security, could lead to serious national security risks.

Application of human mind based on collected intelligence data is invariably required for near accuracy in forecasting to reach the stage of “imagination” to understand the “danger”, as rightly observed by the US National Enquiry Commission on the 9/11 terror attacks.

Similarly, too much reliance on AI in setting up physical preventive security architecture could pose danger. My experience in November 2009 during the Asia-Pacific Homeland Security Summit in Honolulu needs to be quoted. I was invited to give the lead oration on urban security, based on my being member of the high-level committee appointed by the Maharashtra government to enquire into the systemic lapses during the 26/11 terror attacks on Mumbai.

In my address I gave detailed account of the incident and how terrorists came all the way from Pakistan through the sea and how their arrival could not be prevented despite advance intelligence pointers. I also mentioned the danger of thousands of small fishing boats in the oceans around India: also, how difficult it was for our sea patrols to detect and distinguish terrorists from genuine civilian fishermen since small boat sailors from India, Pakistan, Sri Lanka and Bangla Desh dressed almost alike.

At this stage the Israeli delegate who was their consul based in New York intervened and said that they had evolved an AI generated coastal patrolling preventive system for detection and disruption of such dangers. He showed us a video showing how their static and sea borne coastal security system worked against suspicious small boats, based on video surveillance cameras which were linked with heavy guns.

When video cameras, guided by facial recognition system detected danger, the guns went off automatically and destroyed those boats. I told the audience that this pattern of detection and destruction could not be adopted in South Asia as it would be construed as serious violations of human rights.

Fourteen years later, the 7 October 2023 Hamas raid on Israel proved how their iron clad AI led defence system could crumble. “Channel 12” investigation, aired in December 2024, revealed how the Hamas could get around and disrupt this system: for seven years Hamas was watching the Israeli border surveillance system and collecting details including the “IP addresses and serial numbers of all the security cameras in the affected areas including the worst-hit communities on October 7”.

Also, Hamas had a list of Israeli security guards working in the Sha’ar Hanegev area, with their phone numbers, including those from Kibbutz Kfar Aza, Kibbutz Nahal Oz and Kibbutz Mefalsim. Washington Post (October 4, 2024) said that this AI operated defence had led to a situation when IDF cadres manning border posts started taking things easy by not being physically present and doing border vigilance only remotely from their residences.

Border vigilance was left to unarmed young girls (“field observers”) while their armed IDF commanders were away. Their watch reports on Hamas exercises, which they felt were preparations for war, were ignored.

Hamas took advantage of the Jewish “Simchat Torah” celebrations on 7 October 2023, much like the Egypt-Syria attacks on 6 October 1973 during the Yom Kippur prayer day, and ripped through Israel defence, destroying the CCTV cameras, thereby disabling the weapons systems making the border defence non-functional.

Simultaneously their para gliders flew over the border fences while others made huge holes on border fencing using bull dozers. They even had amphibious landing near Zikim to capture a military post. There can be no better example of human neglect in an AI led preventive defence.

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From INSAS to UGRAM

By Yash Telang

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Introduction

Make in India, Atmanirbhar Bharat, indigenization are not just buzz words but indicators of what the future would look like. The sheer fact the India went from one of the largest Importer of Defense products ,to now exporting defense products it in 2025 is a reminder of that. While we primarily focus on Light combat aircrafts, frigates, tanks, drones, in the media we generally ignore our small arms. In this article we discuss how India is creating an indigenous high-class weapon named UGRAM and how in the coming future it will be the face of the Indian small arms scene.

The Problem with INSAS

The 5.56×45 mm INSAS rifle was developed as to replace the 7.62mm SLR. It was designed by DRDO and manufactured by the ordnance factory board. The policy makers gave various reasons for the shift from 7.62mm to the 5.56mm. a) As the 5.56mm rounds were lighter hence more rounds could be carried by the soldiers (b) NATO also used the 5.56mm rounds (c) Parts of the INSAS were also compatible with carbine and LMGs (d) As the 5.56 mm bullet was a 'shoot to wound' so it would not kill the enemy but injure them badly resulting in the breakage or morale of the enemy troops. The gun was widely used in 90s and the 2000s, being used in Kargil, Kashmir and also to combat the leftwing extremism. But the gun came with its own set of Problems like the Jamming issues that it had in high altitude areas like Siachin and Kargil, its magazine getting cracked in the cold weather, Oil leakages in the Rifle, the rifle malfunctioning and auto firing. Hence as a result INSAS was planned to slowly Phase out. By that time the army used different variants of the AK and the SIG 716, M16 from the USA.

Collaboration with Russia and supply chain Impacts

In July 2021 the Indian and the Russian government signed a contract for the manufacturing of the AK 203 Rifle in India, valued at approximately 5000 crores. It was to be produced under a joint venture called the Indo Russian Rifles Private Limited. The deal called to manufacture 6 lakh AKs to meet the need of the Indian army. The contract also included a Transfer of Technology. But the Russian Invasion on Ukraine in February 2022 triggered a Logistical challenge in the defense sector of Russia. As a Result, the transfer of Technology and the supplying of the initial batches of Rifles to India took a hit as it became more important for Russia to have their defense needs satisfied. As of now in 2025 the production of AK 203 rifles in Amethi has been going in full swing, but India understood that it should not be dependent on other countries on matters as important as weapons. And it understood that it was high time that it creates a deadly Rifle which is not only completely made in India with all its parts but also the technology should be from within India.

UGRAM (the Ferocious)

DRDO's Armament Research and development Establishment (ARDE) joined hands with Dvipa Armor India to create the UGRAM Rifle. It is a completely indigenously made battle Rifle to address the needs of the Army and the paramilitary forces. Also, we see a shift from 5.56mm back to 7.62mm suitable for counter insurgency, border security and a change in the doctrine from 'shoot to wound' to 'shoot to kill'. The Rifle is made with the intention to suite the various climatic conditions of India like high Altitudes, deserts and jungles. . It is also important to note that UGRAM shares a lot of features with the INSAS and it was kept intentional as the soldiers currently serving have been accustomed to the INSAS's features like the cocking mechanism, sights, magazine fitment, etc. And soldiers who have been trained and have their reflexes set in shouldn't go haywire during a heated operation.

Also, the effective firing range of the UGRAM is 500m which is higher than then that of the AK which is around 350- 400m. Currently testing of this weapon is going in full swing. BSF are conducting trials of the weapon as their wide operational area matches with the design intent of the gun. The testing phase is and must take time as we shouldn't repeat the same mistake that we did with the INSAS. In August of 2023 the NSG also procured the weapon to test and diversify their Armory.

Future

India is entering a new phase where it is making weapons for itself without compromising quality and the lives of our soldiers. Also, we shouldn't be restricted only to the domestic supply but also explore export. Indian Army always had the best soldiers, it's now time to also equip them with the best machinery.

| Feature / Rifle | INSAS | AK-203 | UGRAM | SIG-716 |
|--------------------------------|---|---|---|--|
| Origin | India | Russia/India (Joint venture) | India | USA |
| Designer / Manufacturer | DRDO / Ordnance Factories Board | Kalashnikov Concern / Indo-Russian Rifles Pvt. Ltd. | DRDO (ARDE) / Dvipa Defence | SIG Sauer |
| Type | Assault rifle | Assault rifle | Battle rifle / assault rifle | Battle rifle |
| Caliber | 5.56×45 mm NATO | 7.62×39 mm | 7.62×51 mm NATO | 7.62×51 mm NATO |
| Action | Gas-operated, rotating bolt | Gas-operated (Kalashnikov system) | Gas-operated, rotating bolt | Short-stroke piston, rotating bolt |
| Weight (approx) | ~4.018 kg (unloaded) | ~3.8 kg | ~3.91 kg | ~3.9 kg (varies by variant) |
| Barrel Length | ~464 mm | ~415 mm | ~415 mm | ~406 mm |
| Magazine Capacity | 20 / 30 rounds | 30 rounds | 20 rounds | 20 rounds |
| Effective Firing Range | ~400 m | ~400–800 m (varies) | ~500 m | ~600–800 m |
| Rate of Fire | Automatic & 3-round burst ~600–650 rpm | ~700 rpm | ~600 rpm (typical) (varies) | ~750–950 rpm (varies by model) |
| Service Status (India) | Former standard; being phased out | In induction; standard assault rifle | Under trials / early induction | In service; supplementary battle rifle |
| Role / Use | General infantry (older) | Standard infantry assault rifle | Indigenous 7.62 mm rifle for infantry/CAPFs | Enhanced long-range infantry rifle |

Macron's India Visit Will Guide the Roadmap for Bilateral Relations

By Dr. N. K. Somani

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French President Emmanuel Macron's three-day visit to India was significant in many ways. The granting of Special Global Strategic Partnership status to India-France relations was the first major achievement of the visit. However, Macron's three-day visit began in Mumbai, India's financial capital, where he inaugurated the ongoing India-France Year of Innovation at Lok Bhavan with Prime Minister Narendra Modi. In the presence of Prime Minister Modi and President Emmanuel Macron, more than 20 agreements were announced between the two countries in the defense, technology, innovation, and energy sectors. These agreements will undoubtedly further strengthen the strategic partnership between the two countries.

During the summit, the two leaders virtually inaugurated the S125 helicopter assembly line in Karnataka. It is being said that the S-125 helicopter, the world's only helicopter capable of flying to the heights of Mount Everest, will be manufactured in India. These helicopters will not only meet India's defense needs but will also be exported globally. This will not only boost India's Make in India capabilities but also strengthen its aerospace capabilities.

France is India's important strategic partner in Europe. Diplomatic relations were established between the two countries after India's independence in 1947. After laying the foundation for diplomatic relations, the two countries began to strengthen their relationship, especially during the rule of General de Gaulle. When strategic relations between the two countries began in January 1998, France was the first Western country with which India established a strategic partnership. This was also France's first strategic partnership outside the European Union. When India conducted nuclear tests in 1998 during the Atal Bihari Vajpayee government, France was the only Western country to support India, defying the United States. Then-President Jacques Chirac supported India's nuclear test, rejecting US sanctions. India's perennial friend, Russia, also issued an uncomfortable statement, saying, "India's nuclear test runs counter to the world community's efforts to strengthen the Nuclear Non-Proliferation Treaty (NPT)."

When other countries halted arms sales to India due to US sanctions, France opened its arms market to India. Following the deal to supply Rafale fighter jets and Scorpene submarines, France has become India's second-largest defense supplier (after Russia). France was the first country with which India launched the International Solar Alliance. Both countries are also working in the field of renewable energy. Importantly, France has always prioritized India on its foreign policy front and has never interfered in our relations with our neighbors. In short, the two countries are not only strategic partners but also support each other on many complex issues.

Both countries are also working on a strategy to contain China's influence in the Indo-Pacific region. This comes at a time when China's dominance in the Indo-Pacific region is growing. India and France established the Indo-Pacific Trilateral Development Cooperation Fund two years ago. Its objective, in collaboration with the United Arab Emirates, is to ensure awareness and security in the maritime domain from the east coast of Africa to the Far Pacific.

The both countries have also issued a Joint Strategic Vision for cooperation in the Indian Ocean region, which includes work on maritime security, naval exercises, and information sharing. These factors have made France one of India's most reliable and trusted defense partners. Amid discussions of the India-US trade deal and reports of strained Franco-US relations, the purchase of 114 Rafale fighter jets is likely to be finalized among the significant defense agreements reached during Macron's visit to India.

The Indian government has approved a proposal worth ₹3.25 lakh crore to purchase 114 additional fighter jets for the Air Force. This is the largest defense deal in recent years. It will not only enhance the strength of India's Air Force but also boost India's defense production. Eighteen of these aircraft will come from France, while the remaining will be manufactured in India under the Make in India initiative.

Although Macron has come to India this time to strengthen the India-France strategic partnership in accordance with the "Horizon 2047 Roadmap," the way the Modi-Macron joint statement calls for elevating the India-France strategic partnership to the level of a "Special Strategic Partnership" demonstrates the seriousness of both leaders regarding the roadmap. 2047 marks the centenary of India's independence and the centenary of India-France diplomatic relations. Furthermore, 2047 marks the 50th anniversary of India-France strategic relations. This roadmap for bilateral relations was prepared during PM Modi's visit to France in July 2023.

When Macron visited India in March 2018, he urged New Delhi to consider France as India's best partner in Europe, rather than using Britain as a gateway to Europe. At that time, Macron stated that Britain has been a historic partner in Europe, and he wants France to become a new partner. Meanwhile, Indian Prime Minister Narendra Modi praised India-France relations, saying that the partnership between New Delhi and Paris is boundless and extends from the deepest oceans to the highest mountains. Macron's visit to India likely reflects this desire.

“Breaking News: The Internet is Down—Long Live the Radio!”

By - Dr. Santhosh Mathew

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In an age where Wi-Fi signals decide our moods and smartphones rarely leave our palms, it sounds almost satirical to say that the most reliable companion in times of crisis is not a 5G tower but a humble radio set. Yet every year on February 13, when the world observes World Radio Day, we are reminded that the simplest technologies often outlast the loudest innovations. The date commemorates the establishment of United Nations Radio in 1946, but its relevance goes far beyond institutional history. It celebrates a medium that refuses to fade, because it is woven into the daily lives of millions.

Marshall McLuhan once described radio as a “hot medium”—intense, intimate, and capable of engaging listeners at a deep emotional level. Unlike television, which demands the eye, radio speaks directly to the ear and ignites imagination. In today’s world of podcasts and earbuds, McLuhan’s idea seems prophetic. Radio is no longer confined to a wooden box in the corner of the room. It has become an extension of our pockets and our ears. Every smartphone is, in essence, a portable radio. In India, radio is more than a communication device; it is the “common man’s university.” Long before digital platforms democratized content creation, radio entered villages, tea shops, fishing harbours, railway stations, and army camps. It carried agricultural advisories to farmers, educational lessons to students, classical music to connoisseurs, and news bulletins to a newly independent nation eager to understand itself.

All India Radio, now officially known as Akashvani, has been the backbone of this journey. Its guiding motto, “Bahujana Sukhaya, Bahujana Hitaya”—for the happiness and welfare of the many—captures its inclusive philosophy. AIR was never designed as an elite forum; it was a public service committed to national integration and social development.

In a country of hundreds of languages and dialects, Akashvani became a unifying thread, embodying India's "unity in diversity." Programmes like Yuvavani empowered young voices decades before social media offered them platforms. Youth could speak, debate, recite poetry, and articulate aspirations over the airwaves. It was participatory communication in its purest form. The FM revolution of the late 1990s and early 2000s injected new energy into Indian radio. Private FM stations brought local flavour, lively radio jockeys, interactive talk shows, and urban vibrancy. Radio once again became fashionable among city youth. It was no longer just about news and classical music; it was about companionship during traffic jams and late-night conversations.

Yet, beyond glamour and entertainment, radio's true strength lies in resilience. When cyclones hit coastal regions, when floods submerge towns, when earthquakes disrupt infrastructure, it is often radio that survives. Electricity may fail. Mobile networks may collapse. Internet services may crash. But a battery-operated radio continues to function. In disaster management, radio is not nostalgia—it is necessity. Community radio stations broadcast real-time weather warnings, evacuation instructions, and relief information in local languages. They correct rumours and prevent panic. In remote villages cut off from highways and digital networks, radio remains the lifeline. Closely linked to disaster response is ham radio—amateur radio operated by trained enthusiasts. When all conventional communication systems break down, ham operators step in. During earthquakes, floods, and cyclones in India, ham radio volunteers have played a silent yet heroic role in coordinating rescue efforts and connecting stranded communities with authorities. Without commercial backing or corporate infrastructure, these operators rely on technical skill and civic spirit. Their antennas become bridges between isolation and hope.

The portability of radio makes it indispensable. It can hang from a nail in a fisherman's hut, sit on a tractor dashboard, or slip into a traveller's backpack. It does not demand literacy or expensive data plans. It asks only for listening. In recent years, radio has experienced a remarkable revival, largely due to Prime Minister Narendra Modi's monthly programme, Mann Ki Baat. Launched in 2014, it transformed perceptions of radio from an aging medium into a dynamic tool of governance and public engagement. Instead of fiery political speeches, the programme highlights grassroots innovators, social reformers, environmental initiatives, and unsung heroes. Mann Ki Baat reflects what communication scholars describe as the "mass line" approach—direct engagement between leadership and the people. By choosing radio, the Prime Minister bypassed the noise of television studios and the fragmentation of social media. The human voice, calm and conversational, created intimacy. Millions felt personally addressed. The programme has undeniably popularized and revitalized radio. Schools organize collective listening sessions. Translations reach diverse linguistic regions. Citizens send suggestions, ideas, and stories that sometimes find mention in subsequent broadcasts. Themes such as cleanliness drives, water conservation, local entrepreneurship, and cultural heritage have gained national momentum partly through this platform.

Radio, in this context, is not merely transmitting information; it is building participation. It is governance through conversation. Meanwhile, community radio continues to empower marginalized voices. Women's groups discuss self-help initiatives. Farmers exchange practical knowledge. Fisherfolk receive storm alerts. Each small transmitter strengthens the democratic fabric of the nation. In a hyper-visual age, Radio offers a rare gift—imagination. It allows listeners to visualize stories in their own way. It accompanies them while driving, cooking, studying, or working. It informs without overwhelming.

As World Radio Day is observed on February 13, the celebration is not about sentimentality. It is about acknowledging a medium that remains India's most inclusive classroom and most portable parliament. From AIR to Akashvani, from Yuvavani to FM stations, from ham radio heroes in disaster zones to the nationwide resonance of Mann Ki Baat, radio continues to evolve without losing its soul.

The next time the internet falters and screens go blank, the old transistor may still whisper steady news and reassuring voices. In that quiet reliability lies radio's enduring power. Perhaps the satire is true after all: when the noise of the digital world fades, it is the invisible waves in the air that keep a nation connected.

US-Russia Nuclear Pact Just Ended. The World Needs a New Start

By - Dr. Seshadri Chari

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The expiration of the last US-Russia nuclear arms control treaty, New START, has raised the spectre of a nuclear arms race once again.

On 5 February, the US-Russia nuclear pact known as New START expired. There are now no treaties requiring the two countries to pursue further reductions in their nuclear arsenals.

This comes just months after US President Donald Trump announced that America would resume nuclear testing after 33 years, a move that could provoke other major nuclear-armed countries to follow suit and accelerate a new arms race.

In this backdrop, it is worth recalling how the nuclear order evolved and how that framework has since eroded.

The nuclear fission theory that an atomic nucleus could split into smaller parts and release massive energy led to the world's first nuclear weapons explosion on 16 July 1945 in Los Alamos, New Mexico, as part of the Manhattan Project.

Just three weeks after this test, atomic bombs were dropped on Hiroshima on 6 August and on Nagasaki on 9 August, killing about 200,000 people. Japan surrendered and accepted the terms of the Potsdam Ultimatum. The Second World War ended, but the destruction revealed the astounding power of a new class of weapons and signalled the beginning of a nuclear arms race.

The Cold War that followed witnessed the most alarming nuclear arms race between the United States and the Soviet Union. Over the decades, the two sides signed various arms control agreements to manage their rivalry and limit the risk of nuclear war.

However, deep fissures have re-emerged in the US-Russia relationship in recent years, leading to the expiration of the last bilateral nuclear arms control treaty, and raising once again the spectre of a nuclear arms race.

The long road to regulating nuclear tests

After the use of nuclear weapons in Hiroshima and Nagasaki, there was general concern across the world, especially in developed countries, on issues related to harnessing nuclear power in a more controlled manner for electricity generation and other peaceful purposes.

But opinion on the use of nuclear devices was divided, especially among scientists working on developing Peaceful Nuclear Explosions (PNE) programmes. Both the US and (then) USSR conducted several tests under PNE programmes.

Considering the expertise, the US had developed, the USSR even approached it for technology exchanges. This led to negotiations on the Threshold Test Ban Treaty (TTBT), signed in July 1974, which set limits on underground nuclear tests.

Meanwhile, in May 1974, India successfully conducted its first PNE test in Pokhran, codenamed "Smiling Buddha".

Two years on, in accordance with the TTBT, the US and the USSR signed the PNE Treaty on 28 May 1976, limiting the parameters of such tests. The treaty entered into effect on 11 December 1990 after prolonged ratification delays, and was initially valid for five years. Since then, neither party has conducted a PNE.

Peaceful nuclear explosions were also addressed under Nuclear Non-Proliferation Treaty (NPT), to which most countries signed on — though India chose not to. Article V of the NPT allows for PNEs. However, at the 2000 NPT Review Conference, member countries agreed that Article V was to be interpreted in light of the Comprehensive Nuclear Test Ban Treaty (CTBT), once it enters into force. Although the CTBT was signed in 1996, it has not yet entered into force.

START and stop?

One of the earliest efforts to harness nuclear explosions for peaceful purposes was the US Plowshare Programme, set up in mid-1957 by the former US Atomic Energy Commission (AEC). Later that year, the AEC carried out the first underground nuclear explosion at the Nevada Test Site — the Rainier event — of 1.7 kiloton. The results validated theoretical concepts and gave impetus to Plowshare. In total, 27 PNE tests, consisting of 35 separate blasts, were conducted between December 1961 and May 1973 in the US as part of the programme.

A plowshare (or ploughshare), a sharp sword-like tool used to plough fields, was invoked in this context to symbolise creative tools that benefit humankind, as opposed to destructive tools of war. The Biblical reference states: “And he shall judge among the nations, and shall rebuke many people: and they shall beat their swords into plowshares, and their spears into pruning hooks: nation shall not lift up sword against nation, neither shall they learn war any more” (Isaiah 2:4).

The USSR, too, had its own parallel programme, ‘Nuclear Explosions for the National Economy’, in this era, where it conducted its own series of tests.

During the Cold War, the US and the Soviet Union, worried about the consequences of Mutually Assured Destruction (MAD) in the event of a direct conflict, agreed to negotiate even as deterrence underpinned their vertical proliferation of nuclear weapons.

The spectre of MAD compelled them to conclude a series of treaties and agreements such as the Strategic Arms Limitation Treaty (SALT I and II), the Anti-Ballistic Missile (ABM) Treaty, the Intermediate-Range Nuclear Forces (INF) Treaty, the Strategic Arms Reduction Treaty (START I), the Strategic Offensive Reductions Treaty (SORT), the Cooperative Threat Reduction (CTR) Programme (Nunn-Lugar Programme), and the New START Treaty—which just expired and left a major vacuum. While Moscow has signalled it will continue to observe New START limits if Washington does the same, there is no binding framework in place.

According to a report last year by the Stockholm International Peace Research Institute, Russia had 5,459 nuclear warheads, and the US about 5,177. China came as a distant third with at least 600.

The doomsday clock is ticking

Last October, Trump made a startling announcement aboard Air Force One: “We’ve halted [testing] many years ago, but with others doing testing I think it’s appropriate to do so.”

Since 1945, there have been 2,056 nuclear test explosions worldwide, 1,030 of them conducted by the United States. Former US President Bill Clinton halted US testing in 1992 at the end of the Cold War. The Soviet Union conducted its last test in 1990 and China in 1996.

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India is Proud of:

Mary Surin

A Grass root Green Warrior from Jharkhand, who Quenches Forest's Thirst by Creating 35 Patthar (Stone) Dams



Who thinks about saving a forest from harsh summer when people cry and crib to get their bucket full? Mary Surin does in Jharkhand's Palamu Tiger Reserve forests. Every summer when forests turn hot cauldrons, animals and trees struggle to get water, one woman in a small tribal village called Badhaniya stood tall with a steely resolve to provision water for them. She also ensured the human population, which struggles through the dry spell, also get their share.

And how did she do this? In these forests, natural streams hold water through the hottest months and the soil too holds firm. So Mary has tried to conserve this water by creating dams - locally called Patthar Dams - where water can be available throughout the year.

With no formal training or financial backing, it was her will to act, that made the gargantuan work possible. A resident of Barwadih block in Latehar district, Mary who has studied only till Class 8, was happy being a housewife managing her home and farmland like most rural women. But she decided to do something for the larger benefit of people and wildlife. She began a grassroots campaign to conserve water, prevent forest fires, and protect wildlife.

She says "We had no resources so we used what was around us, stones and soil. We cannot just leave everything on fate. The forest gives us life. We should do something for her"

In early 2024, when Mary noticed how quickly the rainwater from her village was being wasted after being drained away carrying precious topsoil with it, she thought of somehow conserving it. Saving the water that was flowing down till the Koel river, nearly 22 kilometers away, leaving the land dry, became Mary's purpose.

She convened a meeting in her village and in the presence of elders, proposed a simple idea - to build small check dams using stones from the forest. These makeshift structures, she suggested, would slow the water, trap the soil, and allow the moisture to seep into the ground. Not that the idea was new, but none had thought about it, and certainly not without government help. So she got the support of the majority and also took help of the Palamu Tiger Reserve (PTR) officials before starting the work.

"We did not want to wait. It was already late so without awaiting for machines or government help, we started gathering stone, formed teams and began building a check dam without any map or design. It was purely on the basis of our own understanding and advice of Govt authorities," explains Mary.

Mary led the construction of seven stone dams in one month which were all done by hand without using a tinge of cement. "Each dam took us about four to five hours to complete. By now we have built over 35 stone dams in the forest drains near Badhaniya," she says with a sense of victory.

The dams have now become the reason of happiness for villagers. As water collects behind the dams and stays much longer, soil erosion has also slowed down. Animals like deer, elephants, and monkeys reach the streams for perennial water and drink to their heart's content. Local farmers say their fields retain moisture longer and irrigation costs have lessened.

But water conservation was only a part of Mary's mission. She was equally disturbed with instances of forest fire around Palamu Tiger Reserve. Being extremely vulnerable to wildfires, especially during the summer months, large tracts of forest would go up in flames, endangering wildlife and choking the air with smoke. Mary thought a lot about how her dams could prevent forest fires.

"If water keeps the soil moist and maintains humidity in certain patches of the forest, they could also prevent fires from spreading. Because where there is water, there is life. And where there is moisture, fire does not spread so easily," she explains.

Once Badhaniya villagers were on the same page with her, she started spreading awareness about prevention strategies in the periphery villages encouraging people to avoid burning waste near the forest, and reporting signs of smoke early. Her campaign got momentum and appreciation from forest officials.

Mary's consistent effort made immense change in the way people looked at their forests. In the same year, in 2024, she was honoured by Jharkhand Chief Minister Hemant Soren for her contribution to environmental conservation. Officials from the Palamu Tiger Reserve (PTR) have since then acknowledged her as a valuable partner in saving forests.

"This is commendable. Imagine one woman can lead a community towards conservation of forest resources," says Prajeshkant Jena, Deputy Director of PTR. Mary's husband, Ilyas Topno, has been her biggest support. A farmer, he too feels change is visible. "Earlier, all the rainwater merged with the river but as we started conserving, we see new green patches even in the months of May and June. The cattle get water and forests seem lively," he says with enthusiasm.

Badhaniya had made headlines mostly for the wrong reasons like the 2009 Maoist attack during elections which had taken the lives of CRPF jawans. Even six villagers lost their lives. Located in the Budha Pahad corridor, a stronghold of Maoists, the region had been relegated to the margins under the shadow of fear and neglect.

But today, Mary is hogging headlines and giving Badhaniya a new identity. As a model of grassroots environmental action, Mary has proved that change is dependent on how the people in an area want to adopt it. “The forest has been our biggest support system. When everything fails, the forests sustain us. Is it not our responsibility to save it?” she questions.

Such non-descript, ordinary people show what can be done to protect environment with determination of doing good for the society.

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