# BEYOND THE HEADLINES

## 2023-2024

Charting India's Path: Expert Commentary on India's Top Ten Trending News

Edited by: Dr. Shachi Negi

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# Preface

Welcome to *Charting India's Path: Expert Commentary on India's Top Ten Trending News*. In this volume, we embark on a journey through the significant events that shaped India's landscape during the period of 2023-2024.

India, a nation of rich diversity and dynamic change, experiences a myriad of events each year that leave indelible marks on its social, economic, cultural, and political fabric. This book serves as a compendium of expert opinions and analyses, offering insights into the impact and importance of these events.

The purpose of this book is twofold. Firstly, it aims to provide readers with a comprehensive understanding of the major occurrences that unfolded in India during the specified timeframe. Secondly, it seeks to delve deeper into the implications of these events, elucidating their significance in shaping the nation's trajectory.

Our contributors hail from diverse backgrounds, encompassing intellectuals, academicians, scientists, socialists, researchers, and professionals. Their collective expertise enriches the pages of this book, offering nuanced perspectives and informed commentary on a wide range of topics.

As you peruse the chapters within, you will encounter analyses of pivotal events that have left an indelible mark on India's social, economic, cultural, and political landscape. From ground-breaking policy reforms to societal transformations, each commentary sheds light on the underlying dynamics and ramifications of these developments.

We extend our heartfelt gratitude to all the experts who have generously contributed their time, knowledge, and insights to the creation of this book. Their invaluable contributions have been instrumental in shaping its content and ensuring its quality.

We also express our appreciation to all those who have been involved directly and indirectly in the process of bringing this book to fruition. Your support and assistance have been indispensable, and we are deeply grateful for your contributions.

It is our sincere hope that "Charting India's Path" will serve as a valuable resource for readers eager to gain insights into the Indian scenario. Whether you are a curious observer seeking to understand the dynamics of India's evolving landscape or a diligent student preparing for competitive exams, we trust that the expert commentary presented herein will provide you with valuable perspectives and enrich your understanding of the issues at hand.

Thank you for joining us on this enlightening journey through India's top ten trending news, and we hope that you find this book both informative and thought-provoking.

**Warm regards**

**Dr. Shachi Negi**
**Editor**
**JagritiMedia.com**

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SILKYARA RESCUE OPERATION

# 1.Silkyara Rescue Operation

In 2023, the Silkyara rescue operation captured global attention as a daring mission to save trapped miners in Uttarakhand, India. Following a tragic accident in the Silkyara coal mine, a team of rescuers, including local authorities, national agencies, and international experts, mobilized to extract the miners trapped underground. The operation involved intricate maneuvers and sophisticated equipment to navigate through treacherous conditions and reach the stranded individuals. Despite numerous challenges, including unstable terrain and limited access, the rescuers demonstrated remarkable resilience and teamwork, ultimately succeeding in bringing the miners to safety. The Silkyara rescue operation exemplified courage, solidarity, and unwavering commitment to saving lives in the face of adversity.

# Silkyara Rescue Operation

**"Next time Kali won't be so forgiving"** -
Narrates **Prof. Arnold Dix** his Experience on the Rescue.

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**Article is based upon the experiences on Silkyara Rescue Operation, shared by Prof. Arnold Dix in conversation with Dr. Shachi Negi**

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On fine afternoon of **February 25th** in **India**, under the shine of full moon night in Australia, I found myself in conversation with **Professor Arnold Dix**, International tunnelling expert and a **leading scientist behind the Silkyara Rescue Operation**. Eager to hear the scientist's viewpoint on the operation, I had been informed by locals in Uttarakhand that Arnold was regarded as a commendable individual. So I was also very excited for the meeting.

During the interview, Professor delved into a discussion with me, sharing all the supernatural encounters he had witnessed both prior to and during the operation. The scientist has also revealed the learnings of the operation and also given important piece of advice.

Throughout the conversation, he frequently employs the term **"weird."**

He reflects, **"After returning from Uttarakhand, my outlook on life has undergone a profound change."** However this was not for the first time when he visited India. He also came some years back during the construction of Tihri Dam in Uttarakhand. Reflecting on the entire rescue event, **"I sensed that I had become an integral part of a grand design"**, he says.

Arnold recounts the entire incident from start to finish, offering inspiration and serving as a valuable learning experience for all of us. He narrates:



*The grand design began unfolding a few weeks prior to the Silkyara incident. I had strangely encountered the individuals who would later play a crucial role in the Silkyara operation during those weeks. It was purely coincidental that I was meeting all of them for the first time, individuals who would ultimately assist me in becoming part of one of the world's most successful yet dangerous underground rescue operations*

Heading to New Zealand, coincidently for a Diwali concert - and packing my bags, a peculiar thought crossed his mind – to include all his safety gear. Despite his initial intention of simply enjoying the concert and attending business meetings, a compelling urge led him to pack his safety suit, helmet, light, and safety boots. Arnold's wife, recalling the oddity of carrying such gear, couldn't fathom the need for the boots taking up so much space, but she didn't question his insistence. In a sudden inspiration, he also decided to bring canned fishes, a choice that seemed nonsensical at that time.

Reflecting on it, he expressed a sense of being prepared for a rescue operation of which **he was completely unaware, now believing that a divine force was orchestrating his readiness for the task without his knowledge**.

Nevertheless, he proceeded with his plans, and after the concert, he received a sudden call from India informing him about the unfortunate incident at Silkyara. An urgent presence was required, prompting him to hastily make his way to India. Enduring a lengthy journey from Europe to Dubai, then to Mumbai, Delhi, and finally to Dehradun, he was swiftly transported by helicopter to Silkyara.



Upon reaching the site, a wave of pain surged through his heart. The local priest, distressed, expressed sorrow over the demolition of the local deity's (*Baba Baukh Nag)* temple for the tunnel, attributing it to the mishap. Recognizing the sensitivity of the situation, he remarked, **"We underground people understand that, tunnel construction is always a risky endeavour. When undertaking such projects, we always have a small temple to pray to God Almighty for protection, acknowledging the unpredictable and dangerous nature of the underground. Not just in India – in all countries. Our lives are constantly at risk, particularly when the tunnel is collapsing."** Arnold recounts that upon arriving at the site, he observed the new temple and, in reverence, he too sat down and bowed to the divine.

Entering the tunnel, the scene was distressing to him. The condition inside was far from ideal, with visible cracks and scars of earlier collapses. **"There was damage and scars, I know some people say its fine, but from my eyes, it was not good," "I could see the painful scars of more than 20 prior collapses"** he says. Workers were diligently fixing steel webs to strengthen the structure, but the situation remained precarious. The tunnel exhibited movement during the entire rescue process, adding to the risk. **"Amidst my hope, there lingered a genuine fear for the lives trapped within and our own, a complex mix of emotions as I navigated through the challenging circumstances"**, he says. Excellent rescue Equipment was airlifted in by the army, and we were also fabricating and building the stuff at the site. Prof expresses, **"the underground Avalanche was expanding, a 40 meter high cavern within mountain was expand above the collapsed tunnel, and the tunnel was converging, the tunnel was moving. The length of the rescue zone was growing. We knew that it could collapse. We retreated when we heard it cracking, shifting - falling apart."**

He recounted how, as a cohesive team, everyone worked together.

Arnold was in the management team and wore a white helmet. It was in the final days of the rescue when the powerful rescue machines were catastrophically failing, the rescue pipe crushed and spirits amongst the rescue team fading that he thought of swapping his white helmet for a yellow one. It is usually that all workers wear different coloured helmets depending on our role.

The management wears the white helmets, while the more manual workers in our team don blue and yellow ones. The individuals engaged in more physical labour, they don the yellow helmets. The men trapped and those men doing the most dangerous work were wearing the yellow helmets.

The priest revered Arnold's new exchanged yellow hat, blessing it and adorning it with a *swastika in a makeshift temple in an old concrete pipe outside the tunnel portal*. Then, he observed that a noticeable shift in the foremen's reactions was apparent. **"See! The pink guy is blessed with the yellow hat"**, which surely would have boosted their morale now. **"They then started associating me with the yellow hat."** This newfound positivity infused a renewed spirit, and the rescue operations energy boosted with, greater affirmation and optimism.

**"I really want to share something important. Every day I used to visit villages, the people, the forest, getting flowers. I used to offer flowers to the temple and half of them I kept with me"**, he very humbly shares. Throughout the rescue operation, he recounted visiting local communities, where he was warmly received, with people showering him with various flowers. His pockets would be filled with these tokens of appreciation, serving as a motivation boost. Fuelled by determination, he resumed his efforts. He expressed the dichotomy of emotions – the awe-inspiring beauty of the green Himalayan Mountains left him amazed, while the challenges within the tunnel filled him with a profound sense of pain and sadness.

Arnold continues to don the sacred thread that was ceremoniously tied around him by the priest during worship in India. He shows me off the thread around his wrist, still tied. **Arnold humbly expresses his gratitude for being a part of the operation, considering himself a fortunate member of a great team**.

On asking about the **learnings of the rescue operation**, he identifies:
1. There should be closer attention to details in the selection of the place for tunnels.
2. The process of building the tunnel, you should not be too boastful, if things are not going so well, you can reconsider the approach.

3. More attention to the skills of the tunnel workers, they should better know, how to do their job.
4. The supervising more properly, because if it is not done properly, you hurt the environment.

**The valuable piece of advice provided by Professor Arnold on managing disasters appears to be a source of wisdom that will undoubtedly offer us strategies to navigate through challenging situations**. He expresses:

- Our job is to remain positive. When things were not working well, I still felt we can do it. We kept ourselves positive and motivated. Steel bracing, the pipe, multiple rescue plans, we were not giving up. In any great epic, our job as the people is to honorably and diligently figure out, how to overcome adversity.
- Publicly the reporting was breaking news of the broken equipment and machines and it was complained that we were slow in news reports. It was true everything was failing, but actually we were really busy formulating new solutions. **My advice always had been** in undergoing in such operation is that if you have choice between Fast and slow, **go slow**. Between harder and softer **go softer**.
- The rescue operation is akin to performing surgery on someone who is still alive, here we can't give anesthetic, and so softer and gentler is the better option. However this is often quiet hard for stressed men. **Men often think that bigger, stronger, noisier and tougher is better. My feeling is opposite here, my piece of advice to men is to be softer, slower and gentler**.

Prof. Arnold explains, "That's what we did in the end of the operation, rat mining. And rat mining is nothing more than a mining technique of thousands of years ago which is slow and soft. **We needed that rock by rock approach, so that we did not disturb and upset that rock mass to avoid the rock collapse to make sure *our rescue efforts* did not cause another big collapse**."

**When asked,** <span style="color:#C8992E">**"Is it safe to build tunnels in those fragile mountains?"**</span>

Arnold replies, "Yes! Absolutely! But then he adds, **"You must bring the right attitude, these are very fragile rocks."** We can do this properly, we should do the job professionally. Constructing tunnels in the Himalayan regions requires a different approach compared to the techniques employed in metro areas like in Delhi or other places. The fragile nature of the mountains demands careful and cautious construction. I am sure that tunnels can be improved and constructed more effectively, and I have shared my recommendations with the government.

Our primary concern was the well-being of each person - those trapped inside and those tirelessly working towards success. Eventually, with the grace of *Kali* and *Baba Baukh Nag* all 41 individuals were safely rescued. He believes, **"In the 21st century this whole thing**

**sounds like a modern epic to me. I think Kali decided after watching us kindly try and rescue these young trapped men not to end us this time; she issued us a warning, gave us another chance, showed mercy and imparted a lesson."**

Professor expresses: *Having limited knowledge about Goddess Kali, I sensed that this ordeal was a manifestation of her wrath. Acknowledging her role as a deity associated with death, I fervently prayed, pleading for a delay in her actions. Especially considering the young individuals, many of the 41 trapped just in their twenties, all I asked was for a delay, not to kill us yet. After all he reasons, she will see us all soon enough – no need to rush these things. Arnold, during our conversation, shared a photograph of Kali, the deity he had been devoutly praying to throughout the entire rescue operation.*
*I felt like a divine instrument used for this purpose. Reflecting on the mission's completion, I experienced contentment, not excitement or overwhelming joy. It truly felt like a divine calling that I had fulfilled. I didn't feel that it was my rescue, I was just a little a part in it. No one was hurt and everyone got out, therefore it was a perfect result.*



Professor further expresses that after the success of Rescue Mission he did not join his colleagues on the rescue helicopter as directed **"I was very naughty – I refused the command to leave and spent the next day giving thanks"**, I personally visited and connected with all of them who had motivated and blessed me during the operation, including spending quality time with the SDRF jawans. To my delight, the SDRF team honored me with a song, and we all joyfully danced to the tunes of this new anthem of success. After a trek to the hilltop, I visited the temple at the top of the collapsed mountain, expressing gratitude to God and Goddess Kali for their blessings. And to his utmost surprise when he finally reached to the airport (two days late and unannounced), he found 17 of the 41 rescued workers in the airport, waiting, booked on the same plane – seated together. He recalls, "It was like a family reunion of children I'd never met – we greeted each other with great humility, I was thanked for their rescue which filled me further with great contentment."

*The entire experience of the Silkyara rescue was marked me by awe and humility. As a scientist, a rational thinker, I found myself compelled to embrace the virtues of kindness and compassion in our human endeavours. The issue of credibility loomed large – the mission's failure would not only disappoint the hopeful onlookers but also jeopardize my international standing and credibility. Describing the entire experience remains a challenge, as many aspects surpassed my imagination and caught me by surprise. A lingering sense of strangeness surrounds the events, leaving me pondering what had actually transpired.*

He holds the belief that **Kali didn't intend to harm this time; instead, she aimed to impart a profound lesson**, urging us to exercise **caution, kindness and humility.**

# UNIFORM CIVIL CODE IN UTTARAKHAND

## 2. Uniform Civil Code (UCC) passed in Uttarakhand

On February 7, 2024, the Legislative Assembly of Uttarakhand, India, approved the Uniform Civil Code (UCC) Bill. Subsequently, on March 13, President Droupadi Murmu granted assent to the bill. The legislation aims to establish a consistent and equitable set of regulations governing personal status matters such as marriage, divorce, succession, and inheritance for all residents of the state, regardless of their religious affiliations. However, as outlined in section 2 of the code, the law exempts Scheduled Tribes within the state.

The bill's formulation was overseen by a five-member committee led by former Supreme Court Justice Ranjana Prakash Desai. It was presented to the Legislative Assembly by Chief Minister Pushkar Singh Dhami. Uttarakhand's adoption of a uniform civil code marks a pioneering move within India, where diverse communities often adhere to their respective religious laws and traditions regarding personal status matters.

# Uniform Civil Code:

## Analyzing the Implications of the Uttarakhand UCC Bill

By **Trishla Malik**, Advocate at the honourable Supreme Court of India

The concept of secularism in India is not explicitly defined in the Constitution, yet the country is considered secular. Over time, interpretations of secularism have varied, leading to different understandings or misunderstandings. India is home to diverse religious communities, including Islam, Hinduism, Christianity, Buddhism, and Sikhism. The term "secularism" was incorporated into the preamble through the 42nd Amendment[1] in 1976. Secularism implies that no citizen should face discrimination based on religion and everyone has the freedom to practice and follow any religion of their choice within the country.

**The existence of various religions in India has led to the establishment of different sets of personal laws for its citizens, resulting in a lack of uniformity. This lack of uniformity poses significant challenges, particularly concerning the rights of women, who often face deprivation.**

To address these issues, the implementation of a Uniform Civil Code (UCC) has been proposed. A UCC entails uniform personal laws applicable to all individuals, encompassing matters suchas divorce, marriage, maintenance, succession, and more.

*It is not wrong to say that secularism in the modern trend in India encompasses a commitment to religious pluralism, state neutrality, and the protection of religious freedom, while also grappling with challenges related to communalism and identity politics.*

It remains a dynamic and contested principle that is central to India's democratic ethos and social cohesion.

# UCC Bill in Uttarakhand

The journey towards the enactment of the Uttarakhand UCC Bill 2024 began with the constitution of a five-member Expert Committee[2] led by former Supreme Court Judge **Justice Ranjana Prakash Desai.** The other members of the committee were:

**Permod Kohli (Hon'ble Judge)**
**Shri Shatrughna Singh (IAS)**
**Shri Manu Gaur (Social Activist)**
**Prof. Surekha Dangwal (Vice Chancellor, Doon University)**
**Shri Ajay Mishra (Secretary, R.C, Uttarakhand)**

This committee was tasked with drafting the bill, taking into account the diverse legal, cultural, and religious landscape of Uttarakhand. After several deliberations and modifications, the draft bill was finalized and eventually passed by the Uttarakhand Assembly. This section provides an overview of the developmental process of the bill, highlighting the key stakeholders involved and the considerations taken into account during its formulation.



Source: Social Media

# Analysing Key Provisions and decoding the Uttarakhand Uniform Civil Code Bill

The Uttarakhand UCC Bill 2024 encompasses various aspects of personal law, including marriage, divorce, inheritance, and live-in relationships. Some of the **key provisions** of the bill include its applicability to all residents of Uttarakhand (except Scheduled Tribes), mandatory registration of marriages and live-in relationships, prohibition of bigamy or polygamy, legal recognition of children born out of voidable marriages or live-in relationships, and equal property rights for sons and daughters. This section provides a detailed analysis of these provisions, examining their implications for different sections of society. The bill consists of 7 schedules and 392 sections. Uttrakhand became the first state in independent India to pass a common personal law. The act shall not apply to the members of Schedule Tribes within the meaning of Article 366 (25) of the Indian Constitution and to the group of persons whose customary rights are protected under Part XXI of the Constitution of India.

## Live- in Relationship

**The act acknowledges the concept of a live-in relationship (section 378-389).** It is mandatory to register themselves, if they are in a live-in relationship within the state's jurisdiction, regardless of whether the man or woman are residents of Uttarakhand. The registration is for the record. Partners are under an obligation to submit a statement to the Registrar u/s 381(1) of the Bill. The registrar will conduct an enquiry and, if he is satisfied, then he may grant the certificate in the prescribed format to the partners. Certain conditions, such as being within prohibited degrees of relationship, being married or in another live-in relationship, or involving a minor or obtained by coercion or fraud. The registrar, if not satisfied, may refuse to register, and shall inform the partners of the reasons in writing for such refusal. Section 384 of the Bill states the procedure for termination of a live-in relationship. Both partners ina live-in relationship may terminate it and submit a statement of termination in the prescribed format. The Bill also provides punishment and maintenance u/s 387 and 388.

## Marriage and Divorce

The bill mandates u/s 6 the compulsory registration of marriages within 60 days of solemnization. This provision applies to all residents of Uttarakhand, whether marrying within or outside the state. While non-registration of marriages won't invalidate it, the parties concerned may face a penalty of Rs 10,000. Instances of furnishing false information intentionally would incur a fine of Rs 25,000 and a three-month jail term. No marriage can be dissolved without a court order, otherwise it would attract imprisonment for up to 3 years.

**Section 4 of the Bill prohibits bigamy and polygamy.** It states that no party should have another spouse alive at the time of marriage. This bill has banned certain marriage

practices prevalent among Muslim faith, such as Nikah-halala and triple talaq, without mentioning the name. If we read section 30 (2) it states that, a person has a right to remarry the divorced spouse without any conditions, such as marrying a third person before such remarriage. The bill provides similar rights for men and women with respect to divorce. Section 26 deals with the ingredients and grounds for divorce. The bill doesn't recognize the "irretrievable breakdown of marriage", which refers to a situation where the relationship between spouses has deteriorated to such an extent that it cannot be repaired or restored, leading to the irrelevance of continuing the marriage. Further, "voidable" marriages can be annulled on grounds such as non-consummation, contravention of marriage conditions etc.

**Women have special rights** to seek divorce under the Bill only under two circumstances:

1. If the husband has been found guilty of rape or any kind of unnatural sexual offense,
2. If the husband has more than one wife

In case of divorce, the custody of a child up to 5 years of age remains with the mother. However, The Guardians and Wards Act of 1890 will continue to govern court-appointed guardianship.

## Inheritance

The Bill provides **equal property rights for sons and daughters**, **including illegitimate children, adopted children**, and those born through surrogacy or assisted reproductive technology. It abolishes coparcenary system governing under the Hindu Succession Act, 1956. And in the case of interstate succession, the bill guarantees equal property rights for the spouse, children and parents as mentioned u/s 50, 51, 52 and 53 of the Bill.

# Implications of the Uttarakhand UCC Bill

The passage of the Uttarakhand **UCC Bill 2024 has attracted both praise and criticism** from various quarters. This section explores the potential positive and negative implications of the bill, considering its impact on gender equality, simplification of the legal system, national integration, and the rights of minority communities. The positive aspect of the Bill is that it promotes gender equality by eliminating discriminatory practices existing in the name of customs and traditions in the personal law. The bill is against polygamy and bigamy. The Code is also likely to extend an equal property share to Muslim women against the existing 25% share accorded under Muslim personal laws. The Bill has introduced more efficient and accessible conditions and procedures for annulment of marriage and divorce. It fosters the sense of unity by removing distinction based on religion and fulfills the objective of secularism as mentioned in the Preamble.

# Concerns with the Uttarakhand UCC Bill

The main concern is the implications of the Bill. The women of the Uttarakhand had protested and rejected the draft in toto. According to few community, the Bill was built on the patriarchal Hindu Law and retains several discriminatory aspects that would deny women an equal agency. One of the major concerns is the minimum age for marriage, which is set to remain the same i.e. 18 years for women and 21 for men.

The Muslim faith have protested over UCC because, according to them, UCC bill has overtaken the Muslim personal laws. The bill lacks clarity on ancestral property and self-acquired property.



Source: Social Media

The introduction of compulsory registration of live-in relationships is a topic of debate. The Bill ignores the foundational reason for a live-in relationship, that it lacks the formal structure and obligations of a marriage. Those who are living together, therefore, enjoy autonomy in their consensual partnerships, which a regulated marriage does not. Erasing this much-needed distinction between these institutions is not justifiable. It infringes on free decision making and an expression of feelings, protected under Article 21, which lays stress on the right to a dignified life.

Another unsettling concern is that the government has not created widespread awareness about the *hows* and *whys* about new provisions of the UCC. It has also not produced the necessary documentation to pass around, among citizens. This meansthat many people, especially young men and women, may find that they are law violators in the eyes of the State because they have not submitted necessary documentation to a registrar within 30 days of their union. This failure may subject them to heavy penalties and even long jail sentences.

The exclusion of queer relationships from the UCC highlights concerns about LGBTQIA+ rights and equality under the law. By specifically defining *live-in relationships* as being between a man and a woman, the UCC may perpetuate discrimination against LGBTQIA+ individuals and relationships. The exclusion of tribal communities from the UCC raises questions about inclusivity and equal treatment under the law. **The Bill violates Article 14, 21, 25 and 26 of the Indian Constitution.** This might lead to legal challenges in the future. A sudden imposition of UCC may trigger the sentiments of the public and unforeseen socio-political and legalproblems.



Source: Social Media

When contemplating a UCC, India can't simply mirror Western democracies. The United States and France, for instance, grapple with the delicate balance between law and religious freedom, often favoring majority practices. Similarly, Middle Eastern countries predominantly adhere to Islamic law. India's unique socio-cultural landscape demands a

nuanced approach. But in India, Government should understand that intimate connections built on trust and understanding require mutual respect for individual choices, and not mandatory regulations. It seems like the Uttarakhand government seeks to make a clear statement that live - in relationships now will not just be a social stigma on couple but might lead them to jail as well. And now parents will be obliged to play "some roles" as per the government for a couple who chooses to be staying together.  While acknowledging the government's intention to drive development and protect its cultural heritage, the potential infringement on individual rights under the Indian Constitution and the practical concerns surrounding mandatory registration deserve scrutiny. We must understand that recognizing live-in relationships aligns with evolving family structures not just in India but across the world, acknowledging individual choices and offering some legal protection. Quoting a landmark judgment of D Veluswami v. D. Patchaiammal, Union of India (2010): "Recognized live-in relationships as valid and protected under Articles 14, 19, and 21 of the Constitution".

Making such an effort by the state will provide a gap in the precise interpretation and implementation of the UCC by authorities and courts, remain unclear, requiring further clarification, hence making complexities. Mandatory registration might conflict with the fundamental right to life and personal liberty enshrined in the Constitution, raising concerns about privacy and state intrusion into personal lives. False registrations for opportunistic reasons could harm genuine couples, creating legal complexities and overburdening administrative systems. The lack of clarity on interpretation and implementation by authorities and courts could create confusion and inconsistencies.

Whereas the Government could have Instead of imposing mandatory registration, prioritize educating young people about healthy relationships, responsible choices,and existing legal options.

As a Government, who wish to bring a change in the society and cultural change in Uttarakhand, Instead of focusing on regulating personal choices, the government should prioritize stricter policies against issues like underage drinking and drug abuse, demonstrably harming society in a much larger way than any live-in couple.

Apart from this, the specifics of the Uttarakhand UCC are not fully defined. This leaves room for misinterpretation and potential misuse of the law by authorities or individuals with vested interests. The registration requirements could lead to increasedsurveillance by the state, infringing upon individual privacy and personal liberty. **A UCC could fail to adequately address the diversity of India's population and the unique customs, traditions, and cultural practices of various communities. This could lead to a sense of alienation among those who feel their identities are not being respected**.

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# About the Author



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Trishla Malik Advocate, a resident of Uttarakhand is a practicing Advocate at the honourable Supreme Court of India. She is a member of Supreme Court Bar Association and a founder and Managing Director of a Law firm in Delhi/NCR namely, AmicusLegal Consultancy Firm. She is in the Board of Directors of an NGO in Delhi NCR namely Apoorvarambh Foundation NGO proficient in enhancing literacy and Supporting Human Rights. Trishla is a National level Awardee and an Educationist in her Domain.

INDIAN SPACE MISSION

## 3. Indian Space Mission

India's Space Mission, spearheaded by ISRO, achieved remarkable milestones with the launch of Aditya-L1 and Chandrayaan-3 missions. Aditya-L1, India's first dedicated mission to study the Sun, provided valuable insights into solar phenomena and their impact on space weather. Meanwhile, Chandrayaan-3 continued India's lunar exploration journey, aiming to further our understanding of the Moon's surface and geology. These achievements underscored ISRO's commitment to pushing the boundaries of space exploration and solidified India's position as a leading player in space science and technology on the global stage.

# Aditya L1:

## India's first solar space observatory

By **Amit Kumar**, Engineer-E & HOD Department of Electronics at IIA-Bengaluru

*The accomplishment of the mega mission: Aditya-L1 has shown the world the potential of India to build our own intelligent detector systems for Space Missions. The success of the mission will enable industry collaborators to contribute to such developments, creating opportunities for new employment among the younger generation.*

Aditya-L1 is India's first solar space observatory, was launched by PSLV-C57 on 2$^{nd}$ September 2023 at 11:50 AM. Aditya-L 1 carries seven different payloads to study the Sun, four of which will observe the light from the Sun and three will measure in-situ parameters of the plasma and magnetic fields. Aditya-L 1 will be placed in a halo orbit around the Lagrangian Point 1 (hence L1), which is 1.5 million km from the Earth in the direction of the Sun. It will revolve around the Sun with the same relative position and hence can see the Sun continuously.

**The main science drivers of Aditya-L1 are to understand the origin, dynamics, and propagation of Coronal Mass Ejections (CMEs) and to help solve the Coronal Heating Problem.**
IIA will host the VELC Payload Operations Centre (POC). This will receive raw data from ISRO's Indian Space Science Data Centre (ISSDC), process them further to make it suitable for scientific analysis, and send it back to ISSDC for dissemination. Indian solar astronomy community has geared up to calibrate and use data from VELC as well as other payloads on **Aditya-L1 since its launch to address fundamental questions about solar astrophysics as well as its impact on our daily lives**.

## Why Study Sun from Space?

The sun emits radiation/light in nearly all wavelengths along with various energetic particles and magnetic field. The atmosphere of the Earth as well as its magnetic field acts as a protective shield and blocks a number of harmful wavelength radiations including particles

and fields. As various radiations don't reach the surface of the Earth, the instruments from the Earth will not be able to detect such radiation and solar studies based on these radiations could not be carried out. However, such studies can be carried out by making observations from outside the Earth atmosphere i.e., from space. Similarly, to understand how the solar wind particles and magnetic field from the Sun travel through the interplanetary space, measurements are to be performed from a point which is far away from the influence of the Earth's magnetic field.

# What are Lagrange Points?

For a two body gravitational system, the Lagrange Points are the postions in space where a small object tends to stay, if put there. These points in space for a two body systems such as Sun and Earth can be used by spacecraft to remain at these positions with reduced fuel consumption.

Technically at Lagrange point, the gravitational pull of the two large bodies equals the necessary centripetal force required for a small object to move with them. For two body gravitational systems, there are total five Lagrange points denoted as L1, L2, L3, L4 and L5. The Lagrange points for Sun-Earth system are shown in the figure. The Lagrange point L1 lies between Sun-Earth line. The distance of L1 from Earth is approximately 1% of the Earth-Sun Distance.
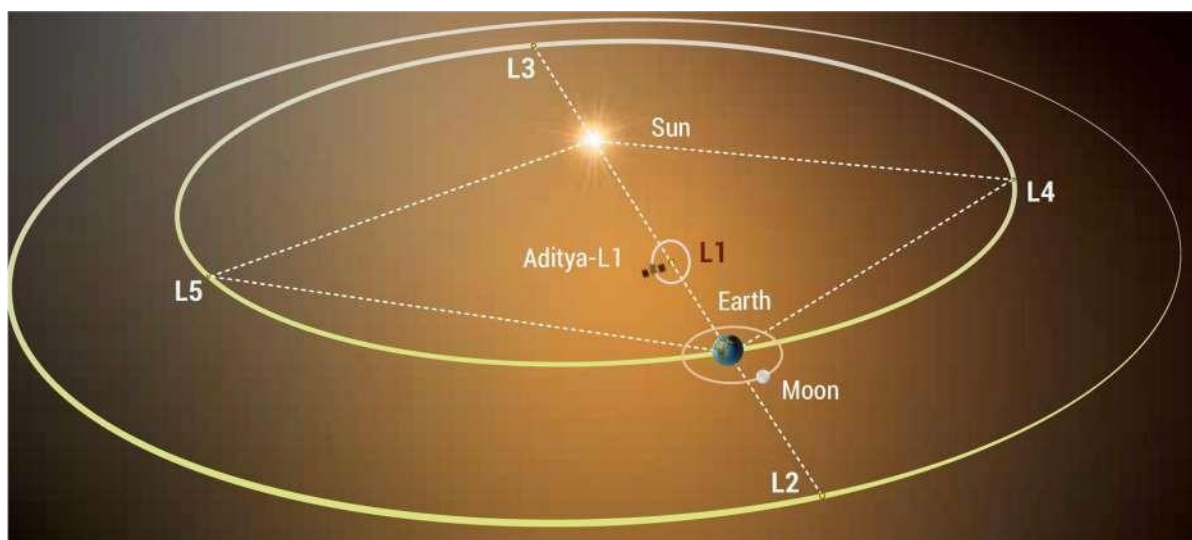


Illustration of Lagrange points of Sun-Earth System

# Aditya-L1 payloads

Aditya-L1 has seven (7) payloads. Among these: VELC, SUIT, HEL1OS, and SoLEXS are telescopes that observe the Sun in the visible and infrared (VELC), ultraviolet (SUIT), low energy X-rays (SoLEXS) and high energy X-rays (HEL1OS). Of the remaining three: PAPA and ASPEX will measure the plasma properties of the solar wind and MAG will measure the magnetic field, all at the location of Aditya-L1.

# Major science objectives of Aditya-L1

1. The coronal heating and solar wind acceleration
2. Coupling and dynamics of the solar atmosphere
3. Solar wind distribution and temperature anisotropy, and
4. Origin of Coronal Mass Ejections (CME) and flares and near Earth space weather

The importance lies in the fact when strong CMEs go past the Earth, the energetic charged particles and magnetic fields can not only damage our satellites in space, but also cause damage to electrical communication networks in countries near the poles. Whenever a large CME eruption is detected from Aditya-L1, it will be communicated to the ground stations in advance and the ground stations can take of their systems and also alert local authorities to save human lives with the advance information of CMEs. Other activities which effect the atmosphere on Earth through Solar Storm also can be communicated in advance.

The largest and technically most challenging payload on Aditya-L 1 is the Visible Emission Line Coronagraph, or VELC. VELC was integrated, tested, and calibrated at Indian Institute of Astrophysics (IIA's) CREST (Centre for Research and Education in Science Technology) campus in Hosakote with substantial collaboration with ISRO.

VELC is an internally occulted coronagraph, with 40 different optical elements (mirrors, gratings, etc) inside it that are aligned precisely. The atmosphere of the Sun, the Corona, is what we see during a total solar eclipse. A coronagraph like the VELC is an instrument that cuts out the light from the disk of the Sun, and can thus image the much fainter corona at all times.

# Uniqueness of VELC payload

VELC can image the solar corona closer to the Sun's disc than any other solar space observatory. This is because of the extremely accurately polished primary mirror, made by LEOS of ISRO, which reduces light scatter inside VELC. It can image the corona with high spatial resolution and at extremely rapid rate (about 3 times a second) in white light and in spectral lines. IIA built India's first large-scale "Class 10" Clean Room at MGK Menon Laboratory, CREST, for assembling VELC.

**Integrated VELC Instrument on ADITYA L1**



**Integrated VELC Instrument on ADITYA L1**

# My Experience with working in the Project

As an Engineer E and HoD Department of Electronics at IIA, I have worked as a lead for development of VELC Payload Detector System, Tests, Calibration, Integration and also for Data Pipeline, and Payload Proposal Submission of VELC.

Initially I found the science requirement of Detector systems is so high that, it demands a robust detector system with operations flexibility. So, an intelligent detector system was proposed and implemented for VELC payload. Total four Detectors (One for Imaging and 3 for Spectroscopy) with processing electronics were being built in close coordination with one of ISRO center-SAC Ahmedabad.

We have been continuously working day and night where we all aimed to do the job with perfection in such a short span of time. Even during COVID Era for around one year, from 2020 to 2021, all the tests, calibration and tests with S/C subsystems of VELC Detector systems were done at IIA Space Science Lab, through constant video meetings with ISRO Ahmedabad team.

The data generation capability of Detector system is around 2 Tera bits per day, with intelligent system of operating mode selection, it brought down to ~132 Giga bits per day without compromising the science needs. One of the detector systems (Continuum Channel) has on-board Coronal Mass Ejection (CME) detection logic, so that we will not be able to miss any major CME Event and data volume will also be less.

Data-pipeline and Payload proposal submission system of VELC also was developed in IIA with the help of Engineers, Scientists and programmers. It is quite involved work done for the payload Proposal system and Data Pipeline.

**It is a great team work to achieve all the goals**. I am really proud to be part of the IIA and project team and leading the detector systems group of VELC payload.

# Present Status of ADITYA-L1 Mission
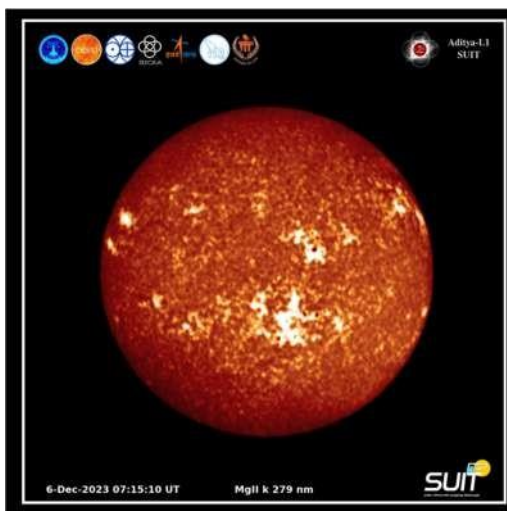


Source:ISRO

At present, all the Payloads except VELC are in operation and going through the on-board calibrations and payload verification phase to validate the working of instrument on board. This activity may take another couple of months to complete. Health of Spacecraft is good and operations in the intended orbit are as per the mission objective. Few minor Solar flares are observed with X-rays payloads in the last couple of months. At present there is no major solar activity is observed on Sun.

# About the Author

**Amit Kumar**

Engineer-E & HOD Department of Electronics at IIA-Bengaluru

Amit Kumar is Engineer-E & HOD Department of Electronics at IIA-Bengaluru. He has worked as camera development lead, Electrical Integration with Spacecraft and On-board operations for Ultra Violet Imaging Telescope (UVIT) Payload on ASTROSAT satellite launched in 2015 and Visible Emission line Coronagraph (VELC) on Aditya-L1 satellite.

Presently he is involved in other upcoming missions of ISRO and DRDO for camera development, and new technical development.

# AI AND ROBOTICS
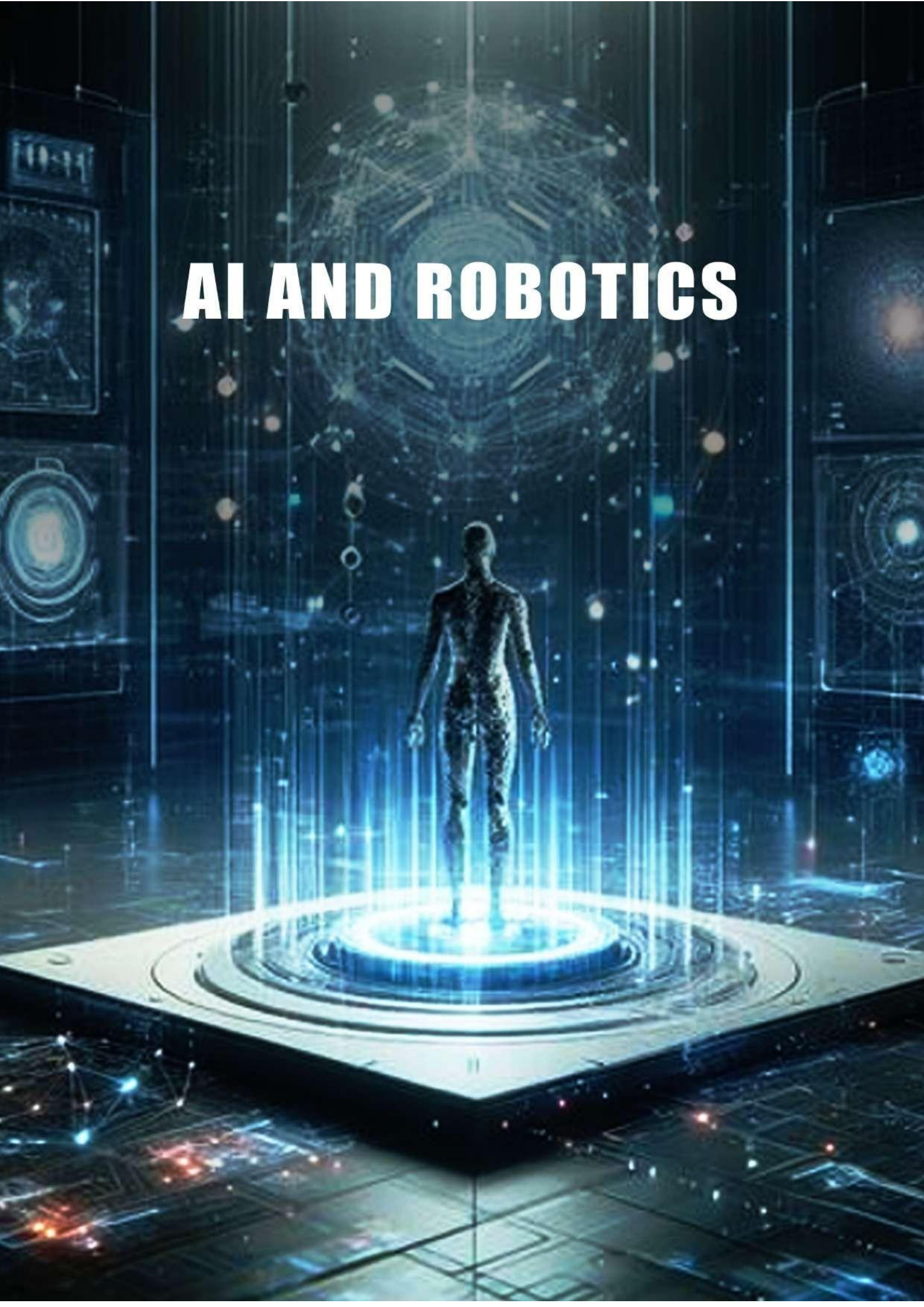
## 4. AI and Robotics

2023 marked a year of remarkable scientific and technological achievements, shaping the future of humanity. Breakthroughs in artificial intelligence led to more sophisticated applications in healthcare, finance, and transportation, enhancing efficiency and innovation.

While India has made significant progress in positioning itself strongly in the global AI race, the narrative of INDIAai is still in its infancy. With India's ambitious AI program, 'INDIAai', scheduled for launch in 2023 is poised to emerge as the pivotal year for AI in India.

By harnessing the capabilities of AI, we're developing applications that unlock value for citizens and enhance the delivery of public services.

# India's Technological Odyssey:

## A Comprehensive Exploration of Advances in Artificial Intelligence and Robotics

By **Dr Anil Audumbar Pise**, Senior Data Scientist and a machine learning expert

*India's journey in the realms of AI and Robotics is not just a story of growth, but one brimming with potential and rife with challenges. This in-depth exploration delves deeper into specific advancements, explores the underlying complexities, and ponders the future implications.*

This article aims to dissect and delve into the intricate developments across machine learning, natural language processing, and automation, showcasing India's dynamic stride towards innovation.

# 1. Machine Learning Mastery

At the epicentre of India's technological renaissance lies the domain of machine learning. The nation has witnessed an upsurge in start-ups, research institutions, and industry collaborations that have collectively propelled India into the limelight of machine learning advancements.

**AI is transforming healthcare in India**. From drug discovery using deep learning algorithms to predictive diagnostics with machine learning, AI is accelerating medical innovation. AI-powered chatbots are also assisting doctors in remote consultations and providing mental health support. **The healthcare sector stands as a beacon of India's machine learning prowess.** Cutting-edge algorithms are being deployed for disease diagnosis, drug discovery, and the tailoring of personalized medicine. With a unique set of challenges, Indian researchers and companies are not only pushing the boundaries of what is possible but are also ensuring that these technologies are tailored to address the specific needs of the country's diverse population.

**India's vast agricultural sector is embracing AI-based solutions.** Smart irrigation systems are optimizing water usage, while disease and pest detection using computer vision is minimizing crop loss. Precision farming techniques guided by AI are leading to increased yields and improved farm management. **In agriculture, machine learning is scripting a new narrative through precision farming.** The amalgamation of predictive analytics, satellite imagery, and sensor data is optimizing crop yields, minimizing wastage, and fostering sustainable agricultural practices. This not only elevates the livelihoods of farmers but also cements India's commitment to food security.
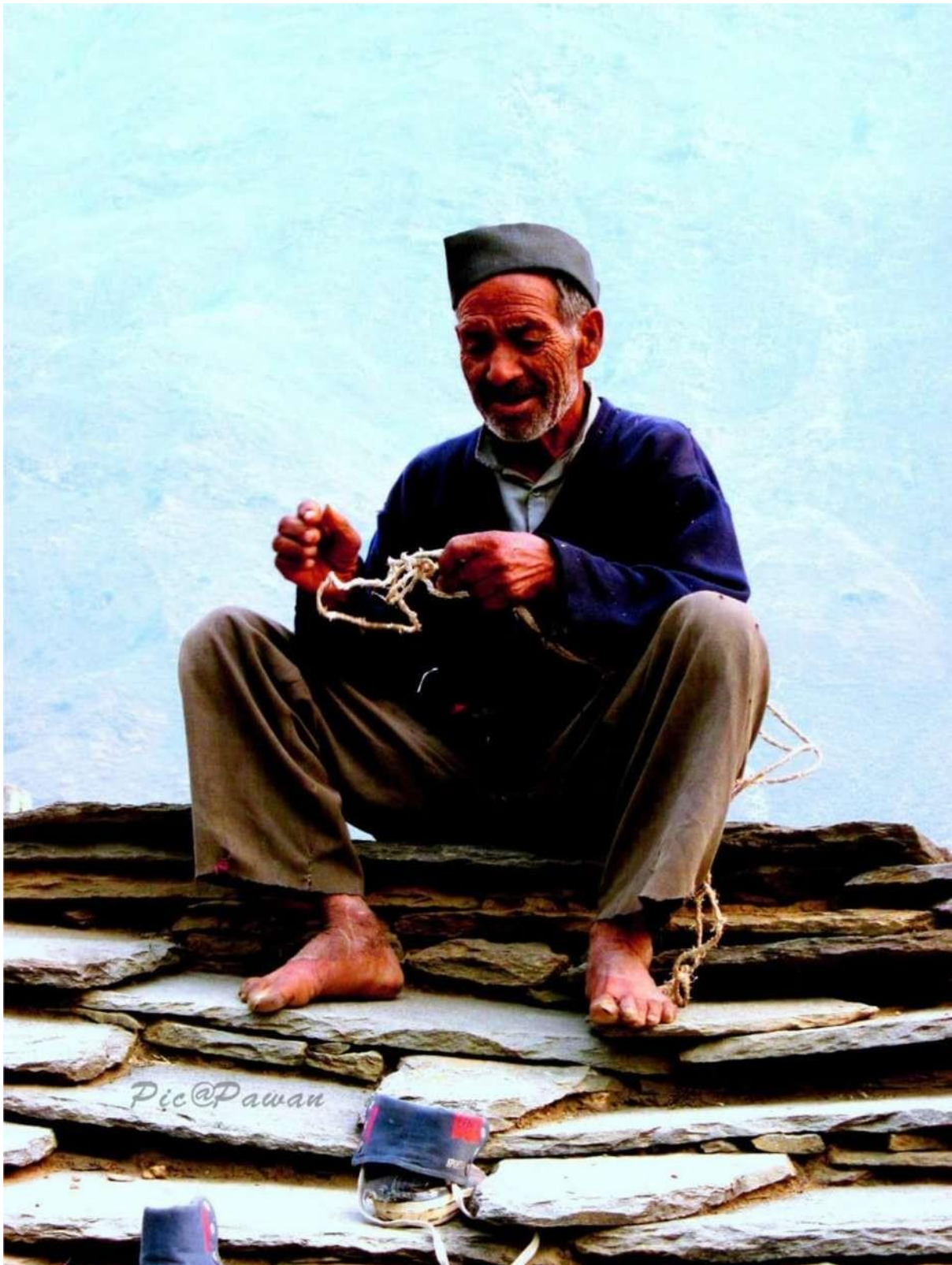
*Photographed by Pawan Negi*

**Financial institutions are leveraging AI** for tasks like fraud detection and loan risk assessment. Chatbots are offering personalized financial advice, and AI-powered robo-advisors are managing investment portfolios.

**In India's retail sector, machine learning algorithms are revolutionizing customer experiences.** From personalized recommendations to dynamic pricing strategies, retailers are leveraging AI to enhance customer engagement and drive sales. Additionally, AI-powered inventory management systems are optimizing supply chain operations, reducing costs, and minimizing stock outs.

In the unfolding chapters of recent years, Indian corporations have embraced the integration of machine learning algorithms as they seek to unravel solutions to various challenges. Some instances where Indian companies have employed machine learning algorithms include:

✓ **Niramai Health Analytix,** within the realms of India has pioneered an artificial intelligence-driven remedy for the early detection of breast cancer through the application of machine learning algorithms. Their technological innovation facilitates a non-intrusive, cost-effective, and privacy-conscious screening process, proving especially advantageous in regions where healthcare resources are scarce.

✓ **Flipkart,** one of India's leading e-commerce platforms, employs machine learning algorithms for various purposes. They utilize AI for product recommendations, personalized marketing campaigns, and inventory management, enhancing the shopping experience for millions of users across the country.



Source: Social Media

✓ **Paytm,** a popular digital payment platform in India, utilizes machine learning for fraud detection and prevention. Their AI-driven algorithms analyze transaction patterns, identify anomalies, and flag suspicious activities in real-time, safeguarding users' financial transactions.



Source: Social Media

# 2. Nurturing Natural Language Processing (NLP)

India's prowess in Natural Language Processing (NLP) is carving a niche in the global AI landscape. With innovations in language models and sentiment analysis, **India is reshaping human-computer interactions across sectors.** The multilingual fabric of India has catalyzed the development of language models catering to diverse linguistic nuances. Startups and research labs are at the forefront, creating models that not only understand but also respond in regional languages. Government initiatives promoting the use of Indian languages in digital content are further accelerating the adoption of NLP, making technology accessible and relatable to a broader audience.

As the world witnesses an evolution in how AI systems understand and respond to human language, **India stands out as a pioneer, bridging the gap between technology and linguistic diversity.** Several instances where Natural Language Processing (NLP) has been utilized to augment functionality include:

- ✓ **India's education sector is embracing NLP to enhance learning experiences**. Language processing technologies are being used to develop intelligent tutoring systems, providing personalized learning paths for students. Furthermore, chatbots equipped with NLP capabilities are assisting students with queries, providing instant feedback, and facilitating interactive learning environments.
- ✓ **The Indian government has implemented AI-powered chatbots and virtual assistants on various platforms**, including official websites and mobile applications. These NLP-enabled systems facilitate citizen interaction with government services, providing information, assistance, and support in multiple languages.
- ✓ **Indian telecom companies like Reliance Jio and Bharti Airtel utilize NLP-powered chatbots to handle customer inquiries and support services**. These chatbots are capable of understanding and responding to customer queries in multiple languages, improving response time and customer satisfaction.
- ✓ **Law firms in India are adopting NLP technologies to streamline legal research and documentation processes**. AI-powered tools analyze vast volumes of legal documents, extract relevant information, and provide insights for case preparation and legal consultations, enhancing efficiency and accuracy in legal proceedings.

# 3. Automation Revolution Unleashed:

**The drumbeat of automation is resonating across industries globally, and India is at the forefront of this revolution.** From manufacturing to services, automation technologies are rewriting the playbook for efficiency, productivity, and economic growth.

In the manufacturing sector, robotic systems are orchestrating a symphony of precision, from assembly line operations to quality control. **Collaborative robots, or cobots are**

**working in tandem with human counterparts, exemplifying the synergy between man and machine.** This not only boosts productivity but also ensures precision and consistency in production processes.



Source: Social Media

# Robotics: Beyond Automation

- **Industrial Robotics:** While industrial robots are streamlining factory operations, advancements go beyond simple automation. Collaborative robots, or cobots, are working alongside human workers, assisting with tasks like assembly and inspection, fostering a collaborative work environment.
- **Service Robotics:** Service robots are making their presence felt in diverse sectors. Disinfection robots are crucial in maintaining hygiene in hospitals and public spaces. Eldercare robots are providing companionship and assistance to the elderly population.
- **Transportation:** In the transportation sector, automation technologies are reshaping logistics and mobility solutions. Autonomous vehicles equipped with AI-driven navigation systems are being tested and deployed in various cities, promising safer and more efficient transportation networks. Moreover, AI-powered predictive maintenance systems are optimizing fleet operations, reducing downtime, and improving overall efficiency.
- The service industry, particularly IT services and business process outsourcing (BPO), has undergone a seismic shift with the integration of automation. Robotic Process Automation (RPA) is streamlining repetitive tasks, liberating human resources to focus on intricate and creative aspects of their roles.

## Examples: -

i.  **Healthcare:** Apollo Hospitals, a leading healthcare provider in India, has implemented robotic surgery systems for minimally invasive procedures. Robotic surgical platforms like the da Vinci Surgical System assist surgeons with precise movements and enhanced visualization, resulting in reduced recovery times and better patient outcomes.
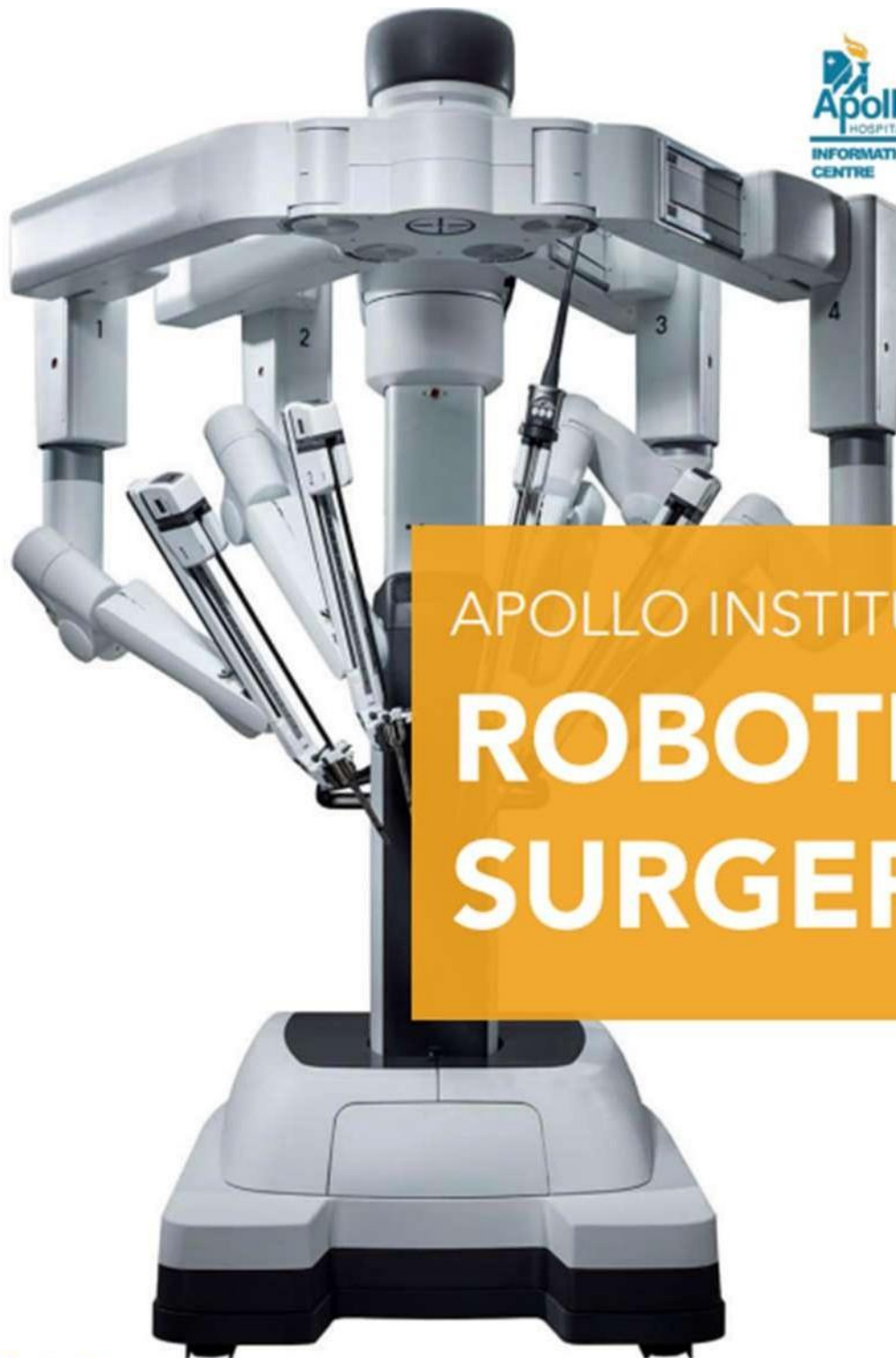
Source: Apollo-Institute-of-Robotic-Surgery-in-India

ii.   **Logistics:** E-commerce logistics companies such as Delhivery and Blue Dart are leveraging automation technologies for warehouse operations and last-mile delivery. Automated sorting systems, robotic pickers, and autonomous delivery vehicles optimize logistics processes, ensuring faster and more reliable delivery services for online shoppers across India.

iii.  **Manufacturing:** **Tata Steel in India has implemented advanced robotics and automation solutions in their steel manufacturing plants**. Collaborative robots (cobots) work alongside human workers to handle heavy materials, perform repetitive tasks, and ensure workplace safety, resulting in increased productivity and operational efficiency.



Source: Tata Steel

These real-life examples demonstrate how India is harnessing AI and robotics across different sectors, showcasing innovation and technological advancement in practical applications.

# Challenges and the Path Forward

- **Skilling the Workforce:** While automation brings benefits, it also poses challenges. Equipping the workforce with the necessary skills to adapt is crucial. This involves reskilling and up skilling initiatives to bridge the skill gap and ensure a smooth transition into the AI-driven future.
- **Data Privacy and Security:** As AI relies heavily on data, concerns around data privacy and security are paramount. Implementing robust data governance frameworks and fostering public trust in data handling practices are essential.
- **Ethical Considerations:** The development and deployment of AI and robotics raise complex ethical questions. Bias in algorithms, transparency in decision-making, and responsible use of these technologies require careful consideration and ethical frameworks.

However, this technological euphoria is not without its set of challenges. Ethical considerations, data privacy concerns, and the imperative need for a robust regulatory framework echo through the corridors of innovation. Striking a delicate balance between pushing the boundaries of innovation and ensuring ethical deployment is paramount for sustainable development.

Moreover, **the shortage of skilled professionals in AI poses a significant hurdle**. Initiatives to bridge this gap, including upskilling programs, STEM education promotion, and robust collaborations between academia and industry, are indispensable for sustaining India's momentum in the global AI arena.

Yet, within these challenges lie unprecedented opportunities. India's foray into AI and robotics is not merely a technological saga; it's a chance to address societal issues, create meaningful employment, and contribute substantially to global technological advancements.

**India's success in this technological odyssey hinges on collaboration**. Fostering partnerships between academia, industry, and the government is essential to drive research, development, and responsible implementation of AI and robotics. Additionally, international collaboration with other leading nations can accelerate progress and address global challenges.

**As India continues its relentless march into the future of AI and robotics, the key lies** in fostering collaboration, nurturing talent, and ensuring that the benefits of technological advancements are inclusive. By focusing on ethical development and responsible deployment, India is poised not just to be a participant but a driving force, shaping the contours of AI's global landscape. In this journey, India is not merely embracing innovation; it is scripting a narrative that resonates with inclusivity, sustainability, and a commitment to a technologically empowered future.

**India's journey in AI and Robotics is a testament to its ambition and potential.** By navigating the challenges, fostering responsible development, and harnessing the potential of these technologies strategically, India can carve a niche as a global leader in shaping the future with AI and Robotics. **This exploration serves as a springboard for further investigation, encouraging continued dialogue and collaborative efforts to unlock the full potential of this exciting technological odyssey**.

# About the Author



**Dr Anil Audumbar Pise**

Senior Data Scientist and a machine learning expert with a background in relational networks and education

Dr Anil Audumbar Pise is a senior Data Scientist and a machine learning expert with a background in relational networks and education. The author holds Doctor of Philosophy (PhD) in Machine Learning, Computer Science from University of the Witwatersrand Johannesburg, South Africa.

His research interests include deep learning, artificial intelligence, machine learning, relational reasoning and relational networks, and data science.

The author is presently Head of Data Science & Cloud ML in Siatik Premier Google Cloud Platform Partner South Africa and Deloitte South África.

# AI's Global March towards

## Wonder and Worry

By **Aksinya Samoylova**, Austrian based, multi-specialized senior professional

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**The invisible force of Artificial Intelligence is reshaping the world**, stitching together a new fabric of reality that is both wondrous and intimidating. How is it already impacting the global society, and **what are the shades of its impact?**

## The Facilitation of AI Globally

The global embracement of AI could be likened to opening Pandora's Box, releasing a spectrum of marvels and challenges. From the cobblestone streets of Europe to the sprawling cities of Asia and the Silicon Valleys of America, AI has carved its niche. **Across continents, governments and corporations have initiated AI programs aimed at harnessing its potential for economic growth, healthcare improvement, environmental protection, and societal benefit.** Isn't it remarkable how, in a matter of years, AI has transitioned from a concept in science fiction to a living, breathing part of our daily lives?

## The Luminous Pros of AI

The advantages of AI are numerous. It has transformed industries by optimizing operations, creating smarter products, and delivering unimaginable services. In healthcare, AI algorithms diagnose diseases with precision that rivals human doctors. *AI has the potential to save millions of lives* notes a leading healthcare professional, underscoring the technology's lifesaving capabilities.

# Emancipation through Artificial Intelligence tools

**The creator economy is booming.** Imagine when not hundreds of millions, but billions utilize AI tools. What does it mean? It boosts personal agency on an unprecedented scale. The internet's advent has already made self-learning more accessible than ever. But AI elevates this accessibility to new heights.

*AI tools are democratizing knowledge and skill acquisition, breaking down traditional barriers. They empower individuals, enhancing their ability to learn, create, and innovate independently. This shift doesn't just change how we learn; it revolutionizes who gets to participate in knowledge creation and dissemination. With generative AI, the potential for a more informed, skilled, and creative global population is not just a dream.*

In education, AI offers personalized learning experiences, adjusting to each individual's pace and style. Could this mark the beginning of an era where education is not a one-size-fits-all approach, but a customized journey for each learner? This could realize the dream of many progressive educators, appearing as though AI will act as a catalyst for the education system to align with the spirit of our times, as it has struggled to revolutionize itself swiftly enough.

**Science is now reaping the benefits of integrating AI into its research methodologies.** New discoveries are emerging, notably in how AI unraveled a significant mystery in biology-the prediction of proteins' 3D shapes. This monumental achievement, courtesy of a program called Alpha Fold, paves the way for major advancements in medicine, potentially facilitating the development of novel disease treatments.
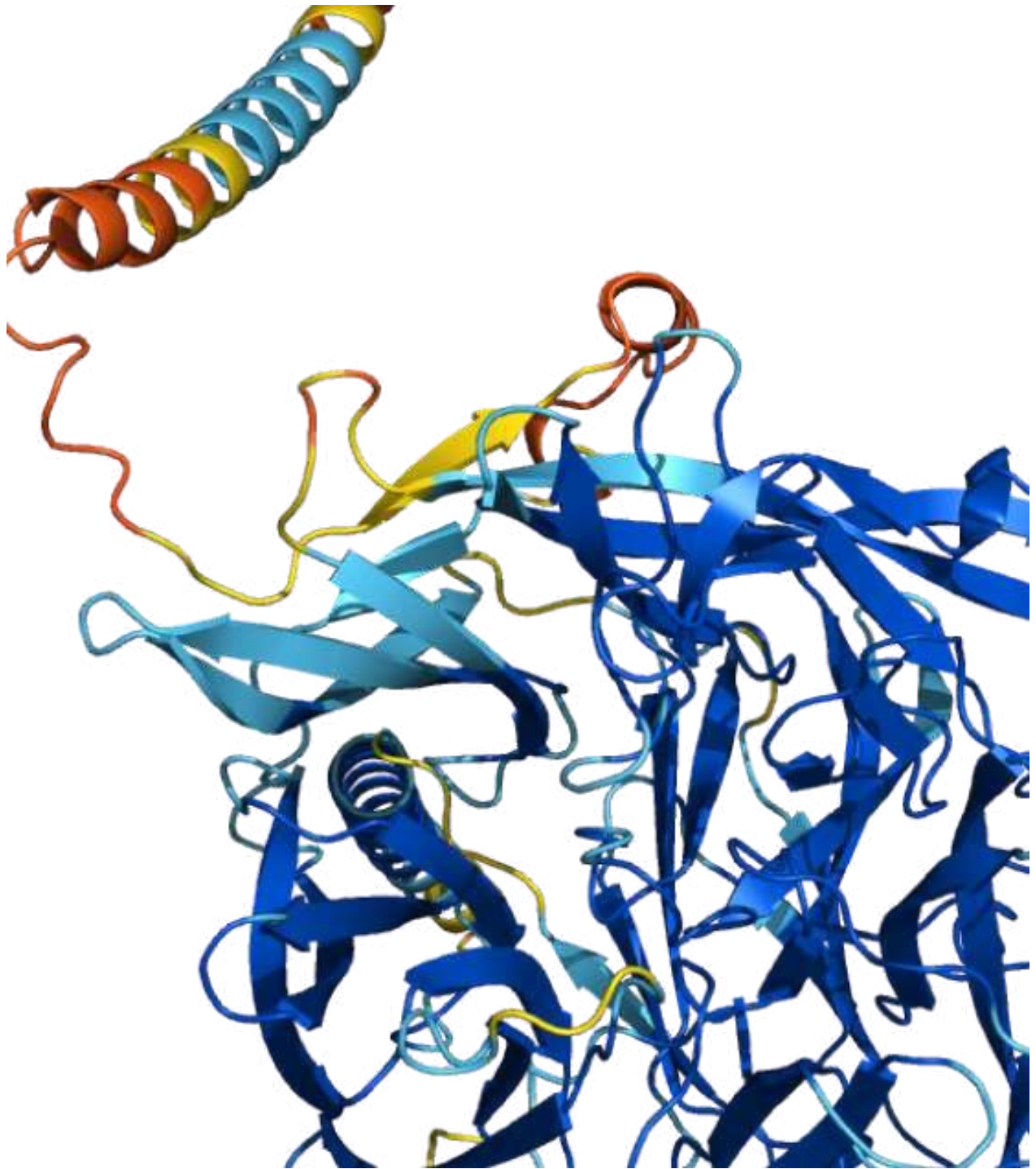
AI, in its vast computational prowess, has already begun to redefine the landscape of materials science. There's a compelling narrative where AI has been instrumental in identifying alternatives to lithium, a critical but increasingly scarce component in battery technology.

Moreover, **AI's role in environmental conservation is noteworthy.** It predicts climate patterns, monitors wildlife, and manages renewable energy sources, acting as Earth's guardian. As one environmental scientist put it, "AI could be our ally in the fight against climate change."

# The Shadowy Cons of AI

However, where there is light, shadows loom. The rapid advancement of AI has sparked debates about privacy, ethics, and employment. The concern isn't just theoretical; it's deeply personal. Could the same technology that promises so much convenience and progress also endanger our freedoms and livelihoods?

Privacy breaches and data misuse stand as stark warnings of AI's potential dark side. With AI systems capable of analyzing vast amounts of personal information, the line between useful and intrusive can blur. *In the wrong hands, AI can become a tool for unprecedented surveillance and control,* warns a privacy advocate, highlighting the technology's dual-use nature.

Moreover, the specter of job displacement looms large. As AI becomes more adept at performing tasks traditionally done by humans, what will become of those whose livelihoods are disrupted? *We must navigate the AI revolution with compassion and foresight*, suggests a labor economist, stressing the need for policies that support those affected.

Recently, **the European Union has adopted the AI Act, a groundbreaking piece of legislation aimed at regulating the development and deployment of artificial intelligence across its member states**. This act represents a significant step towards establishing a framework that ensures AI technologies are used in a way that is safe, transparent, and respects the fundamental rights of individuals. By setting standards for high-risk applications, the EU seeks to foster innovation while protecting citizens from potential harm. This move by the EU not only underscores its commitment to digital ethics but also positions it as a global leader in the governance of emerging technologies. The AI Act is poised to influence not just the European market but also set a benchmark for AI regulation worldwide, encouraging other nations to consider the broader implications of AI in society.
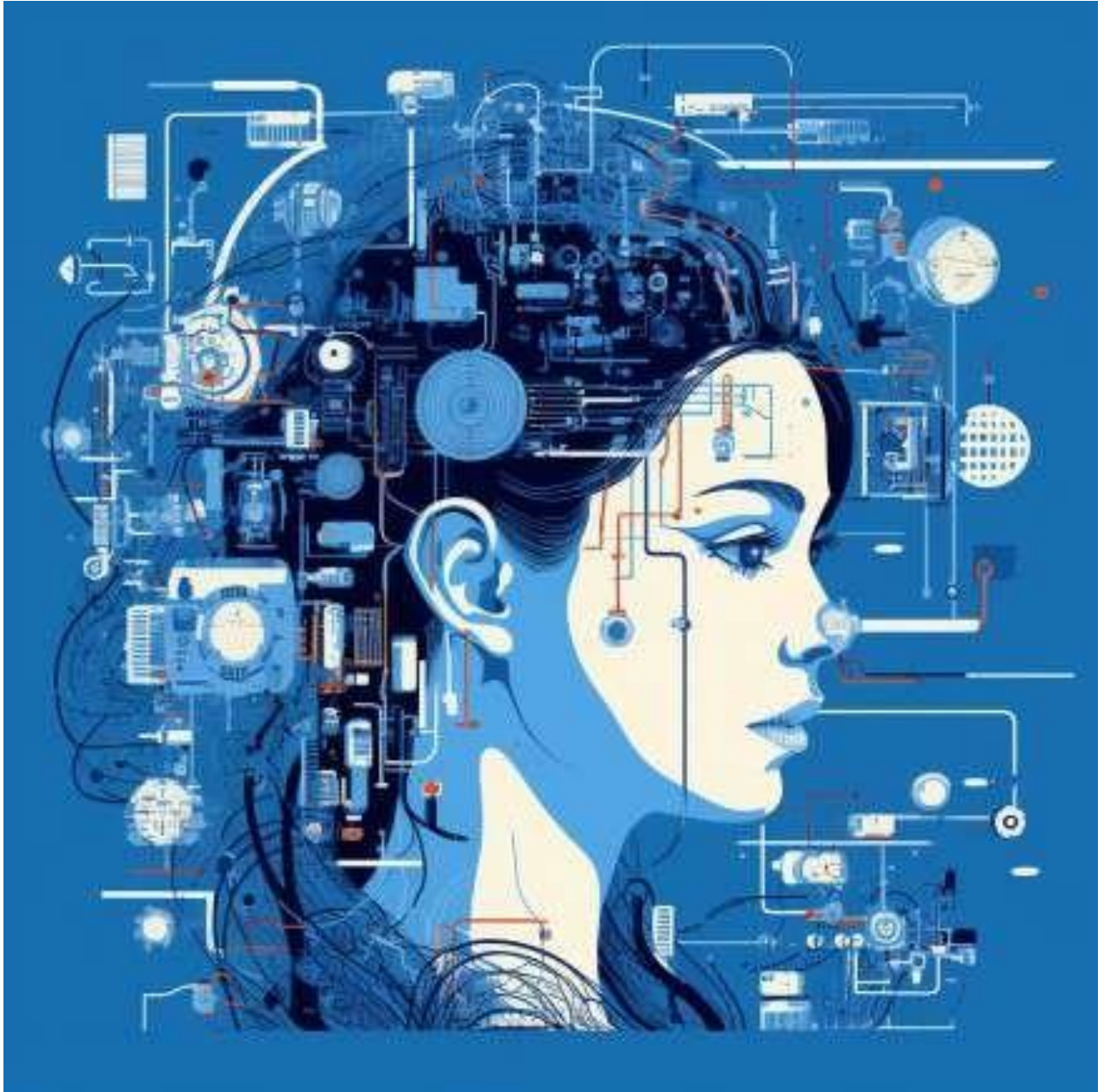
Source: Branded Agency

# Navigating the Future

Today the question isn't whether AI will be a part of our future, but how we can mold that future to reflect our values and aspirations.

*Isn't it time to foster a dialogue that bridges the gap between technologists and the general public, ensuring that AI develops in a way that benefits humanity as a whole?*

As with any powerful technology, AI carries with it the promise of profound benefits and the risk of significant challenges. ***The future of AI is not predetermined; it is something we are crafting every day*** observes an AI philosopher, inviting us to participate actively in shaping this future.


The most important question we face is not **what AI can do, but what we will do with AI.** How will we ensure that this powerful tool serves not just the few, but the many?

# About the Author



**Aksinya Samoylova**

Austrian based, multi-specialized senior professional

Aksinya Samoylova is an Austrian based, multi-specialized senior professional with expertise at the dynamic intersection of People & Talent Acquisition, Future of Work, Corporate Training, Polymathic Research & Learning Design, integrating Generative AI technologies.

# INDIAN ECONOMY

## 5. Indian Economy 2023

In 2023, India's economy displayed resilience and recovery amidst global challenges. With strategic reforms and stimulus measures, the nation saw a rebound in economic growth, supported by robust domestic demand and increased investment. Efforts to strengthen key sectors such as manufacturing, infrastructure, and agriculture yielded positive results, contributing to job creation and income generation. The government's focus on promoting self-reliance through initiatives like "Atma Nirbhar Bharat" fostered innovation and entrepreneurship, driving economic diversification. However, challenges such as inflationary pressures and global uncertainties persisted, necessitating continued reforms and prudent fiscal management to sustain growth momentum and ensure inclusive development in India's evolving economic landscape.

# Services or Manufacturing

## How to solve India's job problem?

By **Professor Anubha Dhasmana,** faculty of economics at the Indian Institute of Management Bangalore

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Anecdotal evidence as well as survey results available from organizations such as the **Centre for Monitoring Indian Economy** (CMIE) point towards a serious problem of unemployment clouding Indian economic performance despite impressive real GDP growth figures in recent years. **Data from government's own Periodic Labour Force Survey conducted by the National Survey Organization shows an unemployment rate of 3.21 % for the year 2022-23.** One must, however, take in to account the fact that a lot of workers (particularly women) classified as self-employed in the NSO survey are engaged in unpaid family labour.

Particularly **worrying** are the **high unemployment** numbers amongst the young (44% amongst those in the age group of 20-24 and 14.3% amongst those in the age group of 25-29 as per the latest CMIE data)[2][3] and the educated (24% amongst those with higher secondary education (class 12th) in 2018). In this context policy makers have been focussed on trying to design policies to encourage job creation.



Source: Pawan Negi

**Historically developing countries have used manufacturing sector expansion as a way to generate growth as well as employment (e.g. China). India seemed to have bucked this trend** with services (especially IT related) doing remarkably well early on while the share of manufacturing continuing to stagnate at roughly 14%. This lopsided sectoral performance has implications for job creation, especially for unskilled and semi-skilled labour.

**Former governor of RBI, Raghuram Rajan, has argued that instead of trying to compete with countries like Vietnam and Bangladesh for low value add manufacturing jobs, India should focus on services growth (both for export and domestic market) where the value add is much higher and environmental costs are much lower**[4]. In other words, instead of looking at the skewed distribution of growth favouring services sector as a problem, India should see it as a sign of its natural comparative advantage and follow its own unique path towards services led development.



Raghuram Rajan; Source: Social Media

An obvious criticism of this view is that growth in **services sector mainly generates jobs for the highly skilled while leaving out most of the low skilled and semi-skilled workers looking for well-paying non-farm jobs**.

*A major challenge in generating private sector manufacturing jobs in recent years has been continued sluggishness in private investment expenditure. Without renewal of private investment, especially in labour intensive manufacturing sector, there would be little scope for creating non-farm jobs for millions of young workers.*

Government needs to convince small and medium sized enterprises (that usually work with relatively small profit margins) that their investment plans will not be derailed by bureaucratic red-tape and unexpected policy changes. At the same time, these businesses need to be protected against unfair competition from underpriced goods coming from outside. This means that the government must be proactive in initiating and pursuing anti-dumping measures against countries trying to flood the Indian market with underpriced products.

**Another venue for creating jobs where government can directly play a role is in public services such as health, education, environmental conservation etc.** Government spending on health and education not only improves social wellbeing directly, but also leads to indirect benefits in the form of healthier and more skilled workforce. Similarly, rapid degradation of environmental resources can seriously dampen economic progress as witnessed by countries such as Bangladesh and Sri Lanka. An important reason behind **Sri Lanka's economic collapse is the climate change and environmental degradation affecting its agricultural exports.** Given the demands on government budget and pressure to keep government deficit in check, however, this seems to be a challenging task. The policy makers have to also choose between the need for investment in physical infrastructure projects such as highways and rail transportation.

In the absence of private investment in manufacturing and limited capacity of the government to immediately increase spending on public services, workers looking for non-farm jobs have had to fall back on low wage jobs in the construction sector. While this may have to continue for some more time, policy makers cannot rely on construction sector boom **to provide good quality jobs to its growing workforce – jobs that pay well and also provide decent working conditions along with a measure of social security.**

**Overall, the challenges in creating good quality jobs for the rapidly growing workforce of India are manifold.** But these challenges also present and opportunity in the form of potential demographic dividend. India has both the supply of vast amount of workforce and a large domestic market available for businesses to supply to.

Source: Pawan Negi

May be Instead of choosing between services and manufacturing growth India should be aiming at services and manufacturing growth driven primarily by domestic demand but also catering to foreign demand where possible.

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# About the Author



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Professor Anubha Dhasmana is currently working as a faculty of economics at the Indian Institute of Management Bangalore. She did her doctoral studies in Economics from John Hopkins University, Baltimore, USA. She worked with International Monetary Fund, Washington, DC during 2007-2008 and has done assignments with the L.A. Times Newspaper. Her research and teaching interests include International Macroeconomics, Applied Macroeconomics and Developments.

# The Remarkable Journey from Fragile Five to First Five:

## Propelling the Nation into Global Economic Powerhouse

By **Dr. Siddharth Singh,** Assistant Professor of Economics at Department of Economics, D.A.V., Banaras Hindu University, Varanasi, India

The events like, a shadow banking crisis, a pandemic, inflation in the West and wars since early 2022 highlights a decade marked by significant global and domestic challenges. Despite these uncertainties, India has shown resilience and progress. The mention of Professor Ricardo Haussmann's *Scrabble* **theory of economic development** suggests that India focused on converting know-how and capabilities into unique products and solutions. This reflects a strategic approach to economic development by leveraging expertise and capabilities in innovative ways.

*The estimated growth rate of 7.3% in the financial year 2023-24 is impressive, especially when considered alongside the growth rates of 9.1% in FY22 and 7.2% in FY23. This indicates a strong recovery and sustained economic expansion.*

**Job creation** is essential for reducing unemployment and promoting economic well-being. The decline in the urban unemployment rate to 6.6% is a positive sign, suggesting improved employment opportunities and labour market conditions in urban areas. The consistently high number of net new subscribers to the Employees' Provident Fund Organization (EPFO) in the age group of 18-25 years since May 2023 is particularly noteworthy. This demographic represents young workers, and their increasing participation in the formal employment sector is a positive indicator for the overall economy. The mention that the number of net new subscribers in the 18-25 age group consistently exceeds 55% of the total net new EPF subscribers indicates a significant contribution of young individuals to the workforce. This is crucial for the demographic dividend and overall economic vitality.

State of Working India 2023, Source:  Azim Premji University

**The emphasis on using technology to accumulate and diffuse tacit knowledge is a crucial aspect of modern economic development.** Technology can play a pivotal role in enhancing productivity, efficiency, and innovation across various sectors.

*The commitment to building high-end manufacturing capacity and improving competitiveness through exports indicates a focus on industrial development and global market integration. Diversifying and expanding exports can contribute significantly to economic growth.*

**The strong domestic demand** for both consumption and investment is highlighted as a key driver of India's GDP growth in the first half of FY2023-24. This suggests a robust and resilient domestic economy. **The stability in the Indian rupee during FY 2023-24 is a positive outcome, suggesting that the currency was not subject to significant volatility**. A stable currency is crucial for economic confidence, trade, and investment. India has managed to maintain a positive growth trajectory, potentially contributing to improvements in economic fundamentals. This could include factors such as GDP growth, employment rates, and fiscal stability.

**The substantial increase in public sector capital investment from ₹5.6 lakh crore in FY15 to ₹18.6 lakh crore in FY24, as per budget estimates, reflects a strong emphasis on bolstering the country's economic foundations.** Such investments can have a multiplier effect on various sectors. The rise in the labour force participation rate, particularly among women, is a positive socio-economic indicator. Increased participation in the workforce can contribute to economic growth and gender equality. The narrowing of India's CAD to 1.9% of GDP in fiscal 2023 is generally considered positive. A lower CAD indicates a more balanced trade situation, which is beneficial for the overall economic stability. **The significant increase in foreign exchange reserves to US$568 billion is a positive sign for India.** Healthy reserves provide a cushion against external shocks, help maintain the stability of the currency, and enhance the country's ability to meet international payment obligations.

**A facilitating regulatory environment supportive of entrepreneurship is a factor contributing to economic growth, indicating a focus on enabling business activities and fostering innovation.** Measures targeted at economic upliftment of the most vulnerable sections of society suggest a commitment to inclusive growth and social development. Efforts directed at developing niche and complex manufacturing sectors, along with building supporting physical infrastructure, indicate a focus on industrial development and enhancing competitiveness. Efforts directed at diversifying the export basket and moving toward higher

value-added products suggest a strategy to enhance export competitiveness and reduce reliance on specific sectors. The expectation of longer and stronger economic and financial cycles suggests confidence in India's sustained brisk growth in the coming years. Reforms at the sub-national level aimed at unleashing the productive potential of MSMEs, ensuring land availability, and meeting energy needs are highlighted as further drivers of economic growth.



Source: Pawan Negi

Source: Pawan Negi

## The fiscal strategy for the fiscal year 2024-25 reflects a comprehensive approach by the government to promote economic resilience, inclusive development, and sustainable growth.

The **fiscal policy** aims to make the domestic economy more resilient to unexpected external shocks. This implies a focus on building a robust economic framework that can withstand unforeseen challenges and uncertainties in the global economic environment. The government's fiscal stance includes measures to mitigate the risks of a global economic downturn. This indicates a proactive approach to economic management, with a goal of maintaining stability even in the face of adverse global economic conditions. The fiscal strategy emphasizes directing resources towards building a more inclusive, sustainable, and resilient domestic economy. This includes efforts to address social and environmental challenges while fostering economic growth. There is an intention to allocate increased resources towards capital spending to sustain the momentum of infrastructure development. Infrastructure investment is crucial for long-term economic growth and can contribute to job creation and improved productivity. **The government continues its holistic approach to fiscal federalism, supporting state-level efforts for capital spending**. This underscores the importance of coordinated efforts between the central and state governments in infrastructure development. The fiscal strategy emphasizes integrated and coordinated planning and implementation of infrastructure projects in line with the principles of PM Gati Shakti. This initiative aims to enhance connectivity and efficiency in infrastructure development. **The fiscal plan prioritizes expenditure on key developmental sectors such as drinking water, housing, sanitation, green energy, health, education, agriculture, and rural development**. This focus aligns with the government's commitment to

addressing critical development challenges. This indicates a commitment to optimizing resource utilization and ensuring efficient fund allocation.

The macroeconomic stability suggests that the overall economic conditions in India were characterized by a **balance in key indicators** such as inflation, economic growth, and employment. A stable macroeconomic environment is essential for sustainable economic development. The significant moderation in the current account deficit and the revival of capital flows are indicative of improvements in India's external position. The mention of a comfortable foreign exchange reserves buffer highlights the importance of having adequate reserves to meet external obligations and manage currency stability. Healthy foreign exchange reserves contribute to a country's ability to withstand external shocks.

## India's growth outlook is influenced by global developments reflects an awareness of the interconnected nature of the global economy

. Economic conditions, trade relations, and geopolitical factors worldwide can impact India's economic performance. Recognizing the trade-off between energy security and economic growth is crucial. Balancing the need for energy resources with sustainable and environmentally conscious practices is a complex challenge faced by many nations. The acknowledgment of AI posing challenges to employment, particularly in the services sector, reflects the ongoing global conversation about the transformative impact of technology on the job market. Prioritizing the availability of a talented and appropriately skilled workforce, ensuring age-appropriate learning outcomes in schools, and promoting a healthy and fit population are recognized as important domestic policy priorities. *A skilled workforce is vital for economic productivity, education lays the foundation for future skills, and a healthy population contributes to overall well-being and productivity*. The acknowledgment that these challenges are not insurmountable and are part of the government's policy thrust indicates a proactive approach. Governments need to formulate and implement policies that address these challenges effectively, fostering sustainable development.

The trajectory of the Indian economy is likely shaped by its ability to navigate challenges, implement structural reforms, and adapt to evolving global scenarios. Government policies, technological advancements, global trade dynamics, and socio-economic factors will **continue to play pivotal roles in determining the future course of India's economic landscape.** **Continuous efforts towards sustainable development, inclusive growth, and resilience in the face of uncertainties will be crucial for fostering a robust and thriving economy.**

Source: Pawan Negi

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# About the Author

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ATMA NIRBHAR
BHARAT

## 6. Atma Nirbhar Bharat (Self-Reliant India)

Atma Nirbhar Bharat (Self-Reliant India) emerged as a central theme and policy initiative in 2023, reflecting India's determination to enhance its economic resilience and reduce dependency on external sources. The Atma Nirbhar Bharat initiative aimed to bolster domestic manufacturing, promote innovation and entrepreneurship, and strengthen key sectors such as agriculture, healthcare, and technology. Through strategic reforms, incentives, and investments, the government sought to create a conducive environment for self-reliance, job creation, and sustainable growth. Atma Nirbhar Bharat represented a bold vision for India's future, emphasizing the importance of self-sufficiency, innovation, and inclusive development in driving the nation towards prosperity.

# Atmanirbhar Bharat:

## India's Self-Reliance Initiative

By **Dr. Neeraj Kumar Sethiya,** an expert of Innovation, Startup and Entrepreneurship

Atmanirbhar Bharat, translating to *self-reliant India* is a strategic initiative launched by the Indian government to enhance the nation's economic resilience and reduce dependency on foreign goods and services. Introduced in May 2020 by Prime Minister Narendra Modi, the campaign aims to bolster domestic industries, foster innovation, and create a self-sufficient ecosystem across various sectors.



*Logo of the Atmanirbhar Bharat Abhiyan India.gov.in*

**The initiation of the Vision Viksit Bharat@2047, aimed at transforming India into a developed nation by 2047.** On December 11, 2023, Prime Minister expressed the vision through a video conferencing. This stands as a prominent undertaking within the New India framework, contingent upon various factors for its success. In this context, the **Atmanirbhar Bharat Abhiyaan** (ABA) or **Self-reliant India campaign-2020** emerges as a prominent vision within the New India framework, designed to transform the nation into a developed entity. This initiative was unveiled alongside the announcement of a special economic and comprehensive package totalling INR 20 lakh crore, equivalent to 10% of India's GDP (Nayak et al., 2022; Sethi, 2022; Khati, 2022).

**The primary goals of the Atmanirbhar Bharat Abhiyaan (ABA) are to address and prioritize:**

- Demand
- Demography
- Economy
- Infrastructure
- System

In essence, the strategy involves reducing India's reliance on imports by establishing facilities to enhance the development of secure and high-quality technology, processes, services, raw materials, and finished products[1].

The government has simultaneously introduced a range of bold reforms, including the development of a skilled human resource pool, the implementation of rational tax systems, the establishment of clear and straightforward laws, the strengthening of the financial system, and reforms in the supply chain, among others (Rao, 2022).

The overarching goal of the entire scheme is to boost the **Make in India** initiative by transforming[2] and establishing the presence of more local Indian companies in the global market, emphasizing the principle of **vocal for local then global**[3].



*Make in India Logo*

A Few successful initiative that exemplify the spirit of "Local for Vocal" under the Atmanirbhar Bharat are:

- **Khadi Revival**

The Khadi and Village Industries Commission (KVIC) has witnessed a significant resurgence in recent years [4]. Many local artisans and entrepreneurs have embraced Khadi, contributing to the revival of this traditional Indian fabric. Notable fashion designers have incorporated Khadi into their collections, giving it a modern and global appeal. This has not only boosted

the market for Khadi but also provided employment opportunities to local weavers and craftsmen.

• **Startup Boom**

The 'Startup India' initiative, aligned with the Atmanirbhar Bharat vision, has witnessed a surge in innovative startups across various sectors. These start-ups focus on developing indigenous solutions and products, reducing dependency on foreign technologies. **Local entrepreneurs have successfully launched and scaled businesses in areas such as healthcare, agriculture, and technology, contributing to job creation and economic growth**[5].

• **Digital India Transformation**

The push for a digital economy has seen remarkable success with the widespread adoption of digital payment systems and the development of indigenous apps and platforms[6].

• **Agricultural Innovations**

Various agricultural initiatives under Atmanirbhar Bharat have empowered farmers with innovative solutions. From the adoption of organic farming practices to the use of technology for better crop management, farmers across the country are witnessing increased yields and improved livelihoods[7].

• **Manufacturing Boost**

The Production-Linked Incentive (PLI) schemes have successfully attracted investment in manufacturing sectors like electronics and pharmaceuticals. Local manufacturing units are thriving, creating a ripple effect by generating employment, reducing imports, and strengthening the country's industrial base[8]

*The Atmanirbhar Bharat initiative has not only stimulated economic growth but has also instilled a sense of pride and confidence in the capabilities of India's entrepreneurs and industries, embracing local products, services, and innovations.*

Moreover, there has been a peculiar shift in the paradigm towards fostering knowledge-based growth through investments in the generation of Intellectual Property, Research and Development, and specialized creations[9].

**Creativity and innovation are consistently recognized as crucial elements supporting the advancement of a knowledge-based economy**. Consequently, an increasing number of start-ups have emerged, actively engaging and employing a significant portion of our population, ultimately contributing to a stronger economy and embodying the true essence of self-reliance (Atma Nirbharata).

**Currently 108 unicorn startups in India that have more than a $1 billion valuations10. Among these five Indian Startup such as ideaForge, Mamaearth, Yatra, Zaggle, and Yudiz have been enlisted in Initial Public Offer (IPO)-2023 and collectively raised over INR 3,600 Cr within a year**.

Experts also believe that in 2024 more Indian startups such as Awfis, FirstCry, Garuda, Go Digit, Mobikwik, Ola Electric, OYO, Lightbox-Backed, PayMate, PayU, Portea, and Swiggy and Unicommerce taking the IPO route to create the benchmark indice.

**The Indian government has implemented numerous initiatives in the past and continues to do so in the present, aiming to bolster the innovation ecosystem and nurture the creativity of every citizen** (Dhar and Saha, 2014).

Various significant measures have been taken to provide support systems for creative and innovative individuals, facilitated through entities such as:
- National Innovation Foundation[11]
- National Innovation Council[12]
- Atal Innovation Mission[13]
- Start-up India[14]
- State-specific Start-up Ecosystems and Incubation Support Systems[15]
- Establishment of Technology and Business Incubators under various schemes[16]
- One District One Product (ODOP) Program[17]
- Start-Up Village Entrepreneurship Program (SVEP)[18]

Moreover, initiatives encompass the Innovation Council, the execution of the National Innovation and Start-up Policy, and substantial backing from institutions such as DST, DBT, CSIR, ASCI, EDI, and various others. The government is actively working towards promoting innovation for entrepreneurship development and sustainable growth by focusing on skills development, advanced research, and technology-driven innovations (Abhyankar, 2014). These endeavors aim to incentivize the emergence of world-class start-ups and entrepreneurs in the country. A recent example is the Bharat App Innovation Challenge launched by Ministry of Electronics and Information Technology (MeitY), MyGov, BIRAC, and Atal Innovation Mission, which serves as a commendable initiative to identify and create globally impactful apps.

**Aatmanirbhar Bharat has redirected the focus of its world-class innovative talent towards developing products and services that match the standards of other countries for the Indian market**. This transformation has positioned it as one of the fastest-growing start-up ecosystems, boasting over 30,000 start-ups and 250 incubators nationwide. This progress is

evident in its recognition as one of the leading innovative nations globally, as indicated by the Global Innovation Index (GII).

**According to the Global Innovation Index 2022 reports released by the World Intellectual Property Organization (WIPO), India maintains its 40th position out of 132 economies, showcasing a consistent upward trend over the last eight years, compared to its rank of 81 in 2015**. Presently, India falls within the category of lower-middle-income economies

**Table 1** illustrates the detailed eight-year performance of India in the Global Innovation Index, breaking down its performance across various parameters. Where it was **clearly reflected that India is continuously improving in major pillars such as Institutions, Human capital and research, Market sophistication, Business sophistication and Creative outputs, respectively to current outcome of India on GII.** However, out of 8 pillars two pillars such as Infrastructure and Knowledge and Technology outputs more consistency of improvement required. As per International Intellectual Property Index released by U.S. Chambers of Commerce, considering 50 unique indicators of top leading global economies ranked India 42nd /55(2023) and 43rd /55(2022), 40th/53 (2021), 40th/53 (2020), 36th/50 (2019), 44th (2018), which really require more improvements in International conditions.

Additionally, **Table 2** shows trends in last 8 years (from 2015 onwards) data with respect to status of Indian Patent (IP) Applications granted or registered/filled collected from Office of the Controller General of Patents, Designs and Trade Marks, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India. **As per report India is continuously progressing in terms of filling IP applications in different sections such as Patent, Design, Trade mark, Geographical Indications, Copyrights and Semiconductor Integrated Layout Design (SCILD), shows dedication toward knowledge based economy.**

However, the conversion ratio as shown in **Figure 1** is **not much satisfactory in terms of final grant or registration with respect to total number of application filling**. The continuous decline in conversion ratio indicated that more precious identification of problems in terms of patentability and uniqueness need to be kept in mind before any experiments conducted lead to filling of any type of IP applications.



**Figure 1** Conversion percentage vs. year (granted or registered/filled) of IP Applications

**Table 1** Parameters wise eight years reports of India performance in Global Innovation Index.

| Years | Overall GII | Institutions | Human capital and research | Infrastructure | Market sophistication | Business sophistication | Knowledge and Technology outputs | Creative outputs |
|---|---|---|---|---|---|---|---|---|
| 2023 | 40 | 56 | 48 | **84** | 20 | 57 | **22** | 49 |
| 2022 | 40 | 54 | 43 | **78** | 19 | 54 | **34** | 52 |
| 2021 | 46 | 62 | 54 | **81** | 28 | 52 | **29** | 68 |
| 2020 | 48 | 61 | 60 | **75** | 31 | 55 | **27** | 64 |
| 2019 | 52 | 77 | 53 | **79** | 33 | 65 | **32** | 78 |
| 2018 | 57 | 80 | 56 | **77** | 36 | 64 | **43** | 75 |
| 2017 | 60 | 92 | 64 | **73** | 39 | 55 | **38** | 85 |
| 2016 | 66 | 96 | 63 | **87** | 33 | 57 | **43** | 94 |
| 2015 | 81 | 104 | 103 | **87** | 72 | 116 | **49** | 95 |

**Source:** Annual report released from office of World Intellectual Property Organization, globalindex.org

**Table 2** Status of IP Applications granted or registered/filled from last 8 years

| Application Type | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 |
|---|---|---|---|---|---|---|---|---|
| Patent | 6326/46904 | 9847/45444 | 13045/ 47854 | 15283/ 50659 | 24936/56267 | 28385/58503 | 30073/66440 | 34134/82811 |
| Design | 7904/11108 | 8276/10213 | 10020/11837 | 9483/12585 | 12256/14290 | 9147/14241 | 15262/22699 | 23400/23897 |
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| Geographical Indications | 26/14 | 34/32 | 25/38 | 23/32 | 22/42 | 5/58 | 50/116 | 55/211 |
| Copyrights | - | 3596/16617 | 19997/17841 | 14625/18250 | 16029/21905 | 16399/24451 | 20673/30988 | 12082/29466 |
| SCILD[*] | - | Nil | 0/02 | Nil | Nil | 0/05 | 0/01 | 0/23 |
| **Total** | 79301/355898 | 271823/ 350467 | 344000/350546 | 356212/405324 | 347415/427309 | 309912/528471 | 327466/568049 | 301648/601789 |

[*]Semiconductor Integrated Layout Design

**Source:** Annual Report related from Office of the Controller General of Patents, Designs and Trade Marks, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India (https://www.ipindia.gov.in/).

In summary, innovation has consistently been at the forefront of the battle for achieving Atma Nirbhar Bharat. The continual improvement in India's Global Innovation Index (GII) ranking is a result of its vast knowledge capital, vibrant start-up ecosystem, and the remarkable efforts of both public and private organizations. The Atal Innovation Mission plays a pivotal role in expanding the innovation ecosystem, and NITI Aayog ensures policy-led innovation in various sectors. Moreover, India's diverse economy, strategic location, and a large pool of highly skilled professionals continuously contribute to its growing prominence on the international stage.

However, there is still a need for more efforts to cultivate a culture of innovation and collaboration in education. Additionally, India's proactive role during the COVID-19 pandemic, including the supply of essential medical equipment and vaccines to other countries, garnered international praise and showcased India's commitment to global well-being. The *Act East* policy of the government has led to deeper economic and strategic collaborations in the Asia-Pacific region, expanding India's global footprint and creating new opportunities for growth and cooperation.

Recognizing that no nation is entirely self-sufficient, foreign partnerships play a crucial role in filling resource gaps and obtaining innovative technology at reasonable prices for rapid growth in the Indian market. In conclusion, **every citizen must think creatively, envision the future growth of India, and actively contribute to initiation, planning, and implementation processes**. Further, addition of **subject based creativity, innovation, start-up and entrepreneurship in curriculum of both school and higher education level may also provide some more boost and interest of future generation towards growth and development of nation.**

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# About the Author



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Dr. Neeraj Kumar Sethiya is an expert of Innovation, Startup and Entrepreneurship. He has worked in the position of Senior Innovation Fellow, at National Innovation Foundation-India (An Autonomous Body of DST- Govt of India). Dr. Sethiya has total 16 years of mixed experience including teaching, research and innovation.Acting as consultant for industrial project and principal investigator for several Govt and private funded project, he has achieved H. index- 26, and total citation of 2447 (Google Scholar Score) with 48 peer reviewed paper (with < 100 Impact Factor), 6 book chapter, 7 books and 15 patents.

# BHARTIYA NYAYA SANHITA

## 7. The Bharatiya Nyaya Sanhita 2023

The Bharatiya Nyaya Sanhita, 2023 ("BNS") was enacted on December 25, 2023, repealing and replacing the Indian Penal Code, 1860 ("IPC") as the new penal code of the country.

After nearly 150 years, the IPC has been re-enacted with the explicit goal of abolishing colonial laws and "simplifying provisions concerning offenses and penalties." Among its objectives, the BNS prioritizes addressing crimes against women, children, and the state. It introduces community service as a penalty for minor offenses and revises fines and punishments for a range of offenses.

# Steering to Transition:

## Bhartiya Nyay Sanhita 2023

By **Atul Pundir**, distinguished lawyer with over two decades of proficient experience in the fields of criminal and matrimonial law

The Bhartiya Nyay Sanhita 2023 is a big change in Indian law, moving away from the [1]old Indian Penal Code (IPC) to something new that fits our current society better. The article looks at how the new law compares to the IPC, what it might bring, and how easy it will be to bring into action.

The IPC has been around since 1860, guiding how crimes are dealt with in India. But times have changed. The Bhartiya Nyay Sanhita 2023 brings in new ideas that reflect today's world. For example, it talks about online crimes, identity theft, and keeping personal data safe, which weren't issues when the IPC was written. **This new law also looks at crimes and justice in a way that fits with today's ideas abouthuman rights and treating people fairly**.



Source:Social Media

*Compared to the IPC, the Bhartiya Nyay Sanhita 2023 is more up-to-date, especially about technology. But changing from the old to the new will take a lot of work.*

Training for legal professionals, updating other laws to match this one, and making sure the law is applied consistently will be big tasks. These efforts aim to make the legal system more modern and fair.

**Ths new law aims to make legal language easier to understand for everyone and is more in tune with today's social and technological issues.** This could mean a more effective justice system. However, shifting to this new law means everyone from judges to lawyers to police officers needs to learn about it, which could be hard. There might also be some confusion at first about how to apply these new rules. Bringing in a whole new set of laws isn't easy. It will need lots of planning, changes to other laws, and a big update to how the courts work. The goal is to fix long-standing problems and make the justice system better for everyone.

**Today's India is very different from when the IPC was made.** The Bhartiya Nyay Sanhita 2023 looks to address modern issues like online crime and privacy in a way the old law couldn't. It's an attempt to make sure the law keeps up with how society is changing. Changing to the new law will be tough, especially for those used to the IPC. But with the right training and a step-by-step approach, these hurdles can be overcome. This change is a big step towards a legal system that's fair, modern, andworks well for India's future.

The Bhartiya Nyay Sanhita 2023 is an ambitious move to update India's legal systemfor the 21st century. It brings new ideas and solutions to match our changing society. Although **there will be challenges in making this shift, it's a necessary step forward. As everyone involved works together, the hope is to build a justice system that's more accessible and relevant to all.**

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# About the Author



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Atul Pundir is a distinguished lawyer with over two decades of proficient experience in the fields of criminal and matrimonial law. Having honed his expertise and knowledge at premier institutes, including the University of Oxford, he brings a blend of scholarly insight and practical acumen to his practice.

Aside from his legal prowess, Atul is an awarded writer, author, and poet, whose passion for words transcends the courtroom. His literary contributions are a testament to his reflective and insightful nature, offering a deeper understanding of human emotions and societal dynamics.

# SINKING JOSHIMATH

## 8. Sinking Joshimath

Joshimath faced alarming land subsidence, prompting urgent action. Accelerated sinking, attributed to soil erosion, deforestation, and geological factors, raised concerns for residents' safety. Authorities collaborated with experts to assess the situation and implement mitigation strategies. Advanced monitoring and ecological restoration efforts were launched to stabilize affected areas and prevent further sinking. This event highlighted the need for sustainable land use practices and proactive measures to address geological hazards. Joshimath's plight underscored the importance of environmental conservation and resilience-building in vulnerable regions.

# Unveiling the Causes of Ground Subsidence

## at Joshimath in Chamoli District of Uttarakhand

By **Dr. Piyoosh Rautela**, Executive Director at Uttarakhand State Disaster Management Authority

**In the intricate tapestry of Earth's geological processes, there lies a reminder of our inherent humility- a recognition that despite our advancements, nature's workings remain enigmatic and awe-inspiring**. It is in this context of reverence that the scientific community grapples with the complexities of ground subsidence, fully aware that unravelling the mystery demands not just persistence but also interdisciplinary collaboration and acute observation.

*The events of January 2023 marked a significant juncture in this ongoing saga, as Joshimath, nestled amidst the Himalayan ranges, witnessed unprecedented geological shifts that tested the resilience of its inhabitants. Beyond mere scientific inquiry, the sinking of Joshimath underscored the profound connection between humanity and the environment, prompting a collective introspection on our role as stewards of this fragile planet.*

As we embark on this journey of exploration and reflection, we are compelled to not only understand the underlying causes of this phenomena but also to chart a course towards a more resilient and sustainable future.

Though highlighted by media after the aggravated pace of ground subsidence in January 2023, the distress of slope material is not a new phenomenon for Joshimath. **Official records suggest that the problem has been persisting since 1970s.** This article delves into the complexities of Joshimath's geological shifts, exploring the historical context, recent events, and the imperative for collaborative solutions.

**The past occurrence of slope instability around Joshimath is evidenced by the fact that the government of Uttar Pradesh, at the time, constituted a committee chaired by Divisional Commissioner MC Mishra in 1976 to investigate the causes of instability and propose remedial measures**. The Mishra Committee did not pinpoint any specific area as particularly affected by slope instability, it however characterized subsidence as being localized in nature. **Poor surface and sub-surface drainage arrangements were identified as exacerbating the problem**. The Committee described the problem in the area around Joshimath as being located over naturally unstable old landslide material. Besides various other measures, the Mishra Committee recommended refraining from agriculture on the hill slope to minimize rainwater infiltration.



Source: Pawan Negi

**There is no evidence to assess the degree to which the recommendations of the Mishra Committee were implemented**. It is therefore no surprise that large majority of public or private infrastructure suffers from ground subsidence. This is despite the Mishra Committee's specific recommendation to assess the load-bearing capacity of the soil before construction and to limit heavy construction in the area.

**Dhauliganga**, which converges with **Alaknanda** at **Vishnuprayag** to the northeast of Joshimath, witnessed a significant flood-related devastation on February 7, 2021. Additionally, the region encountered exceptionally heavy precipitation between October 17 and 19, 2021. These events, believed to have destabilized the toe and subsequently facilitated increased groundwater infiltration, are perceived to have played a role in accelerating the pace of ground subsidence around Joshimath.

In August 2022, the state government formed a multi-institutional committee of experts, including members from GSI Dehradun, to examine the causes of ground subsidence around

Joshimath and propose remedial measures. Interestingly, the observations and suggestions of this committee echoed with those made over four decades ago by the Mishra Committee. Following a thorough field investigation of the area, the Committee identified Ravigram, Gandhinagar, and the upper portion of Sunil wards of Joshimath as being particularly affected by ground subsidence resulting in structural distress.


Source: Pawan Negi

**The slope material around Joshimath, characterized by high porosity and permeability, allows absorption and underground passage of considerable portion of rainwater before it is discharged into the Alaknanda river at lower elevations**. The bedrock characteristics together with massive boulders embedded in the slope material however hinder the free flow of underground water and alter its flow characteristics. Clay and silt therefore tend to accumulate at favourable locations sheltered by large boulders, where infiltrating water may temporarily stagnate.

**Continued deposition of clay and silt led to the formation of an impervious  layer within the slope material, resulting in the creation of a water-bearing horizon**. This hindered free downward movement of water, which had two consequences. Firstly, it limited the percolation of water to the underlying strata, thereby shielding these from the piping effect caused by infiltrating water. Secondly, the restricted downward flow of water ensured that the slope material below the impervious layer remained relatively dry compared to other areas experiencing unhindered water percolation.

While the debris material beneath the impervious layer was safeguarded, the material above it was susceptible to the piping effect of infiltrating water. Consequently, the area around Joshimath witnessed gradual subsidence, which is evident from the findings of several committees, indicating that Ravigram, Gandhinagar, and the upper reaches of Sunil Ward in proximity to Joshimath had previously experienced ground subsidence. Written complaints to the local administration by residents of the Upper Sunil Ward in November 2021 further corroborate this evidence.



Source: Pawan Negi

While pinpointing the exact cause remains challenging, on the night of January 2, 2023, the impermeable layer was breached. A significant volume of water stored in the water-bearing horizon thus rushed down the slope, causing erosion of relatively dry material and initiating an underground movement of silt-laden water, whose erosive potential intensified downslope. This water eventually breached the surface in JP Colony in the Marwari Ward of Joshimath. Consequently, it eroded the very strata that had previously been protected by the impervious layer.

*The ground subsidence incident of January 2023 serves as a stark reminder of the delicate balance between human settlements and the forces of nature. The challenges stemming from this event are multifaceted, encompassing immediate structural damage and long-term socioeconomic implications.*

**Here are some key challenges that the community of Joshimath has been grappling with -**

1. **Structural vulnerability:**
   The post-disaster needs assessment has methodically classified the geographic area of Joshimath into three risk zones (High, Moderate, and Low) and its building stock into five vulnerability classes (Black, Red, Yellow, and Green). The decision to keep the high-risk zone free of all anthropogenic activities, and demolition of Black and Red category structures deemed unsuitable for human habitation, even beyond the high-risk zone, and retrofitting of Yellow category buildings outside the high-risk zone, highlights the necessity for stringent and binding construction norms and building bye laws.

2. **Environmental hazards:**
   The exacerbation of subsidence due to the abrupt release of water underscored the environmental risks inherent in the area. Mitigating water ingress into the slope material and stabilizing unstable slopes are critical tasks necessitating comprehensive and sustainable strategies.

3. **Economic repercussions:**
   The socioeconomic effects of ground subsidence extend widely. Legal evaluations and damage assessments have been undertaken, and rehabilitation strategies have been established. However, ensuring the long-term economic revival of the region demands careful planning and ongoing support.

4. **The pursuit of comprehension**:
   From the outset of this perplexing event, the endeavour to uncover the exact cause of ground subsidence has been collective and relentless. Scientists, geologists, and researchers have engaged in a comprehensive effort, employing diverse methodologies to grasp the underlying factors triggering this geological phenomenon. Yet, as we reach the one-year milestone, the enigma remains unsolved, defying simple explanations and highlighting the inherent complexities involved in understanding the intricate mechanisms of the Earth.

5. **Community resilience:**
   **In the absence of definitive answers, the community of Joshimath has shown remarkable perseverance and fortitude**. Enduring the uncertainty, they have actively participated in scientific inquiries, offering local insights and expertise that enrich the ongoing research efforts. The collaborative synergy between the community and scientific institutions exemplifies a mutual dedication to unravelling the mysteries underlying their surroundings.

Source: Pawan Negi

Moving forward, it is imperative to recognize the resilience of the people of Joshimath and establish realistic expectations for the challenges that lie ahead. Here are some key considerations:

1. **Community involvement**:
   The inhabitants of Joshimath play a central role in the recovery process. The state should ensure active engagement of the community in every intervention, revising plans to accommodate public opinions, aspirations, practical requirements, and sentiments. Collaboration with local civil society organizations can facilitate effective communication and community participation.

2. **Sustainable reconstruction:**
   **Reconstruction and rehabilitation efforts must prioritize sustainability and disaster resilience**. Adhering to building practices aligned with safety standards and environmental considerations is crucial for a more secure future. The state should actively involve the community in shaping building bylaws and land use regulations to ensure voluntary compliance. Additionally, promoting time-tested local architecture and building practices while facilitating capacity building of construction workers in brick, cement, and concrete construction is essential.

3. **Government assistance:**
   **Continued support from government agencies is vital for the success of rehabilitation initiatives**. Coordination between departments responsible for drainage, slope stabilization, infrastructure, and environmental protection is essential

for holistic recovery. To ensure effective coordination, an agency like the Uttarakhand State Disaster Management Authority can be entrusted the responsibility of monitoring and coordinating rehabilitation and reconstruction works.

4. **Risk mitigation strategies:**

   Ongoing efforts to minimize environmental risks, such as implementing drainage systems, waste management, and slope stabilization measures, are vital. **The coordinating agency must work closely with concerned departments to ensure strict compliance with these strategies**.

Despite formidable challenges ahead, Joshimath can emerge stronger and more resilient than ever through collective efforts, prudent strategies, and unwavering community support. The road to recovery is a shared journey, and as we confront the challenges ahead, let us do so with hope, determination, and commitment to building a safer and sustainable future for Joshimath.

The sinking of Joshimath and the exacerbated ground subsidence, along with the subsequent disaster, underscore the challenges faced and the inspiring journey toward recovery. Meanwhile, the community, supported by scientific findings and political leadership, must focus on building resilience, implementing risk reduction measures, and shaping a future that harmonizes human habitation with the dynamic forces and mysteries of the Earth.

# About the Author

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Dr. Piyoosh Rautela is Executive Director at Uttarakhand State Disaster Management Authority. With over two decades, his involvement in disaster risk reduction, emphasizes voluntary compliance and accountable implementation for achieving resilience. With a background in Earth Sciences, he conducts risk assessments and communication effectively. Proficient in climate change, GIS, and remote sensing, Rautela bridges gaps between officials and scientists, facilitating vital systems like earthquake early warning and flood alerts. His diverse experience spans project formulation, administration, and mass awareness, driving scientific solutions for disaster resilience.

# ETHNIC WAR OF MANIPUR

## 9. Ethnic War of Manipur

Ethnic conflict broke out in Manipur's north-eastern region on May 3, 2023, pitting the Meitei population, predominant in the Imphal Valley, against the Kuki-Zo tribal community from the nearby hills. Government records indicate that by February 28, 2024, the violence had claimed 219 lives and forced 60,000 individuals from their homes. Previous reports also cited over 1,000 injuries and 32 people missing. Additionally, 4,786 residences were set ablaze, and 386 religious sites, including temples and churches, were desecrated.

# Locating Deadly Manipur Violence 2023 in the context of Look East Policy:

## Northeast India Perspective

By **Paul Lelen Haokip**, Doctoral Researcher of Sociology at Christ University, Bangalore

**The year 2023 was an annus horribilis in the history of Manipur when the Meitei-Kuki ethnic conflict broke out into a civil war.** Domination of land, politics, trade and commerce in some strategic places such as Moreh and Lamka are the primary causes of violence. Various communities are trying to monopolize the prospects and benefits of LEP. The ethnic war resulted in the loss of more than 219 human lives, 60,000 people internally displaced and 10,000 FIRs (Staff, 2024). Human deaths and the destruction of properties have increased poverty, hatred and mistrust among the people. **This article analyses Manipur violence in 2023 within the framework of the Look East Policy (LEP), Government of India.**

Source: GOI

**Tangkhul Tribes of Manipur**

# Background of the study

**Manipur is in the Northeast region of India, bordering Myanmar. This tiny state (22,327 sq km) comprises three major ethnic groups – Meiteis, Nagas and Kukis**. There are also Meitei pangals and many communities from various parts of India. In the valley region of Manipur, the state legislation manages the land, while the hills are handled by tribal customary laws (Kamei, 2018). In the past, ethnic conflicts in Manipur have historically involved various groups - Nagas, Kukis, Meiteis, Meitei Pangals and others.

*These conflicts have often been linked to historical grievances, competition over resources, political factors, land rights, identity politics, and demands for autonomy or independence. Some of the immediate reasons for the ethnic conflict in Manipur are (1) the destruction of three churches in the Tribal Colony, Imphal, (2) the eviction of villages in the name of protected forests and reserved forests, (3) the demand for including Meitei/Meetei in the Scheduled Tribe list.*

The violence has led to population exchange of each ethnic group in particular areas, thereby leading to a suspicious political-ideological agenda (Baruah, 2024).

# Look East Policy (LEP)

As part of development, the Look East Policy (LEP) of the Government of India aims for regional economic integration, reform and liberalization, sustained economic growth and development of the Northeastern region with East and Southeast Asia (Haokip, 2011). **The LEP has made Northeast India, in general, and Manipur, in particular, a strategic landmass and corridor for successfully implementing its projects.** In the global south, India is a rising power in the Association of Southeast Asian Nations (ASEAN) conglomerate. While India aims to operate the LEP successfully, various communities in the Northeast are trying to control and benefit from LEP. The struggle to control trade and commerce ultimately erupted into a violent civil war in Manipur on May 3, 2024, and continues

in March 2024. **The article explores two places of significant importance in Manipur: Moreh in the Tengnoupal district and Lamka in the Churachandpur district.**

## Importance of Moreh and Lamka in Kaladan Multimodal Project

In Manipur, Moreh and Lamka towns play significant roles in trade and commerce within the LEP initiatives. These two towns will serve as connecting points for India and Myanmar in the more extensive ASEAN relationship. Moreh town in Manipur is the last land connection between India and Myanmar. This town has been an economic hub for decades. From the 1990s onwards, the Tamils, Kukis, Meiteis, and Nagas had various clashes related to trade and commerce. In the early 1990s, the Kuki-Naga conflict erupted in Moreh as each community wanted to control the town. The Kuki-Naga ethnic conflict saw some women tortured and raped before being murdered in various parts of Manipur (Kipgen, 2013). **Similar to what happened 30 years ago, there was innumerable sexual violence against women in the ethnic war of Manipur in 2023.**

Another significant place in Manipur is Lamka town in Churachandpur district. Lamka means **junction** in the Kuki-Zo languages. The success of the Kaladan Multimodal Transit Transport Project (KMTTP) will be seen in Manipur through Lamka town. The KMTTP was agreed upon between the Ministry of External Affairs (MEA), Government of India and the Government of Myanmar in April 2008. Coincidentally, in the same year, twenty-five Kuki insurgent groups entered Suspension of Operation (SoO) with the Central Government and the Government of Manipur on August 22, 2008 (Hussain, 2023). The KMTTP connects Kolkata with the Sittwe port in Myanmar (539 km) to boost trade and commerce between India and Myanmar and ease access to other South Asian countries. The deep-water port is meant to transport bulk cargo like cement, pulses, food grains, and other things (Gupta, 2023). The KMTTP has been successful as the first Indian cargo ship, MV-ITT LION (V-273), successfully docked at Sittwe Port on May 9, 2023 (Banerjee, 2023). This project is a strategic alternate linkage between the landlocked Northeastern states and the rest of India, easing the pressure prevailing in the chicken-neck Siliguri corridor. From Sittwe port, cargo travels through the Kaladan River up to Paletwa. From Paletwa in Myanmar to Zoringpui in Mizoram is 110 km long, and from Zorinpui to Lawngtlai is another 100 km roadway (Gupta, 2023). From Lawngtlai, an existing road connects to Aizawl. Goods can be transported from Aizawl to Lamka in Churachandpur district, Manipur, and Guwahati in Assam. Therefore, Lamka becomes a very strategic landmass in the context of LEP.

# National Mission on Edible Oils

**For the tribals in Northeast India, land is their primary source of subsistence. Loss of land amounts to loss of culture, hope and the end of their history**. Another noteworthy project undertaken by the Government of India to boost its economy is the National Mission on Edible Oils - Oil Palm (NMEO-OP), which aims to enhance the edible oilseeds production and oil availability in the country through harnessing Oil Palm area expansion, Crude Palm Oil (CPO) production and reduction of import burden on edible oils (Department of Agriculture & Farmers Welfare, 2022). Oil palm cultivation is a water-guzzling, monoculture crop with a long gestation period unsuitable to small farmers that could detach tribals from their land, affect their identity and damage their social lifestyle (Haksar, 2023). **In the Northeast, palm oil cultivation is already proving disastrous to natural ecology as tropical forests are cleared to establish plantations**. Increasing human-animal conflicts in the impacted area and misleading reporting about palm oil purposely conceal environmental degradation (Dey et al., 2023).

**The colonial administration** introduced the policy on forest management in 1894 (Ghosh, 1987). **This control over forests continues to this day through various**

**government acts**. As part of forest management and control, the National Mission on Edible Oils – Oil Palm (NMEO-OP) has introduced the monoculture palm oil (Elaeis guineensis) plantation in some states of Northeast India. The reassessment committee of ICAR- Indian Institute of Oil Palm Research (IIOPR) 2020 has assessed in the year 2020, a total area of around 28 lakh hectares fit for oil palm cultivation in India, of which 9.62 lakh in the NE States (Department of Agriculture & Farmers Welfare, 2022). For oil plantations, the government requires a vast forest area. The protesters in Kangpokpi alleged that the Manipur government has wrongly declared some hill areas as Reserved Forests or wetlands (Singh, 2023). This monoculture could destroy the mixed cropping agricultural practices for sustainable livelihood in the region. Unfortunately, economic orientations are concerned with the most significant profit in the shortest time and minimal cost (Francis, 2023). **For the success of this mission, there are disputes arising due to the incumbent government's initiative to declare tribal lands as reserved forests and protected forests.**

# Discussion and conclusion

**The actual cause of ethnic violence in Manipur revolves around the strive to control land, trade and commerce in the Moreh town of Tengnoupal district and Lamka town of Churachandpur district**.

A balanced political representation in the Manipur Legislative Assembly could serve as an objective means for peaceful co-existence. Manipur needs equitable political power sharing in the state assembly. The tribals are 40.9 % of the population as in 2011 census. Out of the 60 assembly constituencies, tribals have 19 reserved Legislative Assembly Constituencies, while 40 are meant for valley inhabitants. The argument that the 40 Assembly Constituencies of the valley are unreserved and can be contested by any tribal is a weak excuse. It is impossible for a tribal to be elected as a member of the Legislative Assembly in the valley and vice versa. **Prof Sugata Bose, grand-nephew of Subhas Chandras Bose suggests a just power-sharing arrangement between the Meiteis, Kukis and Nagas in Manipur to address their grievances** (PTI, 2023).

Tribals in various parts of the world symbolize isolation from urban areas, self-contained in particular regions, socially homogeneous, and possessing a primitive social formation (Béteille, 1998). The Indian government should realize that even before the Indian Forest Act of 1927, the tribal were already taking care of their forests in their specific area.

*Ethnic violence has resulted due to displacement and livelihood loss, destruction of infrastructure (houses, educational institutions, churches, temples, roads, bridges), economic decline, mistrust, social and financial dependency.*

The effects of war-induced poverty can be long-lasting, as the destruction of human capital, social networks, and economic infrastructure may hinder post-conflict recovery and development efforts.

Development models have drastically impacted the lives of people with low incomes in post-independent India. Some people benefit, while others have to pay the cost of so-called developmental works (Fernandes, 2023). Development projects have restricted tribal access to natural resources and affinity with nature. The NMEO-OP project is a threat to the tribals of Northeast India, where their lands will be converted to monoculture for oil palm plantation.

**Due to ethnic war, the collective consciousness of the people has been negatively affected, leading to mistrust, hatred and enmity**. To address the consequences of ethnic war, there is a need for comprehensive strategies that prioritize peacebuilding, conflict resolution, and sustainable development. Infrastructure reconstruction, job creation and livelihood opportunities, strengthening social safety nets, and fostering reconciliation and social cohesion initiatives could be constructive works.

**While addressing the effects of war, the root causes of conflict must be treated - such as inequality, injustice, and marginalization of minorities.**

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# RAM MANDIR

## 10. Construction of Ram Temple

In 2023, the long-awaited construction of the Ram Temple in Ayodhya reached a historic milestone, marking a significant moment in India's cultural and religious landscape. The temple, dedicated to Lord Ram, represents a symbol of faith and unity for millions of Hindus worldwide. The construction process, which began after a Supreme Court verdict in 2019, involved meticulous planning and intricate craftsmanship. With the support of devotees and the government, the temple's construction progressed steadily, adhering to architectural and religious principles. Its completion not only fulfilled a centuries-old aspiration but also fostered a sense of harmony and reverence among communities across India.

# The construction of Ram Mandir and the Modi 3.0

By **Dr. Pankaj Gupta**, a distinguished scholar, PhD from the University of Delhi

**The construction of Ram Mandir was one of the major promises of the BJP Government fulfilled in Modi 2.0.** The major promises that the party has fulfilled under the Modi leadership was abrogation of Article 370 and Article 35A; declaring the practice of triple talaq illegal and unconstitutional and its move towards uniform civil code.

*The construction of Ram temple has helped in dismantling caste based political discourse in Bharat and zeroing in on developmental agenda as well as religious awakening of Sanatanis. It has projected Prime Minister Modi as a national leader whose stature has no match in opposition camp.*

Ram Mandir; Source: Social Media

Modi has emerged as mass leader and a unifying force for the people of Bharat. The construction of Ram Mandir has political leverage for BJP under Modi on one hand and helped in generation of economic dividends for the common masses.

The Supreme Court verdict in 2019 paved the way for construction of Ram Temple in Ayodhya on the land where once the Babri Masjid stood. The construction of the temple was commenced on 5th August, 2020 after Bhumi Poojan (ground worship) and the Prana Pratishtha (consecration) ceremony of Ram Mandir was done on 22nd January, 2024. The Prime Minister Shri Narender Modi was Mukhya Yajman (Chief Patron) in both the events.

# Political implications

**Lord Ram serves as the cohesive factor for the entire Bharat populace, a truth that no political party in the nation can refute.** The construction of Ram Mandir resulted in decimation of the opposition as they are in conundrum as whether to oppose it or to support.

On 2nd October, 2023, just six months before the Lok Sabha elections, the Bihar Government under the Chief Ministership of Nitish Kumar released caste census in Bihar. The reservation ceiling of 50% was also breached after the caste census data was issued and it was increased to 75%. Many political experts believe that it will weaken the unification of *Sanatani* and it would further exacerbate the caste-based division in the country that will help the opposition parties in electoral gains. The release of caste census by many has been projected as master stroke by the opposition parties, which is inclusive of RJD, JD (U), Congress and left, in Bihar.



Ayodhya-mosque Source: Social Media
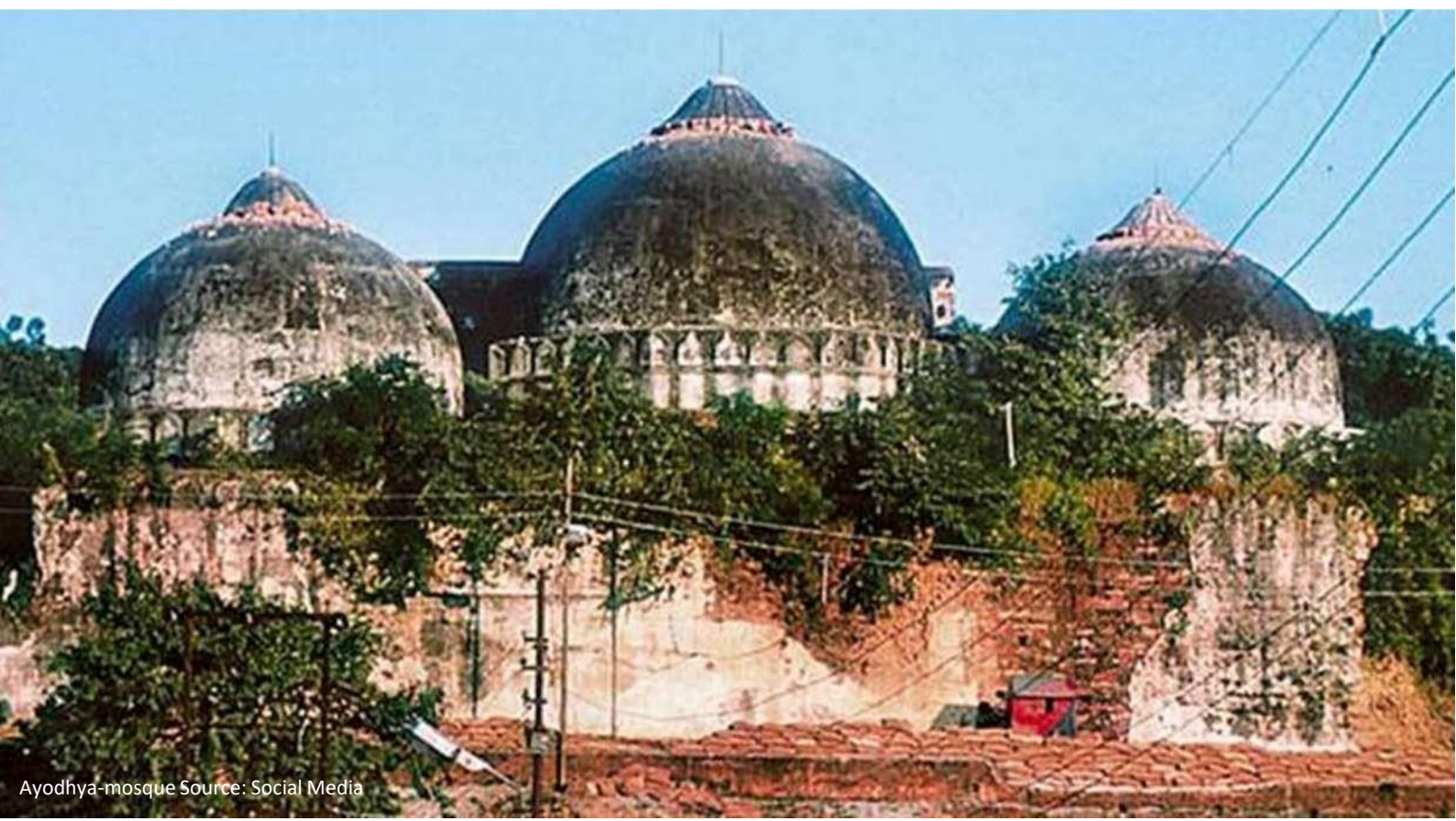
However, construction of **Ram Mandir** has resulted in debacle of all the political conspiracy that was created to divide Sanatani on caste line. Nitish Kumar was a key architect of the opposition's INDIA alliance but with construction of Ram Mandir, the political landscape has been shifted in favor of BJP. It also forced the Bihar CM Nitish Kumar to reconsider his political future and he subsequently shifted again to NDA within less than one and a half years' time. Congress decided to skip the consecration ceremony by dubbing it as RSS-BJP event but it could not openly opposed to construction of Ram Mandir.

# Religion based division or unification:

Although there are certain left leaning news agencies, which consider that it would further create a wedge among Hindus and Muslims yet the reality is different. **The Chief of All India Imam Organisation attended the Ram Mandir consecration ceremony and given paigham-e-mohabbat (message of love) that shows Hindu-Muslim unity and blurring communal overtures**. He was invited for the consecration ceremony, where he mentioned that he has attended the ceremony as part of his duty to the nation. However, there were a few handful of Imams, who issued fatwa against the chief because he attended that event in Ayodhya and given the message of love and unity. But Dr. Imam Umer Ahmed Ilyasi, the chief of All India Imam Organisation remained undeterred by the fatwa issued against him and insisted that his actions were motivated not by religious sentiments but by his "love for humanity". He said in one of the interviews, *we are all humans first and our humanity is our character. One can only be a good Muslim or a good Hindu if one is a good person*, he said. ***People can have different castes, their forms of worship can be different, our faiths can be different, but the biggest dharma should be humanity.***

**The Muslims are equally jubilant like *Sanatanis* and they have also donated for the construction of grand Ram Mandir.** The 400 Muslims from 24 districts of Kashi, U.P. have donated more than two crore rupees for the construction of Ram Mandir.

# Impact on economy

The construction of Ram Mandir is going to massively impact the economy of Uttar Pradesh and generation of employment. As per report of global brokerage firm Jefferies, UP is moving towards becoming $1 Trillion economy with 5 crore tourists every year in Ayodhya. According to a SBI Research report, the total expenditure by tourist in UP will be more than 4 lakh crore by the end of this financial year. The expected footfall in Ayodhya will be more than the combined footfall of Vatican City and Mecca in Saudi Arabia. It is projected that U.P. will be second highest weightage state in India's GDP by 2028 with developmental opportunities in services, industry, agriculture, and exports.

अयोध्या महायोजना 2031
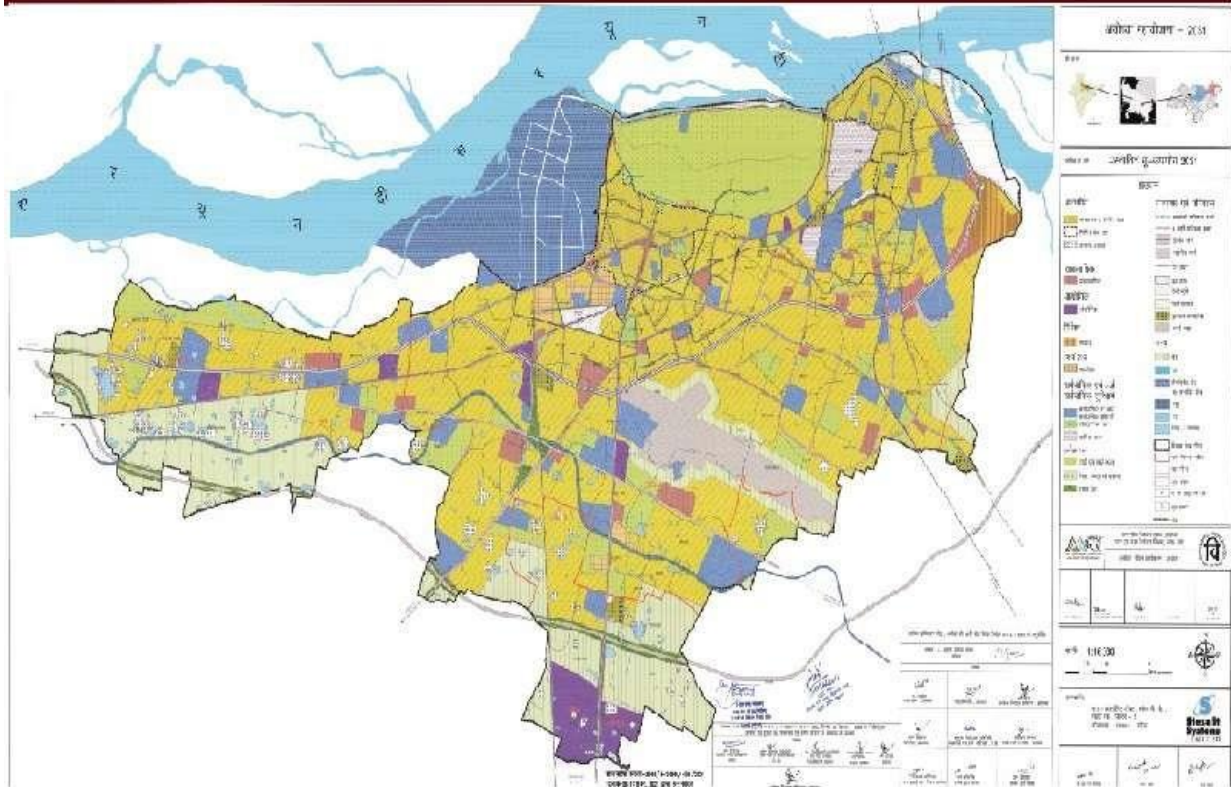
Source: Ayodhya Development Authority

The State government has initiated around 178 projects costing around 305 billion rupees including a railway station modelled on Ram Mandir, international airport, township, wide roads and decorative street lights. The Indian Hotels Company Ltd (IHCL) is going to construct a 100 room Vivanta hotel and another 120 room Ginger hotel in Ayodhya within 36 months.

**In addition to hotels, the central and state governments have announced massive infrastructure development projects worth Rs 85,000/- crore under Ayodhya Master Plan 2031.**

**The establishment of the Ram Mandir has not only fostered unity among Hindus but has also contributed to diminishing caste-based divisions among *Sanatanis*. It has additionally elevated the spirits of new voters who believe in progress and harmony that surpass religious boundaries.** As a result, the polarization of votes along caste and religious lines is diminishing. The Ram Mandir *pran pratistha* has resulted in creating political storm that has led switching of the ideology and even the political alignment. **The Ayodhya Ram temple** will offer the BJP substantial fuel to champion the Hindu cause, and give the opposition parties a wake-up call to realign their approach. The construction of Ram Mandir not only boosted the deep down believes of *Sanatanis* but also helping in giving a major push to development and creating job opportunities to the masses especially the residents of Ayodhya.

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Dr. Pankaj Gupta, a distinguished scholar, holds a PhD from the University of Delhi, reflecting his commitment to academic excellence. With a passion for research, he has contributed to numerous study teams, presenting papers at prestigious forums on diverse social issues. Driven by a keen interest in contemporary socio-political matters, he has authored insightful articles shedding light on pressing societal concerns. His scholarly pursuits reflect a dedication to advancing knowledge and understanding, contributing significantly to the academic discourse on social issues.

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**Editor, Jagriti Media**
Academician I Anchor I Sahaja Yogi

Dr. Shachi Negi, the founding Editor of Jagriti Media, is a distinguished scholar in English Literature, holding a Ph.D. from HNB Garhwal University. An academician since 2009, she has been teaching in higher education. Her research interests encompass British Drama, folklore of Uttarakhand, and media studies, as evidenced by her numerous publications in journals and presentations at national and international conferences. Apart from her academic pursuits, Dr. Negi is a Prabhakar in Hindustani classical music and practices Sahaja yoga, embodying a harmonious blend of intellectual rigor and spiritual exploration.

Furthermore, she has conducted workshops on theatre, personality development, and Sahaja Yoga. Her articles and poems have been published in newspapers, magazines, books, and web portals, reflecting her multifaceted talents and contributions to literature and academia.

# About the Designer



## Ar. Meghna Chatterji
### Design Head and Co-Founder Kaarkhna
Architect I Conservationist I Academician I Musician

Meghna Chatterji is the co-founder of the multidisciplinary firm 'Kaarkhana', an architect, a heritage expert and an award winning academician having an experience of 9+ years.

She completed her masters in Architectural conservation from SPA Delhi and has a diverse background working on architecture, heritage, community building and graphic design projects.

She is an explorer and has travelled and documented more than 3000 villages PAN India. She has also worked as an Assistant Professor in DIT University, Dehradun and was awarded as "Teacher of the year 2021" Uttarakhand by the Honorable Chief Minister.

Prior to that She has worked with organisations like ICOMOS, INTACH and A.T.A. on reknowned projects such as Dutch in Chinsurah - funded by the Embassy of Netherlands, Documention of Built and Natural Heritage of Sawai Madhopur and Dausa district, Post Disaster Cultural Assessement of Uttarakhand funded by UNESCO e.t.c.

She has been facilitator and curator of several community building events and workshops creating awareness on heritage, vernacular architecture, rural development and environment. Her current initiative is "Zindagi Mubarak" a community building event which happens annually in Uttarakhand.  She also happens to be a *Baul* Singer and an admirer of all art forms.