

JANJATIYA GAURAV DIVAS

Janjatiya Gaurav Divas, or Tribal Pride Day, is observed every year on November 15th to honor the contribution, culture, and rich heritage of the tribal communities of India. This significant day coincides with the birth anniversary of Birsa Munda, a renowned tribal freedom fighter, religious leader, and folk hero who played a pivotal role in the Indian independence movement. The day is a tribute to the resilience and determination of the tribal people, who have been an integral part of India's socio-cultural fabric for centuries.

Birsa Munda, who was born on November 15, 1875, in the Ulihatu village of present-day Jharkhand, became a symbol of the tribal resistance against the British colonial rule. He led the Ulgulan (Munda Rebellion) in the late 19th century, which was a significant tribal uprising against the exploitation of the tribal people by landlords and the British administration. His struggle for justice, equality, and preservation of tribal rights has made him a revered figure in tribal history.

The celebration of Janjatiya Gaurav Divas was initiated by the Government of India to honor the sacrifices of tribal communities, to recognize their invaluable contribution to the nation, and to promote their cultural heritage, which has often been marginalized in mainstream discourse.

Tribes in India have made significant contributions in various fields such as agriculture, wildlife conservation, literature, and sports. The day highlights their role in the nation's socio-economic development and acknowledges their achievements in different sectors.

The celebration of tribal pride also serves as an opportunity to foster national integration by promoting respect for diversity and inclusivity. It is an occasion to bring attention to the struggles faced by tribal communities and to encourage solidarity among different cultural groups in India.

Various government and non-governmental organizations hold ceremonies to commemorate the sacrifices made by tribal leaders like Birsa Munda. Tribal festivals, prayers, and folk dances such as the Chhau dance, Santhal dance, and Ghoomar are performed in tribal regions to honor their cultural heritage.

On this day, the government and civil society organizations often organize awareness programs to address issues affecting the tribal population. These campaigns focus on issues such as land rights, forest conservation, healthcare, education, and economic empowerment.

On Janjatiya Gaurav Divas, the government often announces new policies, schemes, or initiatives aimed at the welfare of tribal communities. These may include measures to improve education, healthcare, employment, and housing for tribal populations, ensuring that they receive the benefits of social and economic progress.

In line with the celebration of Janjatiya Gaurav Divas, the Government of India has implemented several welfare schemes to support the development of tribal communities. Some notable initiatives include:

This legislation recognizes the rights of forest-dwelling tribal communities over forest resources and land, empowering them to manage and preserve their traditional habitats.

Tribal Sub-Plan (TSP) is a strategy for the integrated development of tribal areas, focusing on the socio-economic welfare of tribal populations.

Pradhan Mantri Van Dhan Yojana scheme provides support to tribal communities for the sustainable harvesting and value addition of non-timber forest products. National Fellowship and Scholarship for Higher Education of ST Students initiative aims to increase the representation of tribal students in higher education and research. Janjatiya Gaurav Divas is a reminder of the rich cultural heritage, resilience, and contribution of India's tribal communities. It honors the spirit of unity, pride, and dignity that these communities have maintained despite centuries of adversity. As India continues to progress, it is crucial to ensure that the rights and well-being of the tribal population are prioritized, and their contribution to the nation is recognized and celebrated.

■ DR SONIA VERMA

Guru Nanak Dev Ji's life was characterized by extensive travels across a vast geographical expanse, encompassing India, Persia, and Arabia. These journeys were not mere geographical expeditions; they were transformative spiritual pilgrimages, profoundly shaping his understanding of the human condition and informing his teachings. His travels took him far beyond the confines of his birthplace, exposing him to diverse cultures, religions, and social structures. He interacted with people from all walks of life, engaging in dialogues with religious scholars and leaders, challenging prevailing social and religious norms, and directly confronting the inequalities and injustices of his time.

Nanak's interactions were not limited to the privileged classes. He actively sought out the marginalized and oppressed, spending time with those ostracized by society due to their caste, religion, or social standing. These encounters deeply affected him, fostering a profound empathy for their suffering and solidifying his commitment to social justice and equality. He witnessed firsthand the impact of social and religious hierarchies, observing how these systems perpetuated discrimination and denied opportunities to vast segments of the population. The suffering he witnessed fueled his desire to challenge these oppressive structures and advocate for a more just and equitable society.

His dialogues with religious scholars and leaders were often challenging and confrontational. Nanak directly questioned the prevailing interpretations of religious texts and practices, exposing the hypocrisy and inconsistencies he observed. He challenged the rigidity of religious dogma, emphasizing the importance of personal experience and direct connection with the divine. His message of Ik Onkar, the one God accessible to all, resonated with many who felt alienated by the complex rituals and hierarchical structures of existing religious institutions. He emphasized that spiritual merit was not determined by birth or social standing but by one's actions and devotion to God.

The enduring legacy of Guru Nanak's travels lies not only in the geographical reach of his journeys but in the transformative impact they had on his teachings and the subsequent development of Sikhism. His interactions with diverse people and faiths broadened his understanding of the human condition, fostering a message of universal love and brotherhood that transcends cultural and religious boundaries. His unwavering commitment to social reform, born from his experiences with the marginalized, continues to inspire movements for social justice and equality across the globe. The principles of selfless service, equality, and honest labor, central to his teachings, are a direct reflection of the lessons learned during his extensive travels.

Core Teachings of Guru Nanak Dev Ji: Ik Onkar and its Principles

Guru Nanak Dev Ji's core teaching revolves around the concept of Ik Onkar, the one, singular God. This monotheistic principle fundamentally challenged the polytheistic and deeply entrenched caste system of 15th-century India. The prevailing religious landscape was characterized by a multitude of gods and goddesses, often interwoven with a rigid social hierarchy that dictated an individual's place in society based on birth. Nanak's assertion of

a single, formless, timeless, and all-pervading divine essence directly contradicted this established order. Ik Onkar transcended all forms, names, and rituals, making God equally accessible to all, regardless of caste, creed, or social standing. This radical concept of a single, accessible God was revolutionary, offering hope and dignity to the marginalized and oppressed. It directly challenged the power structures that maintained social inequalities, thereby promoting a vision of universal equality.

This revolutionary monotheism wasn't merely a theological statement; it was a call for profound social reform. By emphasizing the oneness of humanity under a single divine creator, Nanak directly challenged the deeply ingrained caste system. He advocated for the eradication of social discrimination, promoting equality among all people. His teachings resonated deeply with those who had been marginalized and oppressed, offering them hope and a sense of inherent worth. The rejection of the caste system was pivotal to his message, creating space for social mobility and challenging the traditional power structures that had perpetuated inequality for centuries.

Three core principles further elaborate the concept of Ik Onkar: Naam Japna, Kirat Karni, and Vand Chhakna.

Naam Japna refers to the constant remembrance of God's name. It's not merely a ritualistic act but a continuous state of being, a conscious effort to live in accordance with God's will. This constant remembrance serves as a spiritual anchor, guiding individuals towards ethical behavior and selfless action. It fosters a deep connection with the divine, shaping one's thoughts, words, and deeds.

Kirat Karni emphasizes the importance of honest labor and earning one's livelihood through righteous means. It rejects the accumulation of wealth through exploitation or unjust practices. This principle promotes self-reliance and discourages dependency, fostering dignity and self-respect. Honest work, according to Nanak, is a form of worship, a way to contribute positively to society and live a life aligned with God's will.

Vand Chhakna highlights the significance of sharing and selfless service. This principle promotes compassion, generosity, and a commitment to the well-being of others. It emphasizes community and collective responsibility, encouraging individuals to contribute to society. The establishment of the langar, a community kitchen providing free meals to all, serves as a powerful symbol of this principle, reflecting Nanak's commitment to social equality and inclusivity. This practice remains a hallmark of Sikh communities, demonstrating the enduring relevance of Vand Chhakna in fostering social harmony and mutual support.

Guru Nanak Dev Ji's Social Reform and Impact

Guru Nanak Dev Ji's life was a powerful testament to his unwavering commitment to social reform. He vehemently condemned the pervasive social inequalities, caste discrimination, and religious intolerance prevalent during his time. His teachings, rooted in the concept of Ik Onkar (one God), directly challenged the rigid social hierarchies and promoted a vision of equality, brotherhood, and social justice. He actively sought to dismantle the caste system, a deeply entrenched struc-

ture that perpetuated discrimination and oppression. Nanak's interactions with people from all walks of life, regardless of their caste, demonstrated his belief in the inherent equality of all humankind. He frequently criticized the Brahmanical hegemony and the exploitation of lower castes, emphasizing that spiritual merit wasn't determined by birth but by one's actions and devotion to God.

His travels across vast regions allowed him to witness firsthand the suffering of marginalized communities. He used his powerful oratory skills and hymns (kirtan) to articulate a message of hope and empowerment. He denounced the ritualistic practices and superstitious beliefs that were often used to justify social injustice. His insistence on honest labor (kirat karni) promoted self-reliance and discouraged the exploitation of others. The establishment of the langar, a communal kitchen offering free meals to everyone regardless of caste or creed, served as a powerful symbol of his commitment to inclusivity and social harmony. This practice continues to be a central aspect of Sikh communities worldwide, representing the enduring legacy of his social vision.

Nanak's teachings also transcended religious boundaries. He engaged in dialogues with people of various faiths, emphasizing the shared humanity that underlay all religious traditions. His condemnation of religious intolerance fostered a spirit of mutual respect and understanding. He actively challenged the sectarianism and prejudice that often led to conflict and violence. His message of universal love and brotherhood fostered a more inclusive and harmonious society. The impact of his social reforms is evident in the Sikh community's emphasis on equality, social justice, and selfless service. His legacy continues to inspire movements for social change and equality globally.

Guru Nanak Dev Ji's Legacy and the Evolution of Sikhism

Guru Nanak Dev Ji's profound impact extends far beyond his lifetime. His teachings, emphasizing the oneness of God (Ik Onkar), selfless service (seva), and honest labor (kirat karni), laid the foundation for Sikhism's unique identity and enduring appeal. His emphasis on equality, regardless of caste or creed, challenged the rigid social hierarchies of his time and continues to inspire social justice movements today. The celebration of his birthday, Gurmurah, is a testament to his enduring legacy, a time for Sikhs worldwide to reaffirm their commitment to his principles.

The establishment of the Khalsa Panth under Guru Gobind Singh Ji, the tenth Sikh Guru, marked a significant turning point in Sikh history. Building upon Nanak's teachings, Guru Gobind Singh Ji formalized the Khalsa, a community of initiated Sikhs committed to upholding the principles of Sikhism. This marked a shift from a primarily spiritual movement to a more organized and politically aware community, capable of defending its faith and identity. The five Ks-Kesh (uncut hair), Kanga (comb), Kara (steel bracelet), Kachera (undergarments), and Kirpan (ceremonial dagger)-became symbols of this commitment, representing the Khalsa's dedication to faith and service.

The Gurus who succeeded Guru Nanak- Angad, Amar Das, Ram Das, Arjun, Har Gobind, Har Rai, Har Krishan, Teg Bahadur,

and Gobind Singh-each played a crucial role in developing and refining Sikh theology and practice. They expanded upon Nanak's message, adapting it to the changing socio-political landscape while maintaining its core principles. The compilation of the Guru Granth Sahib, the Sikh holy scripture, under Guru Arjun Dev Ji stands as a monumental achievement, preserving and disseminating Nanak's teachings and those of the subsequent Gurus for generations to come. The Guru Granth Sahib serves as the ultimate spiritual authority for Sikhs, providing guidance and inspiration in all aspects of life. The legacy of the Gurus continues to shape Sikh identity and practice, ensuring the continuity and vitality of the faith.

Guru Nanak Dev Ji's Writings and Interpretations

Guru Nanak Dev Ji's writings, primarily compiled within the Guru Granth Sahib, offer a rich tapestry of spiritual insights, social commentary, and poetic beauty. The Japji Sahib, arguably his most famous composition, serves as a foundational text, outlining core Sikh beliefs and providing a path to spiritual liberation. Its verses delve into the nature of God, the human condition, and the journey toward enlightenment. Scholarly interpretations of the Japji Sahib are varied, with some emphasizing its mystical dimensions-the union of the individual soul with the divine-while others focus on its ethical implications, highlighting the importance of righteous conduct and selfless service. The concept of Ik Onkar, the one supreme God, permeates the Japji Sahib and other hymns, challenging the polytheistic and hierarchical structures of Nanak's time.

Beyond the Japji Sahib, the Guru Granth Sahib contains numerous other hymns composed by Guru Nanak, each offering unique perspectives on spiritual reality. These compositions employ vivid imagery and metaphorical language, making them accessible to a wide range of readers. Themes of love, devotion, and surrender to God's will are central, but Nanak also directly addresses social issues, critiquing injustice, inequality, and religious hypocrisy. His critiques are not mere condemnations but calls for social reform, urging individuals to strive for a more just and compassionate society. The hymns often emphasize Kirat karni (honest labor), Vand Chhakna (sharing with others), and Naam Japna (remembrance of God's name) as essential components of a virtuous life. Contemporary interpretations of Guru Nanak's writings often focus on their continuing relevance to modern challenges. His emphasis on universal brotherhood transcends religious boundaries, offering a message of peace and harmony in a world marked by conflict and division. His call for social justice resonates deeply in societies grappling with inequality and discrimination, inspiring movements for equality and human rights. The principle of selfless service, exemplified by the langar, continues to be a powerful model for community engagement and social responsibility. Scholars continue to analyze his writings, exploring their historical context, theological implications, and enduring relevance to contemporary issues, ensuring that Nanak's message remains a source of inspiration and guidance for generations to come.

(The writer is member of Synergetic Green Warriors Foundation).

Compute is new oil; Green energy key to win AI race

■ AMITABH KANT

In the years following the COVID-19 pandemic, we have witnessed one of the most transformative revolutions in technological history: the emergence of useful, universal, and unlimited artificial intelligence (AI). The global race is on to secure the technology, infrastructure, and economic opportunities arising from this new AI era. As AI continues to transform industries and revolutionise our daily lives, the demand for energy-intensive AI processing is soaring. India, with its abundant renewable energy resources and growing AI ecosystem, is well-positioned to become a global leader in using green energy to power AI processing.

AI processing requires vast amounts of energy, with estimates suggesting that training a single AI model can consume up to 284,000 kilowatt-hours (kWh) of electricity in the data center. A single ChatGPT query uses nearly ten times as much energy as a typical

Google search and as much energy as running a five-watt LED bulb for an hour. Additionally, data centers alone account for 1% of global electricity demand, highlighting the need for sustainable energy solutions. The energy requirements for AI computing necessitate the immediate establishment of large-scale data centers, known as hyper-scale data centers. These new hyper-scale data centers demand reliable green power at a scale and speed that many regions struggle to meet. Global data center energy needs are projected to reach 4,000 TWh by 2030, which would account for 5% of global electricity demand.

Renewable power plants have the quickest timelines for construction and startup because of their modular - using standardized units or sections - design. However, many regions find it difficult to keep pace with the rapid building of these plants, particularly in ensuring that there are enough transmission lines to deliver power to cus-

tomers. India has set ambitious goals for renewable energy, aiming for 50% of its electricity to come from non-fossil fuels by 2030. With over 300 days of sunshine each year and strong wind speeds, India has a vast potential for solar energy that can be used to support AI processing.

India's true strength comes from its local green energy leaders in both the private and public sectors, who can implement large-scale, world-class energy projects. The renewable energy industry is backed by a modern national grid and an effective regulatory framework. At the same time, India's AI ecosystem is growing rapidly, with more than 1,000 AI startups in the country. Additionally, 20% of global AI talent is based in India, which makes it an attractive place for AI companies. The AI market in India is expected to reach USD 7.8 billion by 2025, driven by increasing demand for digital services, e-commerce, and cloud computing.

India's data center market is expand-

ing quickly due to the rising demand for digital services, e-commerce, and cloud computing. According to a report by MarketsandMarkets, the market is expected to reach 1,432 MW of installed capacity by 2025, growing at a rate of 21.1%. By 2030, it is projected to reach 3,243 MW, with a growth rate of 15.6%. A recent article in the Financial Times suggests that India will become the top data center market in the Asia Pacific, led by hyper-scale data centers.

Data centers have specific needs that set them apart from other infrastructure projects. They are designed for high standards of reliability, security, modularity, and redundancy. Having backup power is essential for their success. While diesel generators are the main backup technology currently used, green options like batteries (providing 6 hours of backup) and hydrogen fuel cells (providing 48 hours of backup) are being explored by major tech companies to reduce carbon emis-

sions. Water availability poses a challenge for expanding hyper-scale data centers, so integrating technologies like fuel cells, which produce water as a by-product, could be a promising solution.

Google's AI-powered data center in Hyderabad operates on 100% renewable energy, setting an example for sustainable AI processing. Microsoft's AI-powered data center in Pune utilizes solar power for its energy needs, highlighting the potential for green energy in AI. Additionally, the Indian government's 'Make in India' initiative promotes the development of green data centers and AI infrastructure, providing a supportive framework for growth in this sector.

To succeed in the AI data center sector, India should develop a policy for net-zero hyperscale data centers. This means creating large data centers that do not contribute to greenhouse gas emissions. The country should identify key locations that can provide continuous green power along with reliable

backup energy options. Additionally, India needs to attract and develop skilled workers who can build advanced data centres that are highly secure and efficient.

To promote innovation, the government should fund pilot projects to find ways to set up data centres that use less energy and water. It's also essential for India to build trust globally regarding data protection by implementing effective policies and regulations.

With its strengths in clean energy and a growing AI ecosystem, India is well-positioned to lead in green energy-powered AI processing. By taking advantage of its renewable energy resources and addressing the challenges faced by AI data centres, India can lower its carbon footprint, boost its reputation as a hub for sustainable business and innovation, and create jobs in the clean energy and AI sectors.

(The author is India's G20 Sherpa and former CEO, NITI Aayog).

■ JAYA VERMA SINHA

Our nation is unique and teeming with diversity in many aspects. We have a long-established tradition of looking at things from a different perspective. For us, the Ganga and Godavari are not just names of rivers; they are synonymous with a mother who gives life. Music is not merely for providing pleasure to the ears but a means to practice and master pitch and rhythm. Similarly, Indian Railways is not just a train equipped with an engine and a couple of coaches; it is a bridge of emotional relationships that connects our workers, farmers, soldiers, and crores of citizens with their families and relatives. Our trains are not merely running on tracks from East to West or North to South; they are, in fact, a passage

for a complex web of feelings and emotions. Encompassing the diversity of the entire nation, Indian Railways is both a representative of the Government of India and a symbol of the aspirations of its citizens.

The litmus test of these aspirations comes up every year during the festive season when crores of people living away from their families return home. After toiling in the anonymity of metropolitan life for a year, the hardworking individuals embark on train journeys in huge numbers with the hope of reuniting with their loved ones. The number of passengers traveling by train during this season is so vast that it could overwhelm those who have not worked under such circumstances. In such situations, merely managing smooth train operations is not

enough. You also have to ensure proper facilities such as ticket booking, accommodation, and drinking water for those coming to railway stations. Apart from railway officials and employees, several voluntary organizations also provide help and support in managing this situation. Indian Railways had decades of experience in helping crores of passengers reach their destinations daily but now the focus is on making this experience a pleasant one.

Foreign guests are often shocked at the scale of operations when this topic is discussed. Many experts in traffic management are surprised to learn that, during the festive season, Indian Railways operated 7,700 special trains in addition to 1,70,000 train trips. Consider the industrial town of Udhna near Surat which

typically handles seven to eight thousand passengers daily, but on November 4, a massive crowd of 40,000 passengers gathered at this small station. Without the railway administration's coordinated efforts and proper arrangements, the passengers' challenges would have been unimaginable. New Delhi railway station witnessed the highest traffic during the festive season, with 64 special trains and 19 unreserved trains operating on demand during this period.

When the topic of train travel during the festive season was discussed in a meeting with foreign guests, one diplomat was astonished to learn that this year, before Chhath Mahapary, at least three crore people traveled by train on November 4 alone, and approximately 25 crore

people used Indian Railways during the festive season to reach their destinations. Smiling, the diplomat remarked, "More people than the total population of Pakistan traveled by your trains in just a few days."

Indian Railways recognizes that our brothers and sisters from the eastern part of the country, working in large numbers in industrial centers, play a crucial role in the development of nation. From the Atal Tunnel in Jammu to Mumbai's Sea Link, from Bengaluru's IT establishments to Delhi's under-construction buildings, all bear the imprint of hardworking individuals from eastern India. Whether it is Army or BSF personnel posted on the country's borders, laborers growing crops in Punjab's fields, employees working in government offices and pri-

vate institutions, or students studying in prestigious educational institutions, all are shaping the India of today and tomorrow in their unique ways.

Indian Railways has embarked on a new and world-class journey by launching modern trains like Vande Bharat, Amrit Bharat, and Namo Bharat, equipped with advanced technology and facilities. Additionally, over a thousand railway stations across the country are being transformed into Amrit stations. The evolving picture of a changing India is now reflected in the transformation of Indian Railways.

(The writer is holds the distinction of being the first woman to have served as Chairman and CEO of Indian Railways).

