

NEW CHAPTER IN ENERGY LEADERSHIP

India, long known as one of the world's largest energy importers, is undergoing a remarkable transformation - emerging as a major exporter of refined petroleum products. This shift not only reflects India's growing industrial and refining capacities but also signals a strategic repositioning in the global energy economy. As the world reconfigures its energy supply chains amid geopolitical uncertainty, India's ascent as a fuel-exporting nation underscores both opportunity and responsibility.

Over the past two decades, India has invested heavily in expanding its oil refining infrastructure. Today, the country boasts one of the largest refining capacities in Asia, second only to China. Refineries in Jamnagar (Reliance Industries), Vadinar (Nayara Energy), and Paradip (Indian Oil Corporation) are global-scale complexes equipped to process diverse crude grades and produce high-quality fuels. With a total refining capacity exceeding 250 million metric tonnes per annum, India now produces more fuel than it consumes - enabling it to export surplus petrol, diesel, and aviation turbine fuel to markets across Asia, Africa, and Europe.

The data speaks for itself. Petroleum products are among India's top exports, contributing nearly 15% of total merchandise exports in recent years. In 2023-24 alone, India exported fuel worth over \$85 billion, with major buyers including the Netherlands, Singapore, the UAE, and the United States. The Russia-Ukraine conflict further amplified India's role, as Western sanctions on Moscow reshaped global energy flows. Indian refiners capitalized on discounted Russian crude, refined it efficiently, and exported finished products to global markets - often to countries that had themselves stopped importing Russian oil directly.

This export surge demonstrates India's agility and strategic foresight. Yet, it also raises critical questions about balancing national priorities. While exports boost foreign exchange earnings and strengthen India's global influence, domestic energy security must remain paramount. India still imports more than 85% of its crude oil, making it vulnerable to global price volatility. The challenge lies in ensuring that export growth does not come at the expense of domestic fuel affordability and supply stability.

The energy sector remains one of the country's largest sources of carbon emissions. As India strives to achieve its net-zero target by 2070, it must carefully integrate cleaner technologies and green fuels into its refining and export strategies. Encouragingly, several refineries are already investing in energy-efficient processes, hydrogen production, and renewable power integration. Transitioning from a fossil-fuel-dependent exporter to a hub for green fuels - such as bioethanol, biodiesel, and green hydrogen - will define India's next phase of energy leadership.

From a geopolitical perspective, India's growing stature as a fuel exporter enhances its strategic leverage. It allows New Delhi to build stronger trade ties with energy-deficient countries and exert soft power through energy diplomacy.

To sustain this momentum, India must continue modernizing its refining infrastructure, diversifying crude sources, and aligning its export policies with long-term sustainability goals. The government's focus on Atmanirbhar Bharat - or self-reliant India - should extend beyond production to innovation, ensuring that Indian refineries remain globally competitive in quality, efficiency, and environmental standards.

India's rise as a fuel-exporting nation is more than an economic milestone; it is a testament to strategic planning and industrial strength. The challenge now is to channel this success toward building an energy future that is secure, sustainable, and inclusive - one where India not only fuels the world but also lights the path toward cleaner and more equitable growth.

Asia's largest Chrysanthemum garden blooms in Kashmir

■ MOHAMMAD HANIEF



Kashmir, often hailed as the crown of India for its breath taking landscapes and timeless charm, has unveiled a new chapter in its floral legacy. The Valley, known for its tulips, chinars, and snow-clad mountains, has now become home to Asia's largest Chrysanthemum Garden, a magnificent new attraction that promises to redefine autumn tourism in the region.

Located within the Nehru Memorial Botanical Garden in Srinagar, the newly inaugurated Bagh-e-Gul-e-Dawood covers more than 100 kanals of meticulously cultivated land. The sprawling garden, bursting with chrysanthemums in radiant shades of yellow, pink, purple, red, and white, is the latest addition to Kashmir's growing network of thematic gardens. Designed to extend the Valley's tourism season beyond spring, the initiative brings a burst of colour and fragrance to the crisp air of October and November, when Kashmir traditionally begins to quieten down.

The garden takes its name from the Persian word for chrysanthemum - Gul-e-Dawood - literally translating to "the flower of David." In Persian and Central Asian cultures, the flower symbolizes endurance and joy, an apt metaphor for a landscape that thrives through changing seasons. The creation of this garden marks a bold step toward positioning Kashmir as a four-season destination, where every time of year offers a distinct experience to travellers.

The concept of the Chrysanthemum Garden evolved from the success of the Indira Gandhi Memorial Tulip Garden, which drew record-breaking crowds in spring 2025, attracting over 850,000 visitors. Officials in the Department of Floriculture sought to build on that success by introducing a floral counterpart for autumn. With its variety, longevity, and adaptability to cooler climates, the chrysanthemum emerged as the ideal choice.

The garden's layout has been designed to take advantage of the natural contours of the Zabarwan foothills. Rows of blossoms descend in terraces, forming sweeping arcs of colour that change subtly with the movement of sunlight. From above, the garden resembles a vast floral tapestry stretching towards Dal Lake, whose reflective waters mirror the blooms in soft autumn light. Walking paths curve gently through the beds, inviting visitors to immerse themselves in the fragrances and hues of the season.

The project involved months of careful planning and preparation. More than a hundred varieties of chrysanthemums, sourced from across India and abroad, were cultivated by teams of horticulturists and floriculturists.



Each flower bed was arranged to emphasize harmony in both colour and texture. The result is a landscape that feels painterly yet precise, blending the Valley's natural charm with meticulous design.

The initiative also underscores a shift toward sustainable horticultural practices. The garden relies on a drip irrigation system to conserve water and uses organic compost produced locally. Native plant species have been integrated along the periphery to support biodiversity. These efforts reflect a growing recognition that tourism development in ecologically sensitive regions like Kashmir must balance beauty with responsibility.

Kashmir's economy is deeply intertwined with tourism, yet its popularity has long been seasonal. Spring and early summer see a surge of visitors drawn by tulips, alpine meadows, and mild weather, while the autumn and winter months have traditionally witnessed a decline in arrivals. The opening of the Chrysanthemum Garden is part of a broader strategy to extend the tourist calendar and highlight the Valley's year-round appeal.

Autumn in Kashmir, often overshadowed by the bloom of spring, possesses a beauty of its own. The chinar trees that line the boulevards and gardens of Srinagar blaze into shades of red, orange, and gold. The saffron fields of Pampore, just outside the city, erupt in delicate purple flowers. The air turns crisp, the light becomes gentler, and the mountains take on a new clarity. The Chrysanthemum Garden now joins this seasonal transformation, offering travellers yet another reason to visit the Valley during this enchanting time of year.

Local tour operators have introduced new "Autumn Bloom Packages", combining visits to the garden with shikara rides on Dal Lake, saffron field tours, and heritage walks through Srinagar's Mughal gardens.

The early response has been enthusiastic, with hoteliers reporting an uptick in bookings and travel agencies noting renewed interest in autumn travel. Local shopkeepers and artisans, too, have benefited from the increased footfall. From kahwa stalls set up at the garden's entrance to vendors selling saffron and handcrafted souvenirs, the site has already begun to generate a ripple of economic activity.

Beyond its horticultural excellence, Bagh-e-Gul-e-Dawood celebrates Kashmir's deep cultural relationship with flowers. Floral imagery has long been woven into the fabric of Kashmiri art and identity - from the intricate embroidery of shawls and carpets to the motifs in woodcarving and papier-mâché. Flowers have inspired poets, painters, and craftsmen for centuries, symbolizing beauty, impermanence, and renewal.

The Chrysanthemum Garden revives this connection in a modern context. It not only offers visual splendour but also serves as a living classroom for students of botany, horticulture, and landscape design. The Department of Floriculture has announced plans to host educational workshops, guided tours, and research programs at the garden to encourage scientific interest in ornamental cultivation. This blend of culture, education, and environmental awareness positions the garden as both a tourist attraction and a centre for learning.

Visitors who wander through its pathways often remark on the sensory richness of the experience - the rustle of autumn leaves underfoot, the scent of chrysanthemums in

the breeze, and the soft murmur of fountains that punctuate the floral beds. Each element of the garden seems designed not merely to impress but to evoke a sense of peace. In a world often marked by haste and noise, this new garden offers the rare luxury of stillness.

The government's long-term vision extends beyond the success of the Chrysanthemum Garden. Plans are underway to create a comprehensive network of seasonal gardens, ensuring that the Valley remains a floral destination throughout the year. The Tulip Garden will continue to anchor spring tourism; the Chrysanthemum Garden will sustain autumn; and new initiatives are being considered to introduce winter flower shows and indoor botanical exhibitions. The combined effect will be a continuous floral calendar that invites visitors to experience the Valley's changing moods across all four seasons.

Officials also envision linking the major gardens of Srinagar through an integrated tourist route that highlights not only their botanical diversity but also their historical and cultural context. Such projects aim to blend natural beauty with heritage tourism, positioning Kashmir as one of Asia's premier destinations for sustainable, high-value travel.

As evening descends over the Zabarwan Hills, the Chrysanthemum Garden takes on a different charm. The setting sun casts a golden glow over the petals, and the air fills with the faint fragrance of flowers closing for the night. The reflection of the blossoms dances on the quiet waters of Dal Lake nearby, creating an almost surreal tableau.

For the people of Kashmir, this garden is more than a tourist site - it is a symbol of hope, creativity, and continuity. It stands as a reminder that the Valley's beauty is not confined to a single season, nor its vitality to a single moment. With each new bloom, Bagh-e-Gul-e-Dawood tells a larger story - of a region that continues to nurture life, colour, and grace, even as it evolves with time.

The unveiling of Asia's largest Chrysanthemum Garden marks the beginning of a new era in Kashmiri tourism. It celebrates the artistry of its gardeners, the vision of its planners, and the timeless charm of its landscape. As visitors stroll through its fragrant pathways, surrounded by blossoms that seem to glow in the fading light, they carry with them a sense of renewal - not only of nature, but of spirit.

In transforming autumn into a season of bloom, Kashmir has done more than plant flowers. It has planted a promise - that its valleys will continue to flourish, its seasons will continue to inspire, and its story, like the perennial chrysanthemum, will continue to unfold with enduring beauty.

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Freight on Track: Unlocking Kashmir's Economic Potential

■ NASIR FAROOQ KHAN & ■ PROF. RAVIJ SETH, PROFESSOR OF PRACTICE

The scenic valleys of Kashmir have long mesmerized tourists and nurtured some of the finest horticultural produce in India. Yet, beneath the breathtaking beauty lies a stark reality, Kashmir's lifelines are fragile. Recent cloudbursts and landslides in Ramban and Udhampur exposed the vulnerability of the Jammu-Srinagar National Highway (NH44). Even minor disruptions paralyze supply chains, hitting horticulturists, traders, and households alike.

For decades, trucks have been the backbone of Kashmir's economy. Tourism and horticulture, the region's mainstay, depend on them. Official data reveals that horticulture alone contributes over 8% to the region's GDP, supporting more than 35 lakh livelihoods. During peak seasons, around 1,500-2,000 trucks transport apples, cherries, and other fruits across India and even to Nepal and Bangladesh. While the alternate Mughal Road exists, it is long, circuitous, and equally prone to landslides.

But there's a new chapter in Kashmir's story. On 10th August, nearly 78 years after India's Independence, Kashmir

welcomed its first freight train, a historic journey from Rupnagar in Punjab to Anantnag in the valley. Northern Railways hailed it as a milestone in logistics and economic growth. Unlike trucks, freight trains can carry heavy cargo over long distances efficiently and safely, revolutionizing the supply chain.

The benefits are tangible and transformative. Reducing the reliance on trucks will ease congestion on NH44, lower road accidents, J&K ranks second in India for road fatalities per 10,000 vehicles and significantly cut carbon emissions. This contributes directly to India's climate action goals, aligning with the five nectar elements of sustainable development (Panchamrit).

Freight trains are a boon for Kashmir's horticulture and handicrafts. Apples, cherries, and other perishable fruits will reach markets faster, minimizing wastage. Transportation costs are expected to drop, potentially saving producers and consumers around ₹50 per kilogram of fruit. Handicrafts, carpets, shawls, papier-mâché, can now be transported more safely and cost-effectively, opening new markets and boosting local incomes.

The ripple effects extend beyond economics. Freight trains can link rural Kashmir with industrial hubs, empowering farmers, artisans, and small traders, while creating direct and indirect employment in logistics and supply chains. By bringing connectivity to remote areas, the initiative ensures that development is equitable, broad-based, and sustainable, not just limited to urban elites.

Enhanced mobility also strengthens essential supplies, social integration, and upward economic mobility in a region where high unemployment and limited connectivity have historically hindered growth. No transformation comes without hurdles. Constructing railway lines through the Pir Panjal range required monumental engineering feats, tunneling through T-50, India's longest transport tunnel (12.77 km), and building the iconic Chenab Bridge. These projects have inevitably impacted ecology, altering hydrology, habitats, and landscapes.

Natural disasters remain a risk. Landslides, cloudbursts, and seismic activity could disrupt rail infrastructure, just as they threaten highways. Financial sustainability is another concern. The 272 km Udhampur-Srinagar-Baramulla Rail Link (USBRL) project cost \$5.18 billion, and high maintenance

expenses could challenge year-round profitability, especially given the seasonal nature of horticulture. Yet, with careful planning and incremental growth, freight trains can achieve long-term viability.

For Kashmir's fruit growers, connectivity is key. Asia's second-largest fruit mandi at Sopore awaits integration with the rail network. Current operations from Budgam station are a start, but repositioning or extending services to Sopore could provide first-mile connectivity, ensuring farmers, traders, and consumers fully benefit. Early signs are promising, cab fares between Jammu and Srinagar are already declining, and freight train operations are expected to similarly energize fruit markets.

Kashmir's freight train is more than a logistics solution; it is a lifeline. It promises safer roads, greener transport, reduced costs, and inclusive growth. It is a bridge connecting mountains and minds, farmers and markets, tradition and modernity. The journey has begun, but its full promise will unfold as frequency increases, connectivity improves, and the valley's economy rides the rails toward a brighter, sustainable future.

PANCHMAHAYAGYA, GATEWAY TO ULTIMATE BLISS AND ECSTASY

■ PURAN CHAND SHARMA
Mortal World classified into four specific categories

During the ancient times when our Rishis and Munis made an effort to analyze the whole mortal world based on their knowledge and experience, they returned the finding that mortal world comprises four distinct categories and the first one is called as Panchmaha Bhoot comprising Graha, Nakshatras, Prithvi, springs, Mountains, Seas forming one distinct and phenomenal world. There is another unique world which consists of holistic Vegetation e.g from a tiny blade of grass to a gigantic Peepal Tree. Another third world happens to be the world of insects of different varieties plus the hordes of lovely birds and beautiful animals. In the fourth category we come across the most classical and developed world of Homo Sapiens (Humans). The significant point in this matter is that the first three specified mortal worlds mentioned hereunder are nature controlled, their behaviour, conduct and habits are in consonance with the laws of nature and by and large they rarely violate and disregard the laws of nature but the fourth world of human beings do indulge in unwanted and undesirable infringements of laws of nature at the risk of being meted out the matching and befitting justice of nature.

Panchmahayagya Parampara (Tradition) in India

Panchmaha Yagya Tradition has been going on and being observed in our country since times immemorial but in consequence of various foreign aggressors assailing the country from time to time and ransacking our materialistic and cultural heritage which sadly slowed down and dented this noble tradition of Panchmaha Yagya, which



in this twilight hour need be revived to restore and enrich our cultural treasures, unlocking our hidden divine strength and capability. Let us judiciously endeavour to understand the five Yagya and their soothing divine impact.

1.BRAHAMYAGYA:- In ancient times Braham yagya meant to be constant meditation and remaining engrossed in it all the times with the thinking process that I am not 'Body' only but all pervading consciousness and the immortal soul, but during the current times this spiritual concept need be expanded across the family and the vibrant society, by doing so we can repay and liquidate our PITRE RRIN in line with the pursuit of laid down spiritual norms and principles. The consistent and regular practitioner of Brahamyagya /Panchyagya does not confine himself to his personal benefit or spiritual upliftment but ensures that entire family and the soci-

ety as a whole is benefited and grows in accordance with the Panchyagya, which is the ultimate purpose and goal.

2.PITREYAGYA:- At this critical period of time it is being observed that our upcoming progeny are not getting proper moral education either in schools or the families and slowly and steadily they are getting delinked and disconnected from their cultural roots, they have almost no access even to our very crucial religious scriptures such as Geeta, Ramayam, Mahabharata, Vedas, Upanishadas, Puranas, bhaktambar (Jains), Dhampad (Bhudists), Gurugranth sahib (Sikhs) etc. A door to door survey conducted in Orissa revealed that out of 1000 Households , 250 houses were found to have no significant religious scripture in their houses, which were the perennial source of learning the tenets of Sanatana SanskritI for one and all in the family

inclusive of growing children. In these changed circumstances, the modified version of Brahamyagya can be very helpful and act as panacea for reviving our age old family system to streamline the things in line with the changed conditions. There is a very inspiring and motivating incident relating to Ashutosh Mukherjee, High court Judge and father of Shyma Prasad Mukherjee. He was very obedient and respectful to his mother: Lord Curzon, then viceroy of India asked Ashutosh Mukherjee to proceed to England for some urgent work, Ashutosh said, I shall have to seek permission of my mother, Viceroy said, when you have permission of the Viceroy, why permission from your mother is required. Ashutosh replied, in our family system, permission of mother is supreme, I cannot go abroad without her permission. As the mother had been suffering from prolonged illness, she advised her son not to proceed abroad and his visit had to be abruptly cancelled. This was the classic example of Pitreyagya.

3.DEVYAGYA:- In our Sanatan Sanskriti we come across so many Vibrant divine entities whom we also address as gods and diligently worship them such as Sarasvati Devi (God of Education), Yam is revered as God of Death, Sun, Moon are worshiped as gods, we cannot think of life on earth without blessings of these celestial bodies, But at this critical juncture humans are causing severe harm to nature in various forms due to lack of knowledge and for mortal gains. Basic moral values and ethics need be inculcated by virtue of Devyagya/ Panchyagya for ultimate Bliss and Ecstasy.

4.NARYAGYA:- All human beings whist spending their life span in this world incur some

kind of debt which need be paid back under all circumstances. This we can do through the medium of NARYAGYA, which requires us to make our house an ideal family which, apart from their own sustenance, volunteer themselves to help the needy and downtrodden, if they do that, it will be their NARYAGYA in real sense of the term.

5. BHOOTYAGYA:- It is universally admitted fact that our existence in this mortal world is dependent on Earth, Water, Air, Animals, Plants etc and whilst living in this transient world, we naturally incur debt from their side enabling us to lead a comfortable and purposeful life in this phenomenal world. We, human beings are morally bound to expunge this debt prior to our departure for the heavenly abode.

CONCLUSION

In our childhood we had experienced that there was lovely tradition in our families wherein our mothers used to cook first Roti for Gau Mata, last Roti for Dog. Further, some morsels of food, some seeds and water etc used to be offered to the Animals and Birds regularly every day. They were being treated as our natural guests. But with the changing life styles and lack of awareness and commitment in respect of basics of Sanatan Sanskriti, adherence to the hardcore values have suffered severe setback. Comprehensive and fool proof revival of Panchyagya together with dedicated compliance of the age old principles and Sanatan morals is the Buzz word and transformative action. Hope we, the people of India take up the challenge lock, stock and barrel for the ultimate good of the global world .

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