> "You can't cross the sea merely by standing and staring at the water."
> - Rabindranath Tagore

EDITORIAL

AI: A Boon or a Threat?

In recent years, Artificial Intelligence (AI) has become one of the most transformative technologies, revolutionizing industries and reshaping societies across the globe. From self-driving cars to AI-driven medical diagnostics, machine learning, and automation in various sectors, the potential of AI is enormous. However, this rapidly evolving technology has also sparked debates about its impact on society, raising concerns about job displacement, privacy issues, and its potential for misuse. Is AI a boon or a threat? This question requires careful consideration, as the answer depends on how AI is developed, deployed, and regulated. The positive applications of AI are undeniable. In healthcare, AI is proving to be a game-changer. Machine learning algorithms can analyze vast amounts of medical data, helping doctors diagnose diseases earlier and more accurately than ever before. AI systems are already being used to predict the onset of conditions such as cancer, heart disease, and diabetes, offering hope for more personalized and effective treatments. For instance, AI has demonstrated its ability to detect tumors in medical imaging with a level of precision that rivals human doctors, if not surpasses it. This can significantly improve patient outcomes and save lives. In the realm of education, AI has the potential to revolutionize learning. With personalized learning systems, AI can cater to the unique needs of each student, adapting in real-time to their strengths and weaknesses. Intelligent tutoring systems can provide additional support to students outside the classroom, ensuring that no one is left behind. Additionally, AI-powered language translation tools can break down language barriers, making education accessible to individuals across the world. In business, AI has streamlined processes, increased productivity, and reduced operational costs. Automation of routine tasks such as data entry, inventory management, and customer service through AI-driven chatbots has freed up human workers to focus on more creative and strategic tasks. Moreover, AI has enabled companies to make data-driven decisions faster, enhancing innovation and competitiveness. While AI holds vast potential, it also poses significant risks that cannot be ignored. One of the most pressing concerns is job displacement. As AI and automation technologies continue to advance, there is growing fear that millions of jobs, particularly in sectors such as manufacturing, retail, and customer service, will be replaced by machines. According to estimates by the World Economic Forum, automation could lead to the loss of 85 million jobs by 2025. These jobs may not easily be replaced by new roles, and the displaced workers may struggle to find new employment without adequate reskilling. In addition to job displacement, there is the issue of AI-driven inequality. As AI technologies become more powerful, they are often controlled by a small group of tech giants and corporations, who possess the resources and expertise to develop and deploy them. This concentration of power could exacerbate existing social and economic inequalities, giving a disproportionate amount of influence to those who own and control AI systems. Another significant concern is privacy and data security. AI systems often rely on vast amounts of data to learn and make decisions. The collection and analysis of personal data raise serious concerns about how this data is used and protected.

Iron lady Indira Gandhi, Symbol of development and champion of foreign policy, creator of Bangladesh

■ RASHID AZAM INQLABI

Smt. Indira Gandhi on many occasion described herself as Beti of Kashmir , she has great love for Autumn season of Kashmir , she spent at least two or three days in Harwan Kashmir in the month of November- December every year, when the leaf of Chinar turn golden. She meets with the people of Kashmir with open heart even with the tribal's of Kashmir. She sanctioned a special package of grants for development of Gujjar and Bakerwal and Gojri Language of Jammu and Kashmir.

On the instruction of Smt. Indira Gandhi, Gujjar Bakerwal sub-plan formulated in Jammu and Kashmir.

I got a chance to share the dice with Smt. Indira Gandhi at Nowshera when I was student of 11th class in late seventies. Smt. Indira Gandhi took the hectic tour of Poonch and Rajouri to regenerate the energy among the Congress grass root worker throughout India and also covered the Poonch and Rajouri in this respect.

Smt. Indira Gandhi was India's third prime minister and the only women prime minister of India till date. She is considered by many to be the strongest Prime Minister India has ever seen. She supported the Bangladesh movement and East Pakistan emerge as independent country, India became the first nation who have given the recognize to Bangladesh as sovereign country. Indira Gandhi belonged to the Indian National Congress and was elected as the PM for the first time in 1966 after Lal Bahadur Shastri died in office.

Born on November 19, 1917 in a Pandit family, Smt. Indira Gandhi was the daughter of Pt. Jawaharlal Nehru. She studied at prime institutions like Ecole Nouvelle, Bex (Switzerland), Ecole International, Geneva, Pupils' Own School, Puna and Bombay, Badminton School, Bristol, Vishwa Bharati, Shantiniketan and Somerville College, Oxford. She was conferred Honorary doctoral degree by a host of Universities globally. With an impressive academic background she also got the Citation of Distinction from the Columbia University.

Smt. Indira Gandhi was actively involved in the freedom struggle. In her childhood, she founded the 'Bal Charkha Sangh' and in 1930, the 'Vanar Sena' of children to help the Congress party during the Non-Cooperation Movement. She was imprisoned in September 1942, and worked in riot-affected areas of Delhi in 1947 under Gandhi's guidance.

She got married to Feroz Gandhi on March 26, 1942 and had two sons. Namely Sanjay Gandhi and Rajiv Gandhi. Smt Gandhi is grandmother of veteran Congress leader Rahul Gandhi.

POLITICAL CAREER

Smt. Gandhi became a Member, of Congress Working Committee and Central Election of the party in 1955. In 1958 she was appointed as a Member for Central Parliamentary Board of Congress. She was the Chairperson, National Integration Council of AICC and President, All India Youth Congress, 1956 and Women's Dept. A.I.C.C. She became the President, Indian National Congress in 1959 and served till 1960 and then again from January 1978.

She had been Minister for Information and Broadcasting (1964- 1966). Then she held the highest office as the Prime Minister of India from January 1966 to March 1977. She was remain the Minister for Atomic Energy from September 1967 to March 1977. She also held the additional charge of the Ministry of External Affairs from September 5, 1967 to February 14, 1969. Smt. Indira Gandhi headed the Ministry of Home Affairs from June 1970 to November 1973 and Minister for Space from June 1972 to March 1977. From January 1980 she was Chairperson, Planning Commission. She again chaired the prime Minister's Office from January 14, 1980.

Smt. Indira Gandhi also became a Member of Rajya Sabha in August 1964 and served till February 1967. She was the Member of Lok Sabha during fourth, fifth and sixth sessions. She was elected to the Seventh Lok Sabha from Rae Bareli (U.P.) and Medak (Andhra Pradesh) in January 1980. She chose to retain the Medak seat and relinquished the Rae Bareli seat. She was chosen as the leader of the Congress Parliamentary Party in 1967-77 and again in January 1980.

SOCIAL ACTIVITIES

Smt. Indira Gandhi was associated with a large number of organisations and institutions, like Kamala Nehru Memorial Hospital, Gandhi Smarak Nidhi and Kasturba Gandhi Memorial Trust. She was the Chairperson of Swaraj Bhavan Trust. She was also associated with Bal Sahyog, Bal Bhavan Board and Children's National Museum in 1955. Smt. Gandhi founded the Kamala Nehru Vidyalaya in Allahabad. She was also associated with certain big institutions like Jawaharlal Nehru University and North-Eastern University during 1966-77. She also served as a Member of Delhi University Court, Indian Delegation to UNESCO (1960-64), Member, Executive Board of UNESCO from 1960-64 and Member, National Defence Council, 1962. She was also associated with Sangeet Natak Academy, National Integration Council, Himalayan Mountaineering Institute, Dakshina Bharat Hindi Prachar Sabha, Nehru Memorial Museum and Library Society and Jawaharlal Nehru Memorial Fund. Interested in a wide array of subjects, she viewed life as an integrated process, where activities and interests are different facets of the whole, not separated into compartments or labelled under different heads.

AWARDS

She had many achievements to her credit. She was the recipient of Bharat Ratna in 1972, Mexican Academy Award for Liberation of Bangladesh (1972), 2nd Annual Medal, FAO (1973) and Sahitya Vachaspati (Hindi) by Nagari Pracharini Sabha in 1976. Smt. Gandhi also received Mothers' Award, U.S.A. in 1953, Islbella d'Este Award of Italy for outstanding work in diplomacy and Yale University's Howland Memorial Prize. For two consecutive years in 1967 and 1968 she was the woman most admired by the French according to a poll by the Parliamentary elections were held later in 1977, congress party were soundly defeated, whereupon she left office. The Janata Party took over the reins of government, with newly recruited member Desai as prime minister.

In early 1978 Gandhi and her supporters completed the split from the Congress Party by forming the Congress (I) Party-the "I" signifying Indira. She was briefly imprisoned (October 1977 and December 1978) . Despite those setbacks, she won a new seat in the Lok Sabha in November 1978 from Chikmagalur Lok Sabha in by election, and her Congress (I) Party began to gather strength. Dissension within the ruling Janata Party led to the fall of its government in August 1979. When new elections for the Lok Sabha were held in January 1980. Congress (I) swept back into power in a landslide victory. Sanjay Gandhi, who had become her chief political adviser, also won a seat in the Lok Sabha. Sanjay Gandhi's death in an airplane crash in June 1980 , badly affected the Indira Gandhi, After the death of Sanjay Gandhi, Rajiv Gandhi, became the leader of congress party. She adhered to the quasi-socialist policies of industrial development begun by her father. In addition, she established closer relations with the Soviet Union which she depended on for support in India's long-standing conflict with Pakistan.

One day Before the assassination On October 31, 1984, Smt. Indira Gandhi while addressing the huge Gathering said that her last drop of Blood is for the unity of India.

The best way to pay the homage to Smt. Indira Gandhi is to work for the unity and development of the rural India which include the down trodden people from all walk of life.

(The author is former Dy. Commissioner Ramban)

A Guide to Cyber Security Awareness for Students

■ UMESH SHARMA

Cyber Security awareness is critically important among students as they are frequent users of digital technologies, yet often lack the knowledge or experience to recognize the risks they face online. With increasing amounts of personal and academic data being stored and shared online, students are prime targets for cyber criminals who exploit vulnerabilities such as weak passwords, unsecured networks, and social engineering tactics like phishing. As students, understanding the basic principles of cyber security is paramount to navigating this digital landscape safely. Cyber security awareness is more than just a nice-to-have skill for students; it's a necessary competence in our increasingly digital world. Recognizing the threats online and understanding how to protect yourself from them is critical for your safety, privacy, and overall digital wellbeing. Cyber security is not a destination but a journey that involves constant learning, adaptation, and vigilance. As a student navigating the digital landscape, your active participation in cyber security is crucial. Your decisions can make a significant difference in creating a safer online environment for yourself and your entire academic community. As students continue to immerse themselves in the digital world, cyber security awareness becomes an essential skill. By educating students about potential risks and how to protect themselves online, educational institutions can help build a safer digital future. Ensuring that students are not only aware of the dangers but also equipped with the tools and knowledge to defend against cyber threats is crucial in today's technology-driven world. Ultimately, fostering a culture of cyber security among students doesn't just protect individuals-it helps to create a more secure and resilient digital environment for everyone.

The Role of Schools and Universities

Educational institutions have a significant role to play in promoting cyber security awareness. Many schools and universities have already begun to integrate cyber security lessons into their courses or offer workshops and seminars on the subject. Educational institutions, policymakers, and parents must work together to ensure students are equipped with the necessary skills and knowledge to navigate the online world safely. This includes integrating cyber security education into school curriculums, conducting awareness campaigns, and providing students with practical tips for maintaining their online security. As student, taking proactive steps to boost your cyber security awareness is essential not only for protecting your personal information but also for contributing to a safer digital environment for everyone. In today's interconnected world, understanding the risks associated with online activities can help prevent cyber attacks, data breaches, and identity theft. Additionally, staying informed about the latest cyber security trends and sharing this knowledge with peers can help create a more security-conscious campus community, where everyone takes responsibility for safeguarding their digital presence.

Some tangible steps you can take as a student to boost your cyber security awareness and help create a safer digital environment:

-Stay Informed: Cyber security is dynamic, with new threats emerging regularly. Stay updated on the latest cyber threats and security practices by following reliable cyber security blogs, podcasts, or news outlets. -Use Secure Connections: Whenever possible, avoid using public Wi-Fi for activities that require you to enter personal or sensitive information. If you must use public Wi-Fi, consider using a Virtual Private Network (VPN) to secure your connection.

-Regularly Update and Back up Your Data: Ensure your devices are constantly updated with the latest software versions, as these often contain security enhancements. Additionally, regularly backing up your data can help mitigate the damage if your device is compromised.

-Learn About and Implement Privacy Settings: Each social media platform and online service has different privacy settings and options. Take time to understand these settings and customize them according to your comfort level and needs.

-Enable Two Factor Authentication (2FA): Two factor authentication adds an extra layer protection on your accounts. Even when someone gets hold of your password, they won't be able to access your account without the second factor - usually a code sent to your phone.

-Strong Password Practices: Encouraging students to use complex passwords and change them regularly. They should also avoid using the same password across multiple accounts.

-Recognizing Phishing Attempts: Identify suspicious emails, messages, or websites that could be phishing attempts designed to steal sensitive information.

-Safe Use of Social Media: Helping students understand the risks of over sharing on social media platforms and the potential consequences of revealing too much personal information online.

-Downloading untrusted files: Additionally, students should be mindful of downloading files or software from untrusted sources, as these may contain malware.

-Participate in cyber security programmes: Many schools and online platforms offer cyber security training. Participate in these pieces of training to deepen your understanding of cyber security and learn practical skills for staying safe online.

Cyber security awareness among students is no longer a luxury but a necessity in today's increasingly digital world. As students engage with technology daily for educational, social, and personal purposes, their vulnerability to cyber threats grows. The lack of adequate cyber security knowledge can lead to devastating consequences, such as identity theft, data breaches, or falling victim to scams and cyber bullying.

Moreover, fostering a culture of cyber security mindfulness helps students not only protect themselves but also contribute to a more secure digital ecosystem. By empowering students with the right tools and information, we can create a generation that is more resilient to cyber threats and more responsible in their digital interactions. Promoting cyber security awareness among students is essential for their safety and well-being. It is an investment in their future, enabling them to thrive in a digital landscape while safeguarding their privacy, security, and personal data.

(The author is working as Chief Coordinator DPS Jammu)

Smog in Jammu and the Indo-Gangetic Plain

■ DR RAKESH VERMA

The pervasive smog blanketing the Indo-Gangetic Plain, including Jammu, is significantly influenced by agricultural practices, particularly stubble burning in Punjab and Haryana. While the CAQM reported a 71% reduction in stubble burning in Punjab compared to the previous year, satellite data paints a more complex picture. NASA scientist Hiren Jethva highlighted that farmers are strategically timing their crop burning to avoid the typical afternoon satellite overpasses, primarily using the late afternoon to burn crop residue when NASA surveillance is less frequent. This tactic is confirmed by data from South Korean geostationary satellites, which capture images every five minutes, showing a significant increase in burning activity after 2 pm. On first Monday of November alone, over 400 fresh cases of farm fires were reported in Punjab, pushing the total beyond 7,000. Although the official data from Punjab may show a decrease, the geostationary satellite data reveals a continued, and possibly increasing, presence of farm fires.

The smoke generated from these fires travels considerable distances, carried by prevailing winds to affect air quality across the region, including Jammu. The exact impact on Jammu's AQI requires further localized data analysis, but the prevailing wind patterns and geographical proximity indicate a significant contribution from Punjab and Haryana's agricultural practices. The long-term implications are equally concerning. Continued reliance on stubble burning as a disposal method will likely perpetuate the annual cycle of severe smog, posing significant risks to public health and the environment. The increase in respiratory illnesses, eye irritation, and other health problems associated with poor air quality directly links to these agricultural practices. The long-term effects could range from increased healthcare costs to reduced agricultural productivity due to soil degradation and decreased crop yields. Moreover, the frequency and intensity of smog events negatively impact tourism, economic activities, and the overall quality of life in Jammu.

Meteorological Factors: Thermal Inversion and Fog

Thermal inversion plays a crucial role in the current smog crisis across the Indo-Gangetic Plain, including Jammu. This meteorological phenomenon occurs when a layer of warmer air settles above a layer of cooler air near the ground. This warmer air acts as a lid, preventing the vertical mixing of air and trapping pollutants close to the surface. As explained by NASA scientist Hiren Jethva, "The warmer air sits above the cooler air on the ground and that does not allow the vertical mixing of pollutants and whatever we emit at the surface stays for around 200 metres within the boundary layer. The stronger the thermal inversion, the more pollutants will be trapped near the surface because there is no venting place for the pollutants to go up in the vertical direction." The smoke from crop burning further exacerbates this effect. The smoke, containing light-absorbing aerosols, interacts with clouds, warming the upper layer of air and strengthening the thermal inversion. This creates a feedback loop where the pollutants are trapped more efficiently, leading to a denser and more persistent smog.

The increased occurrence of fog in November also contributes to the smog problem. Jethva notes that the fog occurrence over the Indo-Gangetic Plain has increased in November, a shift from the usual December occurrence. This is attributed to an increase in particulate matter (PM), which acts as cloud condensation nuclei, favoring fog formation. When temperatures drop, the abundant aerosols contribute significantly to the formation of dense fog. This fog acts as a further barrier, reducing visibility and trapping pollutants even more effectively. The combination of thermal inversion and increased fog creates a near-perfect storm for severe smog conditions.

In the plains of Jammu, these meteorological conditions have a particularly strong impact. The geographical location and topography of the region might create localized pockets of stagnant air, enhancing the effects of thermal inversion. The plains' relatively flat terrain can lead to poor air circulation, hindering the dispersal of pollutants. The presence of valleys and hills can further trap pollutants, creating areas of concentrated smog. The interplay between regional weather patterns, local topography, and the influx of pollutants from stubble burning produces a severe smog situation in the Jammu plains. Understanding these specific meteorological factors is critical to developing effective strategies for mitigating the smog crisis.

Impact on Health and the Environment in Jammu

The severe smog engulfing the Indo-Gangetic Plain, including the plains of Jammu, poses significant threats to both human health and the environment. While precise AQI data for Jammu is currently unavailable, the widespread nature of the smog and its intensity in neighboring regions strongly suggest similarly hazardous conditions. The high concentration of pollutants, primarily particulate matter (PM2.5 and PM10), has severe implications for the health of Jammu's residents.

Respiratory illnesses are expected to surge, with increased instances of asthma attacks, bronchitis, and other respiratory infections. The tiny particles in the smog penetrate deep into the lungs, causing inflammation and irritation. Children, the elderly, and individuals with pre-existing respiratory conditions are particularly vulnerable. Symptoms like coughing, shortness of breath, wheezing, and chest tightness are common. Eye irritation, including burning, itching, and watery eyes, is another prevalent health consequence. The pollutants in the smog can irritate the mucous membranes of the eyes, leading to discomfort and potential long-term damage. Beyond respiratory and ocular issues, prolonged exposure to high pollution levels can also contribute to cardiovascular problems, increasing the risk of heart attacks and strokes. The fine particulate matter can enter the bloodstream, causing inflammation throughout the body. Furthermore, long-term exposure to air pollution is linked to an increased risk of various cancers and reduced life expectancy. The impacts on the health system in Jammu are likely substantial, with increased hospital admissions and strain on healthcare resources.

The environmental consequences of the smog are equally concerning. The dense haze significantly reduces visibility, impacting transportation, particularly air travel. The reduced sunlight penetration due to the smog affects plant growth, potentially leading to decreased crop yields and damage to vegetation. The impact on wildlife is also likely significant, with animals potentially experiencing respiratory problems and other health issues. The smog can disrupt ecosystems, affecting the delicate balance of the region's flora and fauna. The long-term environmental effects of persistent, high levels of air pollution are potentially severe, including soil and water contamination, and a decline in biodiversity. Addressing this crisis demands immediate action, encompassing both short-term mitigation measures and long-term strategies aimed at preventing future occurrences.

Governmental Responses and Mitigation Strategies

The severe smog crisis engulfing the Indo-Gangetic Plain necessitates a robust and multifaceted governmental response. While specific measures implemented in Jammu require further investigation, the actions taken by the Commission for Air Quality Management (CAQM) in the Delhi-NCR region offer valuable insights into potential mitigation strategies. The CAQM has enforced stricter norms, including a ban on non-essential construction and demolition work, and restrictions on the plying of older petrol and diesel vehicles (BS-III petrol and BS-IV diesel).

Long-term solutions demand a fundamental shift towards sustainable practices. Promoting alternative agricultural practices that eliminate stubble burning is paramount. This could involve providing farmers with financial incentives to adopt no-till farming, promoting the use of machinery for in-situ management of crop residue, and developing robust mechanisms for collecting and processing agricultural waste. Investing in cleaner energy sources, such as solar and wind power, can significantly reduce reliance on fossil fuels, thus mitigating air pollution from energy production.

Comparison with Other Regions: Jammu in a Broader Context

The smog crisis impacting Jammu is part of a larger regional problem affecting the Indo-Gangetic Plain. While precise AQI data for Jammu is lacking, the severity mirrors that of other heavily affected areas like Delhi and Lahore. Delhi recently recorded an AQI of 428, categorized as "severe," highlighting the widespread nature of the crisis. Lahore's situation is even more alarming; IQAir reported an AQI exceeding 600, and at its peak, a staggering 1136, making it the world's most polluted city at that time. This stark contrast with cleaner cities like Washington D.C. (AQI 31) underscores the severity of the pollution in the Indo-Gangetic Plain.

Similarities exist across these regions. Stubble burning in Punjab and Haryana significantly contributes to the particulate matter, exacerbated by thermal inversion trapping pollutants near the ground. Industrial emissions and vehicular exhaust further compound the problem. The impacts are also strikingly similar: respiratory illnesses, eye irritation, reduced visibility, and broader environmental damage. However, differences exist in the specific contributing factors and mitigation strategies employed. While Delhi and its surrounding areas grapple with a complex mix of industrial pollution, vehicular emissions, and stubble burning, Lahore's situation might be more influenced by industrial activity and regional dust storms. Jammu's contribution might be more heavily weighted towards the transport of pollutants from agricultural burning in neighboring states given its location and prevailing winds. The effectiveness of mitigation strategies varies as well. Delhi's CAQM has implemented restrictions on construction and vehicle use, but the long-term effectiveness remains to be seen. Lahore, facing a similarly severe crisis, has implemented bans on outdoor activities and early closures of businesses, but the long-term efficacy of these actions is also uncertain. A comprehensive regional approach is needed, coordinating efforts across borders and focusing on sustainable agricultural practices, stricter emission controls, and improved monitoring systems to address the root causes of this widespread environmental crisis.