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## POLITY AND GOVERNANCE

TELEGRAPH,NOV1,2022

Deliberative democracy

Citizens' participation in policy-making is an important factor in assessing the quality of democracy

Namrata Jeph, Rajesh Ranjan

Within five days of the announcement of Agnipath, the scheme had been amended 10 times, raising the larger question concerning consultation in policy-making. The Bharatiya Janata Party-led National Democratic Alliance government has taken a number of policy decisions without public consultation — from demonetisation, which saw 60 changes in 43 days, to GST, which has been amended 376 times in 10 months, to farm laws that were repealed after one year. Continuous changes in legislation indicate poor consultation in policy-making. A recent news report suggests that even deliberation in the cabinet has shrunk, with ministers conceding their space to the Prime Minister's Office.

The constitutional framework does not mandate the chief executive to mandatorily consult the council of ministers. But a careful reading of Article 75(3) reveals that the council of ministers is responsible to the House of the people, making the prime minister first among equals. The Kerala High Court and the Supreme Court have endorsed this principle in separate judgments. Internal consultation is not only important in bringing uniform and refined laws but also affirms to the broader constitutional principle of power-sharing among the representatives. Scholars, too, have argued that the cabinet has a very significant role in policy-making.

Citizens' participation in policy-making is an important factor in assessing the quality of democracy. Despite the technological advancement and launch of MyGov.in to collaborate with different public institutions to echo the people's voice, India is still performing poorly in public consultation. In a deliberative democracy, the value of participation in policy-making is crucial as it gives representation to the voice that gets affected by the outcome of these policies. Legislative consultation in diverse societies like India can be an effective tool for not only raising civic consciousness on democratic participation but also ensuring the continuity of democratic culture.

Uploading bills for mandatory consultation, providing the requisite time for feedback, translating bills into regional languages, and making them accessible can make the policy framework inclusive. Translation is an important tool in bridging the gap in citizens' participation. Research has affirmed that comprehending regional languages is significant for individual identity. However, what we are witnessing instead are efforts to impose Hindi, alienating a section of non-Hindi speaking citizens from policy-making. The presidential order of 1960 mandates the creation of the Official Languages (Legislative) Commission in the states. This commission was created with the purpose of translating Central laws into regional languages. However, only Karnataka, Kerala, Tamil Nadu and Assam have such dedicated Commissions. Other states rely on law department translators and independent collaborators that eventually delays translations. Impediments in translation can be rectified through the enactment of legislation mandating translations into regional languages. Engagement with the civic organisations with expertise in translation in regional languages can foster the growth of legislative outreach. One such organisation is Socio Legal Literary, which has been instrumental in translating into regional languages important legislations and constitutional texts that affect individual rights.

Echoing the importance of deliberation and people's representation, Ram Manohar Lohia had remarked, "If the roads become silent, Parliament becomes awry." People are the fifth pillar of democracy. Today our democracy requires participative and continuous engagement among all its pillars to cultivate and sustain the democratic spirit.

(Namrata Jeph and Rajesh Ranjan are senior advisor and co-convenor, respectively, of the Legal Aid and Awareness Committee, National law University, Jodhpur)

STATESMAN,NOV2,2022

Investment in India means investing in democracy, safer planet: PM Modi

Noting that the country's domestic markets were strong due to the aspirations of its people, he declared that building a New India was possible only with bold reforms, massive infrastructure, and the best of talent.

Noting that the fundamentals of the Indian economy were strong despite global crises, Prime Minister Narendra Modi today sought greater investments in the country while reaffirming his government's commitment to bold reforms. "Investing in India means investing in inclusion, investing in democracy, investing for the world, and investing for a better, cleaner, and a safer planet," he said addressing the inaugural function of Invest Karnataka 2022, the Global Investors Meet of the state via video conferencing. Noting that the country's domestic markets were strong due to the aspirations of its people, he declared that building a New India was possible only with bold reforms, massive infrastructure, and the best of talent. "We are continuously working towards cementing our fundamentals to further strengthen India's economy with each passing day," he said.

Emphasising the need for understanding the trajectory of the Indian economy, the PM explained the change of approach from what it was 9-10 years ago when the country was grappling with policy and implementation-related issues. "Instead of trapping the investors in the red tape, we created an environment of the red carpet for investment, and instead of making new complicated laws, we rationalised them," he added.

Modi noted that in the 21st century, India has only moved forward from its position. It received a record foreign investment of \$84 billion last year. Referring to the sense of global optimism towards India, the PM said, "These are uncertain times, still most of the nations are convinced about the fundamentals of the Indian economy. In this period of fragmentation, India is moving with the world and giving emphasis on working with the world. India could assure the world about the supply of medicines and vaccines in the period of the disrupted supply chain."

The PM noted that bold reforms were carried out today in every sphere of the government. In this connection, he mentioned GST, IBC, Banking reforms, UPI, abolition of 1500 outdated laws, and 40000 unnecessary compliances. He also stated that steps like decriminalisation of many company law provisions, faceless assessment, new avenues for FDI, liberalisation of drone rules, geospatial and space sector, and defence sector were bringing unprecedented energy. The number of operational airports has doubled in the last eight years and Metro has expanded in more than 20 cities.

The PM emphasised that goals of development could be achieved only by focusing on investment and human capital. "Moving forward on this thinking, we promoted investments in the health and education sector. Our aim is also to increase productivity as well as to improve human capital," he added.

The PM elaborated by mentioning simultaneous push on things like manufacturing incentives along with health assurance schemes; ease of doing business as well as health and wellness centres; highways network as well as provision of toilets and clean drinking water; futuristic infrastructure as well as smart schools. On the environment-friendly growth of the country, he said “Our initiatives towards green growth and sustainable energy have attracted more and more investors.”

Highlighting the aim of the PM-GatiShakti National Master Plan, the PM remarked that it was aimed at integrated infrastructure development. He explained that a road map was prepared not just for developing infrastructure but also for the existing infrastructure. He laid stress on last-mile connectivity and ways to improve the product or service by making it world-class. The PM stated that India has set a target of becoming a developed nation by 2047 and for this, it was very important that the investment and India’s inspiration come together as the development of an inclusive, democratic, and strong India would accelerate the development of the world.

**PIB,NOV2,2022**

Union Minister Dr Jitendra Singh announces Nationwide Campaign for Submission of Digital Life Certificates (DLC) by Pensioners

The Minister says “In Amrit Kaal Period a Digitally Empowered Pensioner would enable creation of a Digitally Empowered Nation”

New initiatives in Pension Welfare – Universalization of Integrated Pensioners’ Portal for all Banks and National Anubhav Awardees Webinar Series Announced

Dr. Jitendra Singh, Minister of State for Personnel, PG and Pensions announced a Nationwide Campaign for Submission of Digital Life Certificates and use of face authentication app by Pensioners in the month of November. He said “in Amrit Kaal Period, a Digitally Empowered Pensioner would enable creation of a Digitally Empowered Nation.” Dr. Jitendra Singh said submission of Life Certificates is an important activity to be carried out by pensioners every year in the month of November (with special provision for pensioners aged 80 years and above to submit their Life Certificates in the month of October) to ensure continuity of their pension. In the traditional mode, pensioners had to present themselves before the Pension Disbursing Authority for physical submission of their Life Certificate which was inconvenient, particularly for the old, ailing and infirm

pensioners. Further, there was no mechanism for the pensioners to get a status regarding updation of their Life Certificates in the records of the Pension Disbursing Authority.

Dr. Jitendra Singh said that to enhance 'Ease of Living' of Central Government pensioners, Government has been promoting use of Digital Life Certificate i.e. Jeevan Pramaan extensively. Initially submission of DLCs using biometrics was commenced. Subsequently the Government developed a Face-Recognition technology system based on Aadhar database whereby it is possible to give a DLC from any Android based smart phone. This reduced the dependence of pensioners on external bio-metric devices and made the process more accessible and affordable to masses by leveraging smartphone-based technology.

Dr. Jitendra Singh launched the nation-wide campaign for the month of November 2022 and urged all pensioners to avail the facility of Face Authentication technology. He said that the Pension Disbursing Authorities have been issued directions for promoting the use of DLC/Face Authentication technology. Detailed guidelines in this regard have been issued to the various Ministries/ Departments of Government of India as well as to Banks to reach out to the maximum number of pensioners to avail the service. All CGHS Wellness centers/Dispensaries/Hospitals have also been requested to set up camps in their premises for this purpose. In addition, Pensioners Associations have also been sensitized to hold camps for pensioners for DLC submission.

Dr. Jitendra Singh announced 2 new initiatives for Pensioner's welfare on this occasion.

The Government will initiate efforts for universalization of the Integrated Pensioners' Portal as Bhavishya 9.0 version, with the aim of enhancing "Ease of Living" for the Central Government Pensioners by incorporating various stand-alone Portals of Pensions department and 17 Pension Disbursing Banks' portals so as to provide multiple services from a single window with a single login. On completion of all phases of this integration the retirees can choose a Bank and Branch for opening an online Pension Account, check their monthly pension slips, Form 16, Status of Life Certificate as well as change their Pension Disbursing Bank through BHAVISHYA. State Bank of India is the first pension disbursing Bank to integrate its Pension Seva Portal with BHAVISHYA on October 18, 2022. The process of integration with all the remaining 16 Pension Disbursing Banks has commenced and shall also soon be complete.

The National Anubhav Awardees Webinar Series to be launched by DoPPW from November 2022. Dr. Jitendra Singh said that on the directions of the Prime Minister of India, in March 2015, ANUBHAV is a means for retiring employees to showcase significant achievements made and their contribution in enhancing the effectiveness of the various Government policies during their service period through write-ups submitted on the Portal. Selected write-ups are awarded with a Medal, a Certificate and a cash prize of Rs. 10,000. The Department of Pensions and Pensioners Welfare will be launching the National Anubhav Awardees Webinar Series which will be held on a monthly basis and will feature two Anubhav Awardees/webinar as speakers to share their experience and to motivate/raise awareness among retiring employees on filling up their own experiences on the Anubhav Portal. It is envisaged that this culture of documenting administrative history of the Nation through office leaving notes by retirees on ANUBHAV portal will become the foundation stone of good governance and administrative reforms in future.

**INDIAN EXPRESS,NOV2,2022**

Savarkar vs Nehru and Gandhi: Different versions of nationalism

Savarkar's view of the nation was ethno-religious and his focus was on defending Hindus against Muslims, for which he collaborated with the British. In contrast, Gandhi-Nehru fought for a free, multicultural and secular India where all communities would live on an equal footing

Christophe Jaffrelot

The wave of historical revisionism that India is experiencing today finds expression in different kinds of misrepresentation of the past in textbooks as well as in public discourse. Jawaharlal Nehru is one of the main victims of this trend — either he's erased from history or his role in the freedom movement and the making of modern India is distorted. Mahatma Gandhi himself, although the government continues to use him as an icon in India and, even more abroad, is not recognised any more as the chief architect of India's fight for independence. Non-professional historians today claim that independence was won by those who took up arms despite Gandhi. Some of them consider Veer Savarkar and his disciple, Nathuram Godse, who feature prominently in a play I recently saw in London, "The Father and the Assassin", as the real heroes. To know who Savarkar and Godse really were, one can read excellent books, including Gandhi's Assassin by Dharendra K Jha and Hindutva and Violence: V D Savarkar and the Politics of History by Vinayak Chaturvedi, both recently published in India. They help



us respond to many questions, including the only one I'm interested in here — in what sense was Savarkar a nationalist as compared to Nehru and Gandhi?

Savarkar retained the image of a nationalist because of the revolutionary commitment he developed as a young man, which resulted in his arrest in 1910. He was then sent to the Andamans and remained a prisoner of the British till 1937. After his release from prison, his main target became Muslims. This shift was evident from the many speeches he gave as President of the Hindu Mahasabha. By 1941, his main motto was “Hinduise all politics and militarise Hindudom”, which implied some collaboration with the British. The government of the Raj was recruiting Indian soldiers in the British army and for Savarkar that was a “unique opportunity to press on the movement for militarising our Hindu race”. He was in favour of “extending military cooperation with the British government [...] to secure permanently a dominant position for the Hindus in the Indian army, navy and air-force wherein today the Moslems are almost monopolising...” He assured the viceroy that “no help the Moslems have given or can give to the government can ever outweigh the help which the government has already received and is sure to receive in future from Hindudom as a whole in India”.

Hindu Sabhaites toured the country requesting young Hindus to join the army and supported the war committees that the British had established in the Central Provinces and Bengal. Narayan Apte — Godse's accomplice in the assassination of Gandhi — became an assistant technical recruiting officer and, in this capacity, took part in war services exhibitions. Savarkar, in the same vein, asked the viceroy to appoint 15 Hindu Sabhaites to the war advisory council.

The Hindu Mahasabha was extending support to the British in a very specific context. In 1939, the Congress, which was in office in more than half a dozen provinces, withdrew from these governments in protest against the British dragging India into World War II. More importantly, Mahatma Gandhi was preparing to launch the Quit India movement. Savarkar, as his biographer Dhananjay Keer points out, was against the Quit India movement. His priority was not independence, it was the fight against Muslims for which Hindus would need to occupy as many posts as they could in the army and in the state machinery. In October 1943, Savarkar made it clear again: “I once more exhort my Hindu sanghatanist comrades to capture as many places of vantage as possible in the political machinery of the land whether in the legislatures or in the ministries or in the executive council...” The Hindu Mahasabha tried to form coalition governments in several provinces, including in partnership with the Muslim League. In June 1943, Savarkar argued that in League-dominated governments, Hindu Sabhaites should “capture as many seats in the ministry as possible” and in Hindu majority provinces, “Leaguers or Moslems should,

of course, be invited to join the ministry”. Where were the so-called Congress “collaborators” of the British at that time? After the Quit India resolution was passed by the party on August 8, 1942, most of the members of the Congress Working Committee were arrested. Nehru, Sardar Patel, Maulana Azad and others stayed behind bars at the Ahmednagar Fort till June 1945. Their definition of nationalism was different: They fought for a free, multicultural and secular India where all communities would live on an equal footing. To force the British to Quit India was their priority and they succeeded by resorting, mostly, to non-violent techniques — a unique achievement in the history of the world. In contrast, Savarkar’s view of the nation was ethno-religious. True to the notion of Hindutva he had formalised in 1923, he wanted Hindus to prevail over other communities because, according to him, they were sons of the soil and recognised this land as their “punyabhoomi”. His priority, therefore, was to defend Hindus against Muslims and use martial power for the purpose. Hence his desire to collaborate with the British in order to learn from them the art of war and to occupy the seats of power they could offer their subjects. These are the terms of the debates that could preside over intellectual conversations in order to expose historical revisionism. To live in history is not necessarily a bad idea, but to know the history one lives in is even more important.

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**STATESMAN, NOV 4, 2022**

Govt forms panel for strengthening assessment of higher educational institutions

The mandate of the committee includes strengthening the assessment and accreditation processes and preparing a roadmap for the National Accreditation Council envisioned in the National Education Policy, 2020. The government has constituted a high-level committee, under the Chairmanship of Dr. K. Radhakrishnan, Chairperson, Board of Governors, IIT Kanpur & Chairperson, Standing Committee of IIT Council, for strengthening the assessment and accreditation of higher educational institutions. The mandate of the committee includes strengthening the assessment and accreditation processes and preparing a roadmap for the National Accreditation Council envisioned in the National Education Policy, 2020.

India has one of the largest and most diverse education systems in the world. With the concerted efforts of the government, there has been a widespread expansion in the higher education sector.

Accreditation plays a vital role in making quality assurance an integral part of the functioning of higher educational institutions. Accreditation assists higher education institutions to understand their strengths and weaknesses through an informed review process, thus facilitating the identification of internal areas of planning and resource allocation by them. The accreditation status of any higher educational institution serves as a source of reliable information for the students, employers, and society regarding the quality of education being offered in the institution. The other members of the committee include Prof. Mridul Hazarika, Vice-Chancellor, Mahapurusha Srimanta Sankaradeva Viswavidyalaya, Assam; and Prof. Bharat Bhasker, Professor, IIM, Lucknow and the Joint Secretary, Department of Higher Education.

TRIBUNE, NOV 5, 2022

Gujarat poll

Economic plank holds the key in triangular contest

With the EC fixing December 1 and 5 for voting in the Gujarat Assembly elections and AAP announcing Isudan Gadhvi as its chief-ministerial candidate, the poll battle is hotting up for a triangular contest this time. Traditionally, the fight has been bipolar, with the BJP and the Congress being the main contenders. And, the state has remained in saffron hands since 1995. As new factors come into play, the BJP needs to go all out to continue its dream run. Buoyed by its win of a ward in the Surat municipal polls last month — when, significantly, the Congress failed to open its account — and the landslide victory in Punjab earlier this year, AAP has jumped into the Gujarat fray full throttle. Party chief Kejriwal has been wooing voters with his Delhi mantra of tackling problems related to electricity, water supply, health and education.

There are other changes on the scene that threaten to dent the BJP's 'Hindutva' poll plank, which has been the dominant force for its successive wins, led by the Modi-Shah duo, since 2001. The anti-incumbency sentiment cannot be discounted as the people's restlessness over the vital issues of rising inflation and unemployment is palpable. The BJP seems to have read the people's pulse as Gujarat has, in the last two months, bagged two mega industrial deals: the Rs 1.63 lakh-crore Vedanta-Foxconn semiconductor venture and Rs 22,000-crore Tata-Airbus aircraft project.

Meanwhile, the Congress seems to have failed to capitalise on the BJP's reduced margin of victory in the 2017 Assembly poll that reflected the voters' waning trust in the ruling party. The rural Patidar community was especially agitated and had rebelled against the BJP's farm policies. It worked to the advantage of the Congress as it welcomed young leaders Hardik Patel, Jignesh Mevani and Alpesh Thakore to its fold. Unfortunately, the infighting-ridden Congress could not hold them for long as Patel and Thakore jumped ship to join the BJP. The new Congress president, Mallikarjun Kharge, indeed, has his task cut out. The December 8 results would reveal whether the Opposition space has been tapped effectively enough by the Congress or AAP to whet the voters' appetite for change or the BJP still holds sway.

STATESMAN,NOV6,2022

Digital University~I

In view of the UGC Chairman's latest announcement of a digital university to be set up in the coming academic session, it is time to mention that the spectre of Coronavirus haunted the policymakers of education.

A K GHOSH

In view of the UGC Chairman's latest announcement of a digital university to be set up in the coming academic session, it is time to mention that the spectre of Coronavirus haunted the policy makers of education for more than two years and it is, undoubtedly, education technology that came to their rescue. Microsoft Teams, Zoom, Skype, Google Hangout and other apps helped all to communicate and exchange knowledge with each other.

The universities also embraced these solutions, but the time has come to ask if India can come up with the concept of a digital university, as visualised by the National Policy of Education (NEP 2000), thereby providing learners with a new experience of learning? It sounds exhilarating to think of attending a class whenever one wants to because of prerecorded sessions, asking the teacher questions and receiving answers instantly as the teacher is logged on at the same time. Also, it could be a moment of enjoying financial relief because one does not have to travel or stay at some hostel. The plan to set up digital universities is premised on the National Education Policy's objective of enhancing the gross enrolment rate in higher education in the country from the current 26 per cent to 50 per cent by 2035. However, on the basis of global experience, it is feared that the quality of education delivered by such universities may have to be compromised. The concept of digital universities has been developed for students to obtain almost immediate feedback from teachers through emails or online discussions. When the

term came into existence it applied to things that were simulated by the computer, like virtual memory. Now, this came to be applied to things that physically exist and are created by means of computers. In fact, the concept of digital universities first came with the idea of a wireless university at the BBC. In the tele-university concept, courses were taught on the radio and television in the name of “university on air” which came to take the shape of an open university. Online courses mean that students will learn in their own time by reading course materials, working on course activities, writing assignments, and interacting with teachers and other students through teleconferences.

Digital classroom environments will be accessible to any student provided he or she has access to a computer or internet connection. This may allow dynamic interaction with teachers and among the students themselves. The synergy that may exist in student-centred digital classes is one of the most vital traits of the digital learning format. Virtual Global University in Germany offers a graduate programme in information and management where students can have access to a wide network of people and interactions. They are able to work at their own pace. Hence, the importance of the development of such skills including creativity, communication, and knowledge application.

However, the fact remains that a digital university cannot provide face-to-face interactions. So, the students would be deprived of opportunities for better communication and deeper understanding. Their computer literacy may also deter them from adopting new technology which may lead to incomplete learning and low performance. The performance of many students at DeVry University in the US was examined some time ago. The university offers online and contacts versions of all its courses, using the same textbooks, assessments, assignments, and lecture materials for each format. Even though the courses are seemingly identical, the students who enrolled online performed worse.

As a result, online students would be more likely to drop out. The hardest hit would be the unwilling few and those who enter the virtual classes with low grades in their previous examinations. The weaker students would be the worst sufferers. An overwhelming advantage to student learning by thrusting information technology has not been perceived as yet when simple chalk and talk methods could have done equally well. We have not thought of an equally good alternative to the classroom lecture ~ the discussion method that has been at the heart of the teaching-learning experience.

No instructional technology has been developed to replace cooperative learning that takes place in group projects, field studies, recitals, and presentations. It is generally agreed that students do not learn merely from textbooks; if so, teachers would not be required. Only when textbooks and supplementary study materials are brought to bear upon a topic to be discussed in the classroom does the teaching-learning process become live. This is further accentuated through projects and assignments followed by term-end examinations. Lack of access, whether it be for economic or logistic reasons, may exclude otherwise eligible students from the digital courses. This is an important issue in rural and lower socio-economic neighbourhoods. Internet access may pose a significant cost to the users in a digital university. Both students and facilitators must be able to use a variety of search engines and be comfortable navigating on the web, as well as be familiar with newsgroups, FTP procedures and e-mail. Even the most sophisticated technology is not hundred per cent reliable. At the same time, to successfully participate in an online programme of a digital university, students must be well-organised, self-motivated and possess a high degree of time management skills. An online teacher must compensate for the lack of physical presence by creating a supportive environment in a digital classroom where all students feel comfortable participating. Computer-related frustration and the fear to face new things on the part of teachers may make them unacceptable to students.

A Digital class environment means the transfer of traditional pedagogy towards an electronic pedagogy in which the teacher becomes a facilitator of the learning process. This new pedagogy presupposes that the teacher should be qualified in new techniques. For many, it may be a threatening experience. It may be important to recognise that some subjects may not be taught online in a digital university because the electronic medium does not permit the best method of instruction.

Examples are hands-on subjects, such as public speaking, surgery, dental hygiene and sports where physical movements contribute to the achievement of the learning objectives. Hybrid courses may represent a solution, thus making that area of the course more accessible to a greater number of people who would otherwise have difficulty getting to the campus. An online curriculum should reflect the use of dialogue among students and group discussions. Quality education may be provided in a digital university only if the curriculum is developed or converted to meet the needs of the online medium.

The task of accessing both the curriculum products and curriculum experts is an important issue for the success of a digital university. As the students cannot have access to the entire curriculum products, it is likely that scientific visualisation is used as an educational tool. The curriculum may not be easily updated or very interactive. The use of email may be effective for the exchange of information. Video conferencing over the internet may not be a practical substitute. From the administrative

point of view, the question of accreditation becomes pertinent. Where would the credits go? How can Intellectual Property Rights be maintained? How will the issue of faculty control over content and curriculum be preserved?

These questions must be addressed initially. The students may not be able to reach dramatic moments that occasionally result in witticism, humour and other such elements that help to enhance the joy of the teaching-learning process. If a colourful presentation using PowerPoint fails to lead to a lively classroom discussion, it will be of no use.

But the teacher on the dais in front of many students can do wonders. It is always challenging for the teacher in traditional mode to get his point across without facial gestures and vocal cues. He can create classroom animation ~ the thrill of being with the students ~ which is absent online.

STATESMAN,NOV6,2022

Digital University~II

Classroom teaching is a performance and many teachers choose this profession because it gives them a sense of participation in the learning process. Physical proximity and face-to-face interactions can bring out the best in students.

A K GHOSH

Classroom teaching is a performance and many teachers choose this profession because it gives them a sense of participation in the learning process. Physical proximity and face-to-face interactions can bring out the best in students. Engaging all the students and encouraging them to be active online becomes a Herculean task. The adrenaline rush that is felt in the class when there is something awkward, the sudden laughter, the body language and voice inflexion, the mimicry, and the instant feedback including yawning and the backbenchers' bantering ~ all are found missing in the virtual classroom. Since most digital teaching is done through words, it is expected that the lessons should be exciting enough to kindle the imagination of learners.

So, the real challenge is how to bring one's personality into the digital classroom. Instead of keeping ahead in their academic field, teachers are expected to master newer technologies every now and again. Programming the curriculum for digital universities will be one of the biggest challenges. Interactive media courseware development is a tedious operation. A true quality educational product would require synergy between faculty experts, programmers, and digital artists.

The think tank must realise that a foolproof curriculum requires an institutional investment in faculty expertise to programme in this novel content medium. If students at a digital university have to go through a separate curriculum from the on-campus students, there may not be a sufficient baseline from which to determine the grades of the virtual pupils. While designing an electronic curriculum for distance learners, it is important to build a reliable testing infrastructure. If this is done, the distribution of grades between the virtual students and on-campus learners may be identical. Also, proper market research may be done to identify the target learners ~ whether it is the lifelong learners who desire to learn that will dominate over the ones who seek to obtain real university credits in order to decrease time to a degree once he enters the university. This makes it difficult to directly respond to individual learners' needs for a curriculum. It must be agreed that the quality of a degree depends on the depth and scope of the one-on-one mentoring relationship with individual faculty members. To make possible the interactive aspect of the mentoring process would require an enormous investment of faculty time. Few teachers would be there to commit to a teaching endeavour that requires spending as much time. So, it is desirable that electronic courseware and credit granting must be cost-effective. It may be argued that reduced cost per credit hour will be the prime incentive for students to go in for digital university courses. Virtual students would like to buy the cheapest educational products in the market where education has become a commodity.

If a purely commodified market model is to be applied in the case of digital universities, then the scholarship is sure to be sacrificed especially when the budget for the education sector keeps getting reduced. When establishing a digital university, the challenge would be the pedagogical approach. In order to manage the students in virtual mode, the teachers have to develop engaging pedagogical techniques that appear in the virtual class, giving them an opportunity to engage themselves in the running of the class.

Considering the value of practicum in evolving the skill of the learners, it becomes important to develop a practicum plan for digital learners which is equally engaging. The assessment schedules have to be exhaustive and need to navigate each aspect of the coursework. Only then will the pedagogy make sense. Since learners' growth must be evaluated holistically and in terms of the social value they create in society, the responsibility lies in pedagogy and evaluation schemes.



Along with the learning of the coursework, the faculties will also have to work on the possibilities of the learners' coming together in the teaching-learning process and also creating human values. The aim of a digital university is to promote online course delivery through the use of computer networking. It can be said to be a multimedia network learning environment that differs from more traditional learning environments in that it is customizable. Digital learning environments offer a wide range of advantages over traditional environments such as flexibility, convenience, lower costs, access to current materials, increased retention of knowledge, and elimination of geographical boundaries. It enables students to learn anytime at any place. It can expand the time, place and pace of education and enable learning to become more individualized and emphasize interaction and collaboration between students and academics. The role of a student may change from passive learner to active participant in the learning process. The role of the educator will change from the distributor of knowledge to the sharer of understanding and intellectual breakthrough. Thus, a virtual university may allow students to gain more independent learning skills by becoming more active participants in their own learning processes. When utilising web-based course materials, academics are required not only to undergo training on the new technology but also time to develop teaching materials; they will need support from students and administration.

Problems with computer hardware malfunctions, setting up software to provide access to an educational institution, remote dial-in access and heavy traffic on the web can create learning barriers for students. Internet shutdown may also disrupt digital learning. Digital learning readiness issues can become more acute in regions like Kashmir which face Internet shut down on a regular basis. According to a report released by UNICEF, merely 8.5 per cent of students in India have access to the Internet. The Annual Status of Education released in November 2021 highlighted that 67.6 per cent of children in India had smartphones available at home, but 26.1 per cent had no access to them.

So, any barriers can broaden learning gaps, as seen during the Covid-19 period, and as expounded in a recent UNICEF report, Reimagining our futures together: a new social contract for education. The urban-rural divide is very much visible in the fact that 23.4 per cent and 42 per cent of urban households have computers and Internet access respectively compared with a meagre 4.4 per cent and 14.9 per cent of rural households, according to the National Sample Survey (NSS) 75th round. Also, it is learnt from Mission Antyodaya 2020 that as many as 27,930 villages in India have no access to electricity. For the proper functioning of a digital university, some of the guidelines may include promoting user participation and planning, designing and implementing initial training programs for academic staff, and providing students with the opportunities and facilities to participate in class discussions online.

TELEGRAPH,NOV6,2022

Nadda announces UCC, 33% quota for women in govt jobs in manifesto for HP polls

Party president promises Uniform Civil Code, creation of 8 lakh jobs in phased manner, 5 new medical colleges. BJP president J P Nadda on Sunday promised Uniform Civil Code (UCC) and 33 per cent reservation for women in government jobs in Himachal Pradesh while releasing the party's manifesto for the state Assembly polls. With less than a week left for assembly polls in his home state, Nadda announced various soaps, including 8 lakh jobs, scooters for girls pursuing higher education and five new medical colleges. Releasing the BJP's 'Sankalp Patra', Nadda promised implementation of UCC in Himachal Pradesh if the party is voted to power and said a committee will be formed for it.

At the same time, he said the BJP government will also conduct survey of Waqf properties in the state to check their illegal use. Focussing on women voters, Nadda released the party's separate manifesto for them announcing 33 per cent reservation in government jobs. He also announced cycles for girl students in classes 6 to 12. Replying to a question, Nadda criticised the Congress manifesto -- released on Saturday -- saying it lacks both vision and weight. The BJP had formed a committee to take suggestions from the general public to draft the manifesto. The BJP is eyeing to change the trend of alternate governments in Himachal Pradesh. Elections for the 68-member Himachal Pradesh Assembly will be held on November 12.

## ECONOMIC AND SOCIAL DEVELOPMENT

PIB,NOV1,2022

PM to inaugurate 3024 newly constructed flats at Kalkaji, Delhi under 'In-Situ Slum Rehabilitation Project on 2nd November

PM to hand over keys of flats to eligible Jhuggi Jhopri dwellers at Bhoomiheen Camp

In line with PM's vision to provide housing for all

Project will provide a better and healthy living environment; equipped with all civic amenities and facilities

Flats will give ownership title and sense of security

Prime Minister Shri Narendra Modi will inaugurate 3024 newly constructed EWS flats at Kalkaji, Delhi built for rehabilitating slum dwellers under 'In-Situ Slum Rehabilitation' Project and hand over keys to eligible beneficiaries at Bhoomiheen Camp in a programme at Vigyan Bhawan in Delhi on 2nd November, 2022 at 4:30 PM.

In line with the vision of the Prime Minister to provide housing for all, in-situ slum rehabilitation in 376 Jhuggi Jhopri clusters is being undertaken by Delhi Development Authority (DDA). The objective of the rehabilitation project is to provide a better and healthy living environment to the residents of Jhuggi Jhopri clusters, with proper amenities and facilities.

DDA has undertaken three such projects at Kalkaji Extension, Jailorwala Bagh and Kathputli Colony. Under the Kalkaji Extension Project, in-situ Slum Rehabilitation of three slum clusters namely Bhoomiheen Camp, Navjeevan camp and Jawahar camp located at Kalkaji are being taken up in a phased manner. Under Phase I, 3024 EWS flats at the nearby vacant commercial centre site have been constructed. The Jhuggi Jhopri site at Bhoomiheen Camp will be vacated by rehabilitating eligible households of Bhoomiheen camp to the newly constructed EWS flats. Post vacation of Bhoomiheen Camp site, in Phase II, this vacated site will be utilised for rehabilitation of Navjeevan Camp and Jawahar Camp.

Phase I of the Project has been completed and 3024 flats are ready to move in. These flats have been constructed at a cost of about Rs. 345 crores and are equipped with all civic amenities including finishing having been done with vitrified floor tiles, ceramics tiles, Udaipur green marble counter in kitchen, etc. Public amenities like Community parks, Electric Sub-stations, Sewage Treatment plant, dual water pipelines, lifts, Underground reservoir for hygienic water supply etc have also been provided. The allotment of flats will provide the people ownership title as well as a sense of security.

MINT,NOV1,2022

Economic good news

The Centre had upped public spending in the expectation that it would lure the private sector into investing heartily, but this hasn't quite worked out. State expenditure has its limits. Thankfully, the Centre has been cautious.

India has reason to be pleased with its latest core sector output and fiscal deficit data released on Monday. While the output of eight key industries grew a healthy 7.9% from a year earlier in September, the government's fiscal deficit for the first half of 2022-23 stood at 37.3% of the whole year's estimate. That our core sector growth was on top of last September's 5.4% expansion is heartening, as it shows output expanded on a moderately large statistical base. To be sure, this indicator has often shown high volatility in the short term, but it has been on an incline for many months, with output expanding 9.6% in the first half of this fiscal year. While India's economic recovery may have broadened, there is plenty that's still not alright with our economy. The spring back from the covid crisis has been uneven, with only a few sectors pulling the economy ahead. Private investment hasn't picked up as robustly as hoped, despite policy efforts to stimulate it. The Centre had upped public spending in the expectation that it would lure the private sector into investing heartily, but this hasn't quite worked out. State expenditure has its limits. Thankfully, the Centre has been cautious.

ECONOMIC TIMES,NOV2,2022

Karnataka leads the way in many sectors with attractive policies to promote industries: Nirmala Sitharaman

Union Finance Minister Nirmala Sitharaman on Wednesday batted for investments in Karnataka saying that the state is a leader in many sectors and has attractive policies to promote industries. The Union Minister, who is a Rajya Sabha member from Karnataka, said investors are willing to come to the state because of the record of Karnataka and Bengaluru in facilitating

industries."Karnataka is a leader in many sectors. First in renewable energy, because 63 per cent of all our installed capacity lies in renewable energy. First in electrical maintenance, innovation, home to about seven plus auto Original Equipment Manufacturers (OEMs) -- more than seven of them are here and 50-plus auto component manufacturers are here," Sitharaman said addressing the gathering at the launch of the three-day Global Investors' Meet titled 'Invest Karnataka'.The industry consultative process which happens in Karnataka is one which is extensive, the Finance Minister said.Quoting Chief Minister Basavaraj Bommai, Sitharaman said that initially when the GIM was planned, the state government's expectations and target of investment was somewhere in the range of Rs 5 lakh crore.However, it went upwards to about Rs 7.5 lakh crore, of which Rs 2.8 crore related proposals have already been cleared, she said."That is the pro-active nature of this government being led by Chief Minister Basavaraj Bommai and it is at that speed, which gives confidence to the investors," Sitharaman pointed out.

She highlighted that the MoUs are coming up in the sunrise areas, including green hydrogen. Sitharaman said the state government is making sure that the corridors are coming up for industries and the ports are connected.According to her, the state's new Information Technology Policy 2020-25 is a big step forward as it also looks at electronic system-defined manufacturing and telecom services in six clusters.Further, the industrial clusters are not just going to be located in Bengaluru but outside the city in places like Mangaluru, Tumakuru, Mysuru, Hubballi, Shivamogga and Kalaburagi."The 'one district, one product' is something which the state is moving at a rapid pace. Land reforms are happening. Similarly, the renewable energy policy of the state is something which I think is very rewarding and as a result, you have a lot of investments happening in the renewable energy area as well," Sitharaman said.

TELEGRAPH,NOV4,2022

Viewing growth

Economic progress must complement planetary conservation

Anup Sinha

The word, 'development', is usually associated with a change for the better, a progression towards an improved state of affairs. When used in the context of an economy, it usually means material enhancements in the standard of living of some, if not all, members of that economy. The essence of the matter revolves around the word, 'change', towards something more desirable or preferred. There are many difficulties that arise when we use the word, development, in a loose fashion. A number of

questions crop up. When we say that, for instance, the economy of the United States of America is more developed than that of India, do we merely compare national incomes or national wealth? In most instances, we do so. However, the deeper question is this: why should we always take material wealth or consumption of goods as the ultimate criterion of economic development?

A simple example will suffice. Consider the two economies, China and India. If we are to compare the state of affairs at a point of time in the two countries, can we say that China is more developed than India? Has it progressed more than India? Towards what end? Consider an alternative situation — India in 1947 and India in 2022. Can we say India has developed during this period of time? We are comparing China and India now, or we are comparing India circa 1947 and India now? The points of comparison show differences. How do we evaluate these changes? The changes can constitute progression, stagnation or regression. Hence development, as change, is dynamic, and requires an evaluating criterion (or a set of criteria).

There are many ways in which socio-economic change can be viewed and evaluated. There are a number of economists who argue that development is about growth in the availability of goods and services. To produce more, industrialisation and the use of science-based technology are considered the best instruments of change. The institutional apparatus that facilitates this growth is usually assumed to be parliamentary democracy and free markets with voluntary exchange. Hence, according to this view, the end state of development is a materially rich country with free markets and democracy. The future is best handled by keeping these quantitative changes going: more goods, more incomes, and more consumption. Progress is purely quantitative and material.

There are other economists who believe that an end state will arrive in the process of economic development, but there will be substantial qualitative changes leading to transformations in the market economy and the distribution of political power. For instance, Marxists would tend to believe that the current structure of market economies is inherently unfair and unstable. A classless worker's state would be the end result of economic development. There are other scholars who tend to argue that development is uneven, unpredictable, and changes occur in a non-linear fashion over time and geographies. Hence, there is no predictable end state of development, and there is no progression to a better or more desirable world that humans could create.

There are problems associated with each of these intellectual positions. Consider the belief that the market economy and its wealth creation apparatus are the ultimate economic structures in human history. It is now clearly evident that such an economy cannot progress and develop in a purely quantitative way without bringing about its own collapse. The inability to factor in natural resource constraints and the failure to control waste emissions would bring about a downfall in the economy. The capitalist market economy, the way it functions now, is patently unsustainable.

The ideas of radicals and other scholars who dreamt of some utopia different from the capitalist order have been unable to demonstrate that such worlds could be actually sought after and created by human agency. Indeed, some of the efforts to create such worlds, like the twentieth-century experiments to create socialism, have failed resoundingly. Those who believe that history has no meaning and development is a kaleidoscopic pattern of endless variations of the same components might have difficulty in explaining the massive changes that human societies have witnessed since the recorded history of humankind. Substantial change has occurred over time, and that change cannot be captured by mere material improvements or some convergence towards a predictable end state.

A number of scholars have emphasised the expansion of freedom and liberties in a society as the hallmark of development — more freedom to do things an individual or society chooses as well as greater freedom from constraints to a good life, such as freedom from hunger or ignorance. This view is the most acceptable in terms of justice and fairness and does not talk about a final end state of development. However, this view, too, has some limitations when we consider the sustainability of the process of expanding spaces of freedoms. This worldview does clarify that individual and social freedoms cannot restrict the space of freedom of other individuals or other societies. However, it does not clarify that freedoms and liberties cannot encroach on natural processes so as to damage them in irreversible ways.

Human history started when change was perceptible in society and was different from nature, which was considered to be changeless, static. Humans began to perceive time through a series of social events with broad consequences. In most of these cases of momentous change, human knowledge about the planet and about themselves increased significantly. Humans were able to bring about substantial changes within small periods of time because they were able to transmit accumulated knowledge from one generation to the next. This was the real well-spring of human development. This helped tear asunder human history from the larger planetary history of evolution. Biological development is about transmission of genetic inheritance and occurs over millennia. Economic development is about the social acquisition of characteristics that can occur

within a generation. For instance, the human brain of modern humans is about the same size as that of humans 5,000 years ago. But the effectiveness of human thinking has multiplied manifold. One might argue, then, that human development is the accumulation and transmission of knowledge over generations. This cannot be measured through material progress alone. Human beings are part of the biological evolution story too, and they are just another (albeit smart) species in the animal kingdom. Hence the history of humanity cannot be completely independent of the planetary story of evolution. If history, in this bigger framework of the planet, is a journey, then the accumulated human knowledge must sustain this journey. Changes brought about in economy and society ought not to lead to a series of crises and disruptions in the forces of nature and natural processes.

One can view history as a voyage of development of knowledge that makes humans free from debilitating constraints of hunger and disease and provides freedom to do things of their choice, such as leading a preferred lifestyle. No story of economic development can be meaningful if it is inconsistent with the planetary history of evolution. Hence, development must be sustainable — the use of human knowledge must do no harm to destroy nature. Yet, the human ability to cause harm to nature is much more than the ability to conserve and create. Economic development must be viewed as a progression of ideas and understandings that protect and preserve nature in its entirety, yet making human life easier and more enriching. Achieving it is not easy even though we are a clever species. The big question remains: are we clever enough?

Anup Sinha is former Professor of Economics, IIM Calcutta

TRIBUNE, NOV 5, 2022

State of our education

India must transform public schooling system

Free and compulsory education for all children in the age group of 6-14 years is a fundamental right in India. Yet, among the several disturbing facets of Unesco's Global Education Monitoring Report 2022 is the one showing that a large number of the Indian people have given up on state education. 'Only 46% of adults agreed that the primary responsibility for providing school education rested with the government, the lowest share amongst 35 middle- and high-income countries,' the report notes, citing its survey of parents. Observing that 70% of new schools established in India in the past eight years are private



ones, it issues a stark verdict: 'Expansion of access through non-state provision is inequitable. In India, children from the richest quintile were seven times as likely as children from the poorest quintile to attend private early childhood institutions.'

We have known this for a long time, of course. The infrastructure and quality of education in government schools have always been suspect, and the best private schools are very expensive. It means that an unofficial apartheid situation exists in India, banishing the poorest populace to the worst schools. The Unesco survey found that '73% of parents in India chose private schools because public schools did not meet quality standards, 12% because they offered English-medium education and 10% because public schools were not available.' Even poorer people tended to avoid government schools as the survey said that 86% of children from such households were enrolled in a budget private school or expecting to transition to one in Grade 1. The rush for private schools, undoubtedly, puts an immense strain on the household budgets. The National Education Policy (2020) envisages that public investment on education be 6% of the GDP. However, the Economic Survey presented in January showed that the expenditure on education in 2020-21 and 2021-22 has been only 3.1% of the GDP. Unesco notes that the failure of governments to increase spending on education 'leaves a ticking bomb for the poorest who are increasingly faced with high costs to access an education that should normally be free.' This verdict must act as an alarm bell for the education ministries in India.

## SCIENCE AND TECHNOLOGY

PIB,NOV1,2022

Young researchers selected for support under SERB-N-PDF to work in frontier areas of science and engineering

A total of 301 young researchers have been selected for support under SERB-National Post-Doctoral Fellowship (N-PDF), to work for 2 years in frontier areas of science and engineering. The fellows will work under a mentor who is in a regular academic/research position in a recognized institution in India and this training will provide them a platform to develop as an independent researcher.

Applications were received from 3,833 researchers against the invitations for proposals. The applications were reviewed by the designated expert committees and Science and Engineering Research Board (SERB), a statutory body, working under the umbrella of Department of Science and Technology (DST) announced the names of 301 awardees. The support which includes a monthly fellowship, an annual research grant and overheads for the host institution is broadly given in five thematic areas, namely Chemical Sciences, Earth & Atmospheric Sciences, Engineering Sciences, Life Sciences, and Physical & Mathematical Sciences. Candidates within the upper age limit of 35 years, with Ph.D/M.D/M.S degree from a recognized University and also those who have submitted their Ph.D/M.D/M.S thesis and are awaiting award of the degree, are eligible to apply. The fellowship, initiated in 2015 to tap the young budding researchers and support them to graduate to an independent scientist, has received around 23000 applications in last eight years, out of which around 3500 fellows have been benefitted so far. N-PDF 2022 fellows will bring this number to 3800.

STATESMAN,NOV1,2022

Towards the scientific basis of telepathy

Most of the Nobel Prizes awarded in scientific disciplines can be broadly classified into three categories. These may be for developing some new product or a device or identifying a better and more convenient method for the synthesis of a useful chemical.

DR. K.K.PAUL

Most of the Nobel Prizes awarded in scientific disciplines can be broadly classified into three categories. These may be for developing some new product or a device or identifying a better and more convenient method for the synthesis of a useful chemical. These have also been awarded for work on life processes, identifying the nature of a disease and finding its cure. Yet another category consists of awards for postulating a new theory to clarify certain natural and well-known phenomena being observed may be for centuries. It was in the 17th century that Galileo, the Italian scientist, conducted an experiment from the leaning tower of Pisa to prove that the speed of fall of an object from a height was unrelated to its weight. It was however left to Newton, who almost 150 years later, inspired by the fall of an apple, studied the phenomenon in detail, to give this force the name of Gravity. But even he could not explain the origin of this force. Finally, it was much later and only in the twentieth century that the genius of Einstein was able to show to the world, the how and why of gravitation. Just imagine the time it took to explain one of the most common phenomena existing since the origin of the universe. Similarly, we have a number of physically observed experiences which as of now do not fit into the frame of the existing knowledge of science.

These have been broadly termed the metaphysical phenomenon. It was John Locke who, some three centuries ago, had enunciated various stages of knowledge, from a sensory experience to reasoning to doubting and finally believing. Today contemporary scientific developments and thought are vastly different but the fundamentals of the theory of knowledge still remain relevant. It is in this light that we have to see whether the awarded discoveries can form the basis of scientific explanation of some established metaphysical phenomenon. This year's Physics Nobel shared by Zeilinger, Clauser and Alain Aspect for their work on entangled photons has opened several new avenues for communications and cryptography. A photon is an electromagnetic particle without a mass or a charge which moves at the speed of light. These photons can get entangled with each other in their fundamental states, which in other words means that what happens to one also happens to the other immediately, irrespective of the distance.

In order to achieve entanglement, usually a simple crystal is exposed to a laser for generating photons. One of the photons is then converted into two, but each one has only half the frequency. When the phases and spatial modes of these photons overlap, they are known to have become entangled. It is this characteristic of entangled photons being made effective even from a distance which can possibly lead to the interpretation of certain metaphysical and psychic phenomena like Telepathy and ESP.

The phenomenon of subatomic particles communicating with each other had been studied for quite some time, but no confirmation was available. It was Alain Aspect, who in the 1980s, was able to scientifically show that two distinct photons under certain conditions could behave as if they were one single entity. Experiments to confirm these startling results have continued since then which now stand scientifically proven. Separately, as reported in Physical Reviews, an experiment was conducted by the Austrian physicist, Zeilinger in 2015.

For this, he chose the second basement of the Imperial Castle of Vienna to ensure stability and the absence of any extraneous vibrations. The distance between the two sites of photon generation was initially 60 m; in a parallel experiment, observations were taken from a distance of 185 m and found to be substantiating the theory of entanglement and simultaneous transfer of information. While there is no teleportation but the exchange of information was much in evidence. At one time this had also been visualized by Einstein, who had named it as the “spooky action at a distance”. In this context, Sumeet Khatri of Baton Rouge University along with others has successfully tested communications amongst entangled photons via the medium of a satellite. The Chinese too have successfully conducted tests with microsatellites where the distance between the entangled photons was over 1000 Kms. Application of these successful experiments when fully harnessed through a net of satellites can be visualized to be the precursors of a world wide web of Quantum Internet.

While these technological applications will be developed in due course, it would be equally important to interpret the theory of entangled photons in respect of Biophotons or neurons. The electrical activity in the human brain was first observed about a hundred years ago by a German psychiatrist, Hans Berger. Much progress has since been made in this direction and today we are conclusively trying to analyse the processes in our brain which generate thoughts. It is a complex process originating through nerve cells also known as neurons, of which there are a few trillion in the human brain. They connect with each other through neurotransmitters and chemical exchanges which become the source of electrical activity.

Since every external stimulus to our brain can ultimately be reduced to an interaction of photons with biophotons, it would be a pathbreaking step to study the entanglement of photons in the biochemical space of the human brain. In the absence of any scientific evidence, telepathy so far has been considered to be in the realm of the parapsychic phenomenon, often being relegated and clubbed with plain imagination or the result of a confirmation bias or even the occult.

But not any longer. With the scientific evidence now available to prove photonic entanglement as an existing reality, even at very large distances, it may be possible to extend the theory of entangled photons to biophotons which would ultimately unveil the scientific basis of telepathy.

TELEGRAPH,NOV1,2022

### Tech To Purify Water

Arsenic contamination of groundwater is a major problem and scientists have been working on making cheap and easy-to-use products that will remove arsenic and make it safe for drinking

Researchers at the Indian Institute of Technology, Rourkee, have come up with an affordable novel material that can remove arsenic as well as other heavy materials from water. Arsenic contamination of groundwater is a major problem in West Bengal as well as in other parts of the country, and scientists have long been working on making cheap and easy-to-use products that will remove arsenic from water and make it safe for drinking. The new product, developed by Professor Abhijit Maiti of the department of polymer and process engineering along with Anil Kumar and Nishant Jain, ticks all the boxes. It is made from ferromanganese slag, an industrial waste product, and an economical natural rock that is abundantly available, which makes it cheap, sustainable and environment friendly. The material can adsorb the most hazardous varieties of arsenic and it can be easily integrated into existing water purification systems in households as well as in large domestic systems.

“Cheap raw materials, minimal use of chemicals and easy scalability of the removal process are the three pillars of this invention. This innovation has also taken into consideration environmental sustainability. That is why ferromanganese slag, which is an industrial waste and has little commercial value, was used,” Maiti pointed out. A regular water processing setup tricked out with the new material will last for a good many years in a standard household with 4-5 family members.

The innovation was showcased at InvenTiv, the two-day research and development fair involving all 23 IITs, which was organised last month to commemorate 75 years of independent India and held on the IIT Delhi campus.

## Prototype grant

Continuing their relentless efforts to convert innovative ideas into path-breaking products, IIT Kanpur's technology business incubator Startup Incubation and Innovation Centre (SIIC) has partnered with the the Union ministry of micro, small and medium enterprises (MSME) to facilitate the MSME Design Innovative Scheme. This scheme provides grants to final-year undergraduate and postgraduate students engaged in design development as well as to MSMEs working in the design domain. The grant for students is up to Rs 1.5 lakh while it ranges between Rs 15 and 40 lakh for MSMEs. The funds are awarded for one year for the development of prototypes. Grants have been provided to seven enterprises to develop select prototypes. The products being developed include a drone for a drone light show, a machine to mix, grind and stuff paste into food products such as kachoris, a portable jaggery maker that can be set up near the fields to juice sugar cane and prepare jaggery, a low-cost weather and insect monitoring system also aimed at farmers and a seed coated by a super-absorbent polymer that reduces the need for initial watering.

The focus of SIIC has been to bridge the gap between innovators, start-ups and government bodies. It is currently facilitating over 155 start-ups and MSMEs.

MINT,NOV1,2022

Generative AI models should expect growing resistance

Siddharth Pai

Software has clearly begun to encroach on the turf of human skills in ways that threaten jobs

Some weeks ago, in IT Matters I wrote about foundation models, a wholly new approach to Artificial Intelligence (AI). Foundation models have become popular as they blow through the traditional methods of training AI programs with smaller data sets. They were expected to be game changers. Foundation Models have also been called neural networks and 'generative AI models'. These are new buzzwords and I have come across many startups that want their investors (venture capital firms, angel investors and the like) to believe that they are basing their work on such generative AI models.

The most salient feature of generative models for AI is that they scour almost every shred of information available on the web, a data store that is doubling in size every two years, and then use the output of these to train AI programs to generate output. Going by a two-year doubling rule defined by Live-counter.com, which tries to track of the size of the internet's data, that figure is close to 80 zettabytes. A zettabyte is a trillion gigabytes.

Open AI, heavily backed by Microsoft, has two such models: one called GPT-3, which is mainly for documents, and another called DALL-E, which focuses on images. GPT-3 analysed thousands of digital books and nearly a trillion words posted on blogs, social media and elsewhere on the internet. Its competitor is Google, whose own offering in generative AI is called BERT.

In contrast, the more focused cognitive models have smaller data sets (some of them even filled with dummy data) that are used to train AI programs on specific use cases. For instance, a medico-radiological system would limit itself to X-rays, magnetic resonance imaging (MRI) scans and other such medical images, and would likely not be training itself on poetry or music and other such information that has no relevance to the task at hand. The sponsors of generative AI have a lofty aim. The idea is to form a foundation for all sorts of AI applications that can be written on that base. There are several problems with this 'sledgehammer to kill a fly' approach, which I touched upon in previous columns. Today, however, I would like to dwell on two opposite views—albeit from different industries—of the effect that generative AI models are having. One thinks they are a flash-in-the-pan, while the other is girding itself for a fight.

OpenAI's text-to-image creator is called DALL-E. Its best-known rival, a newcomer dubbed Stability AI, has just pulled in \$101 million in funding for its Stable Diffusion system, according to Techcrunch.com ([tcn.ch/3DL2TyF](https://techcrunch.com/2022/10/25/stability-ai-raises-101-million/)). In response to news of this funding, Futurism.com reports that according to Will Manidis, founder and CEO of AI-driven healthcare startup ScienceIO, generative AI is all flash and no substance. While it might be attracting VC cash now, Manidis opines that most ventures will quickly fade into oblivion.

Manidis' argument centres on text-to-image generators such as DALL-E. He is of the belief that the "creator economy" doesn't really have much room for growth. Yes, it's fun and sometimes useful to produce AI-made artworks, but according to him,

turning everyone into creators won't really generate major new revenue streams. He expounded his views on the subject in a Twitter thread on 25 October ([bit.ly/3frRfPU](https://bit.ly/3frRfPU)).

According to his thread, "Billions of hours of human potential every year are wasted on menial tasks. Data entry, form filling, basic knowledge work kind of stuff," and these foundation models may have much better uses here (in the base automation of menial tasks) than in more refined use cases such as medical technology, which is what his firm focuses on. One could argue that the argument is a little self-serving, but it's not without merit. For instance, data entry and expert analysis of medical images are worlds apart. Meanwhile, it seems as if all is not well for generative AI models at the other end of the spectrum either, with the music industry up in arms against it.

AI generator tools can create brand new music tracks at the click of a button and might be starting to threaten the livelihoods of musicians. This has lobbyist groups deeply concerned. For instance, the Recording Industry Association of America (RIAA) is worried that AI-based music output could threaten the income as well as the rights of human artistes.

The RIAA has a long history in fighting piracy and counterfeiting—first by smashing illegitimate digital copies made on CDs and other media and then in its attempts to iron-clad digital copyrights for musicians. According to an RIAA filing with the Office of the US Trade Representative, the US music industry contributes \$170 billion to the US economy, supports 2.47 million jobs and accounts for over 236,000 businesses in the US. For every dollar of direct revenue within the US music industry, the RIAA claims an additional 50 cents is created in adjacent industries. Digital sources for music revenue account for about 90% while physical products such as CDs account for 10%, a clear cross-over made possible by products such as the original Apple iPod and later the smartphone.

The RIAA is now gunning for online services that use generative AI extracts and then remix recordings in the style of well-known human artistes. The lobby group maintains that these services violate copyrights and directly pinch the pockets of its members. Given that the RIAA has been successful in protecting its members in the past, those using generative AI for music production do have cause for worry. Siddharth Pai is co-founder of Siana Capital, and the author of 'Techproof Me'.

PIB, NOV 3, 2022

CRISPR gene-editing possible in temperature sensitive organisms, plants & crop varieties



The CRISPR gene-editing technology that received the Nobel Prize in 2020 has witnessed a new height. Indian scientists have demonstrated for the first time that the associated Cas9 enzyme, which acts as molecular scissors to cut DNA at a location specified by a guide RNA, can bind to and cut the target DNA at very low temperatures.

This work has shown the highly efficient functioning of this platform at temperatures as low as 4°C, making it possible to edit genes in temperature sensitive organisms, plants, or crop varieties. CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) are short DNA sequences found in the genome of prokaryotic organisms such as bacteria, which are reminders of previous bacteriophage (viruses) attacks that the bacteria successfully defended against. Cas9 enzyme (part of bacteria's defence mechanism) uses these flags to precisely target and cut any foreign DNA, thus protecting the bacteria from future attacks by similar bacteriophages. The unprecedented precision of targeting the DNA sequences and then efficiently cutting them is the basis for CRISPR-Cas9 technology, which has been recently demonstrated in editing genes in cells and organisms. CRISPR-Cas9 technology has been successfully used for many purposes, including basic studies of gene function, agriculture, and medicine to increase our knowledge of disease processes and their potential future therapies. So far, most binding trials were typically performed at 37 °C.

As a further step to advance this platform into the forefront of biomedical and analytical biotechnology, scientists of Raman Research Institute (RRI), an autonomous institute of the Department of Science and Technology (DST), have explored temperature-dependent binding and release of cleaved products by the Cas9 enzyme. Serene Rose David, Sumanth Kumar Maheshwaram, Divya Shet & Mahesh B. Lakshminarayana, under the guidance of Dr. Gautam V. Soni, have demonstrated that the Cas9 enzymes strongly bind to the target at very low temperatures and remains bound to the cleaved DNA products even after the enzyme has done its job. Subsequently, the bound products were released in a controlled fashion using high temperature or chemical denaturant (that make proteins and DNA lose their 3-dimensional structure and become non-functional). The research published in the Scientific Reports journal of the Nature Portfolio expands possible application of the Cas9-based genetic toolbox to a previously unexplored temperature range that would be compatible with long-term storage of biological samples. Their observations on high efficiency of Cas9 binding to target at very low temperatures also provide opportunities to edit genomes of the less explored organisms called cryophiles with an optimal growth temperature of 15°C. The results on Cas9-DNA binding and release mechanics will provide valuable insights for developing temperature-dependent applications of the CRISPR-Cas9 technology. It also builds a quantitative understanding of product release mechanism of this enzyme system.

PIB,NOV3,2022

An indigenous technology from IIT Madras can now produce new-generation super-abrasive tools

A newly developed technology can now produce new-generation multi-point/single-layer superabrasive tools for advanced grinding applications to meet high productivity and energy-efficient material removal requirements. The tools produced also have enhanced tool life. Grinding industries have aired their voices for developing advanced superabrasive cBN/diamond tools that meet high productivity and energy-efficient material removal requirements and customization based on local needs.

A research team led by Dr. Amitava Ghosh at IIT Madras has used advanced chemical bonding technology with an application-specific novel formulation of filler material and controlled spacing of grits on the tools by an indigenously developed semi-automatic grit-printing device. The team recommends application-specific-advanced coatings to develop such new-generation superabrasive tools. The novel formulation offers an excellent blend of strength, wear resistance, and wetting characteristics (ability to spread well in a liquid state with low contact angle on solid superabrasives during brazing). The grit-planting (planting/placing of grits in pre-defined co-ordinate position on grinding wheel's working surface) setup allows a manufacturer to print grit in customised pattern to suit the requirement of an application. The recommended coating enhances the durability of the bond, thus adding life to the developed tools.

In a nutshell, these superabrasive tools can be produced using active brazing technology with remarkably striking attributes of high crystal exposure above bond level. The joint strength and wear-resistant characteristics of bond of these tools are superior to those of their commercial counterparts. These tools can withstand more grinding force, offer significantly higher tool life, and execute load-free grinding of advanced materials with an extremely high material removal rate. This indigenous tool supported by the Core Research Grant (CRG) of the Science and Engineering Research Board (SERB), a statutory body of the Department of Science and Technology (DST), offers a competitive cost with a superior quality tool, which is also tailor-made as per the needs of industries like aerospace, automobile, mining, and dental surgery. The technology can produce new-generation tools with versatile geometries. The prototypes of various tools have been developed in the laboratory and are being experimentally test-simulated under industrial conditions. This innovative route of showcasing the novel pathway of manufacturing superabrasive tools has been published in "Journal of Manufacturing Process" recently, and patents filed are under review for approval.

This technology which fits the requirements of Make-in-India National Mission is under lab validation and is near-ready to be taken up by a start-up or any industry for a full-scale launch. The application-specific indigenous formulation of active fillers for joining superabrasives to metal substrates through state-of-the-art active-brazing technology is a critical novelty that may be exploited for large-scale manufacturing industries.

PIB,NOV4,2022

Union Minister Dr Jitendra Singh inaugurates the Centre for Metabolic & Endocrine Disorders at Symbiosis University Hospital & Research Centre in Pune. Dr Jitendra Singh, a renowned Diabetologist says, lifestyle management plays an essential role in managing type 1 diabetes. Union Minister for Science and Technology, Dr Jitendra Singh today inaugurated the Centre for Metabolic & Endocrine Disorders at Symbiosis University Hospital & Research Centre in Pune today.





Dr Jitendra Singh, who is also a renowned Diabetologist and the Life Patron of the coveted RSSDI (Research Society for Study of Diabetes in India) described the New Centre as a timely and much needed one in view of the increasing incidences of lifestyle diseases and metabolic disorders. The Centre would focus on preventive screening of the most common disease – diabetes. The entire Symbiosis Aarogya Dham is located at the scenic campus of the Symbiosis International University at Gram Lavale, Pune. The medical college and its attached Symbiosis University Hospital and Research Centre has state-of-the-art infrastructure and facilities.

Dr Jitendra Singh said, over the last two decades, India has seen a surge in Type 2 Diabetes Mellitus, which has now acquired pan-Indian proportions. He said, Type 2 Diabetes, which was till two decades ago prevalent mostly in South India, is today equally rampant in North India and at the same time, it has also moved from metros, cities and urban areas to rural hinterland.

Quoting from the recently released guidelines by Indian Council of Medical Research, Dr Jitendra Singh said, the past three decades witnessed a 150 per cent increase in the number of people with diabetes in the country. He said, the main concern is the progressive lowering of the age at which type 2 diabetes is being diagnosed, with the disease prevalence becoming apparent in the age group of 25-34 years in both urban and rural areas.

Dr Jitendra Singh said, lifestyle management plays an essential role in managing type 1 diabetes, and understanding the effect of diet and physical activity on glycemia is essential for optimal management of the disease. The Minister pointed out that even during the pre-COVID era, it had been proven with evidence that in the treatment of non-communicable diseases, like for example, Diabetes-Mellitus, the dose of insulin or oral anti-diabetic drugs could be brought down with the adjuvant practice of certain Yoga Asana and lifestyle modifications available in Naturopathy.

Dr Jitendra Singh also informed that under the Free Drugs Service Initiative of NHM of Union Ministry of Health and Family Welfare, financial support is provided to States/UTs for provision of free essential medicines including insulin for poor and needy people including children. Furthermore, quality generic medicines including insulin are made available at affordable prices to all, under 'Jan Aushadhi Scheme', in collaboration with the State Governments. Moreover, Government Hospitals provide free of cost treatment. The treatment for in-patient care is also available under Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY) for 10.74 crore families eligible under AB-PMJAY as per Socio Economic Caste Census (SECC) database 2011.

Referring to Prime Minister's revolutionary announcement of the "National Digital Health Mission" from the ramparts of the Red Fort on 15th August, 2020, Dr Jitendra Singh said, technology will be used prudently to reduce the challenges in treatment. He quoted Modi as saying, "Every Indian will be given a Health ID. This Health ID will work like a Health Account of every Indian. This account will contain your details of every test, every disease, the doctors you visited, the medicines you took and the diagnosis. We are devising a system which will help each and every citizen to make a better and informed decision".

The Symbiosis Centre for Metabolic & Endocrine Disorders is equipped with body composition machine, skinfold thickness measurement caliper, biothesiometer for early detection of neuropathy, handheld vascular Doppler, podiascan etc, while the nutritionist and nurse diabetic educator will be available to counsel the patient and their relatives for ensuring right kind of diet and its significance. The main focus at the centre is to prevent complications and ensure patients are guided to maintain a good lifestyle.

All allied specialists like Cardiology, podiatric surgeon, neurologist, ophthalmologist all are available within the centre to ensure end to end services. Moreover, another major lifestyle concern is Obesity and the centre aims to provide both non interventional and surgical remedies for such patients. Apart from diabetes and obesity, the centre also would manage patients with thyroid disorders, Poly Cystic Ovarian Syndrome (PCOS) and other metabolic and endocrine disorders. The presence of sister institutes within the campus like the Symbiosis Institute of Technology, Symbiosis School of Biological Sciences and the Research Centres such as Symbiosis Centre for Stem Cell Research (SCSCR), Symbiosis Centre for Medical Imaging Analysis (SCMIA), Symbiosis Centre for Emotional Wellbeing (SCEW), Symbiosis Centre for Applied Artificial Intelligence (SCAAI), Symbiosis Centre for Behavioural Studies (SCBS), Symbiosis Centre for Nanoscience and Nanotechnology (SCNN) & Symbiosis Centre for Waste Resource Management (SCWRM) will assist in the strong focus on academics and research.



## ENVIRONMENT AND CLIMATE

PIB,NOV2,2022

### CAQM Holds Review Meeting To Take Stock Of The Implementation Of Stage III Of GRAP In Delhi NCR

CAQM held a meeting with implementing agencies/ bodies of the NCR Districts of Haryana, Rajasthan and Uttar Pradesh today in continuation of yesterday's review meeting with Delhi to take stock of the status of implementation of Stage III of the Graded Response Action Plan (GRAP) in the entire National Capital Region in addition to actions under Stage I and Stage II, . These NCR Districts were further reiterated to enhance the implementation of Stage I, II & III under GRAP with stringent actions including heavy penalties against gross defaulters flouting the Statutory Directions of the Commission.

The review meeting was primarily focused on enhancement of water sprinklers including use of fire tenders, round-the-clock mechanical sweeping of roads, augmentation and increased utilisation of smog guns at Construction & Demolition (C&D) sites, effective waste management, improved vigilance against waste burning and strict penal actions, ensuring use of only approved cleaner fuels in industries, enforcing ban on mining activities, issuance of challans against vehicles not running with PUCC, stringent actions against dust generating activities, drive against the use of coal in tandoors, etc. "A positive impact and improvement is likely to be seen in the air quality of NCR in the coming days because of effective steps and stringent actions taken under GRAP", said Dr. VK Soni, Member of the GRAP Sub-Committee .

PIB,NOV4,2022

### CAQM holds review meeting to assess implementation of directions to restrict farm fires

Reviewing the status of implementation of measures directed to restrict farm fire counts in Punjab, the Commission for Air Quality Management in NCR & Adjoining Areas (CAQM) held a meeting with the Chief Secretary and Deputy Commissioners of 22 Districts of Punjab except Pathankot (no farm fire incidents reported). The primary focus of the review meeting was to assess the on-ground implementation of directions and reiterate the need for immediate intensification of actions to put a halt to the sudden spike in stubble burning cases seen in the last few days in Punjab. The Chief Secretary and Deputy Commissioners of the 22 Districts of Punjab were reminded of their earlier commitments of drastically bringing the farm fire counts in 2022 as compared to last year.

The Deputy Commissioners of 10 Districts namely Amritsar, Barnala, Bhatinda, Firozpur, Jalandhar, Kapurthala, Ludhiana, Sangrur, Tarn Taran and Patiala where more than 1,000 fire counts are reported, were specifically advised to pay special attention and focus on the implementation of the action plan. During the review meeting, the Chief Secretary and Deputy Commissioners of the 22 Districts of Punjab assured that they will put their best foot forward to substantially bring down the rising farm fire incidents in Punjab. They also assured that a decline in stubble burning incidents is expected to be seen in the coming days.

PIB, NOV 4, 2022

Union Minister of Environment, Forest and Climate Change, Shri Bhupender Yadav to lead Indian delegation to COP 27

India committed to domestic action and multilateral cooperation on climate change

India looks forward to substantial progress on discussions related to climate finance and clarity on its definition

Strengthening of the financial mechanisms of UNFCCC imperative to meet the climate finance delivery goals

Progress on Adaptation and loss and damage to complement each other Progress on actions, indicators and metrics needed on the Global Goal on Adaptation. India to invite all countries to join LiFE movement – Lifestyle for Environment, a pro-people and pro-planet effort

COP 27 rightfully named as the COP of “Implementation”

Union Minister of Environment, Forest and Climate Change, Shri Bhupender Yadav will be leading Indian delegation to attend the 27th Session of Conference of Parties of the UNFCCC (COP 27) scheduled to be held at Sharm El-Sheikh, Egypt from 6-18 November, 2022. India is fully engaged with the process and is supportive of the efforts by Government of Egypt for substantive outcomes at COP 27.

In the 56th Session of the Subsidiary Bodies held in June 2022 in Bonn, developing countries made it clear that UNFCCC is the centre of the collective and multilateral response to the issue of climate change. There must be a faithful, balanced and comprehensive implementation of the Convention and the Paris Agreement, in accordance with its goals and principles.

India looks forward to substantial progress on the discussions related to climate finance and clarity on its definition. As it is a saying that “what gets measured gets done”, more clarity is needed on the definition of climate finance for the developing countries to be able to accurately assess the extent of finance flows for climate action. While the Standing Committee on finance will submit a report on the various definitions, we hope to have good deliberations on this to arrive at a common understanding. The interpretation of the term must be in line with the commitments made by the countries on climate finance in the Convention and its Paris Agreement.

The goal of USD100 billion per year of climate finance by 2020 and every year thereafter through till 2025 is yet to be achieved. Due to lack of common understanding, several estimates of what has flown as climate finance are available. While the promised amount must be reached as quickly as possible, there is a need now to substantially enhance the ambition to ensure adequate resource flow under the new quantified goal post-2024.

The discussion on the new collective quantified goal in the ad-hoc working group must focus on the quantity of the resource flow and also on the quality and scope. Issues relating to access to and suggestions for improvement in the function of the financial mechanisms are also important. Besides this, improvement in transparency to ensure appropriate oversight of the quantum and direction of flows is imperative. The Ad hoc working group must provide advice/ suggestions covering all the above aspects. Strengthening of the financial mechanisms of UNFCCC and its operating entities is imperative to meet the climate finance delivery goals. There needs to be a greater discussion on this as resources available to them should be utilized well. The SCF could also play an important role in assessing the shortcomings and may suggest appropriate measures to address them. The Egyptian Presidency of COP27, which is also a member of the Like Minded Developing Countries, has rightfully named COP 27 as the COP of “Implementation”. India welcomes this step as over the last twelve months the world has seen the widening gap between the statements by developed countries at COP 26 in Glasgow and the reality of their actions.

India will support the Egyptian Presidency, for a plan of action that answers the needs of developing countries. Adaptation and loss and damage are two issues at the centre of attention, and a progress on these two issues will complement each other.

Loss and damage must also be on the agenda of COP27 and there must be specific progress on the issue of loss and damage finance. The existing financial mechanisms, like GEF, GCF and Adaptation Fund, under the Convention have not been able to mobilise or deliver funds for loss and damage due to climate change. These mechanisms are under-funded; accessing funding is cumbersome and time-consuming; and most of the funding is for mitigation. Adaptation funding is highly inadequate and loss and damage funding is perhaps none at all. These are the circumstances based on which G77 and China has proposed adoption of an agenda item on loss and damage finance. It is the time that this issue is accorded prominence on the climate agenda that it rightfully deserves. On the Global Goal on Adaptation, there needs to be significant progress on actions, indicators and metrics. There must not be any hidden agenda of mitigation, especially in the form of nature-based solutions, in the name of co-benefits. The Work Programme on Enhanced Ambition in Mitigation and Implementation cannot be allowed to change the goal posts set by the Paris Agreement. The GST process and the other mechanisms of the Paris Agreement, including enhanced NDCs and submission of the long-term low emissions development strategies, are sufficient. In the Mitigation Work Programme best practices, new technologies and new modes of collaboration for technology transfer and capacity building may be discussed fruitfully.

On the issue of finance, a discussion on Article 2.1 (c), a sub-clause of article 2, cannot be opened as a standalone COP27 agenda item at this stage. Article 2(1) (c) has to be read in conjunction with entire article 2 as well as article 9 on climate finance. Reaching the USD 100 billion per year goal must come first, and the developed countries must be asked to show the roadmap for the same. India will emphasize again on its invitation to all countries to join the LiFE movement – Lifestyle for Environment, a pro-people and pro-planet effort that seeks to shift the world from mindless and wasteful consumption to mindful and deliberate utilization of natural resources.

India is committed to both domestic action and multilateral cooperation on climate change, and will continue to fight all global environmental concerns in the call to protect humanity's planetary home. But global warming also warns that equity and international cooperation, leaving no one behind, hold the key to success, where the most fortunate must lead the way.

STATESMAN, NOV 4, 2022

Bhupender Yadav to lead Indian delegation to COP-27 in Egypt

India is fully engaged with the process and is supportive of the efforts by the government of Egypt for substantive outcomes at COP-27. Union Minister of Environment, Forest and Climate Change Bhupender Yadav will lead the Indian delegation to the 27th session of the United Nations Framework Convention on Climate Change (COP-27) scheduled to be held at Sharm El-Sheikh in Egypt from 6-18 November. India is fully engaged with the process and is supportive of the efforts by the government of Egypt for substantive outcomes at COP-27.

In the 56th Session of the subsidiary bodies held in June 2022 in Bonn, developing countries made it clear that UNFCCC is the centre of the collective and multilateral response to the issue of climate change. There must be a faithful, balanced, and comprehensive implementation of the Convention and the Paris Agreement, in accordance with its goals and principles.”India looks forward to substantial progress on the discussions related to climate finance and clarity on its definition,” the Ministry of Environment said. It said more clarity is needed on the definition of climate finance for developing countries to be able to accurately assess the extent of finance flows for climate action.

”While the Standing Committee on Finance will submit a report on the various definitions, we hope to have good deliberations on this to arrive at a common understanding. The interpretation of the term must be in line with the commitments made by the countries on climate finance in the Convention and its Paris Agreement,” the ministry added. The goal of \$100 billion per year climate finance by 2020 and every year thereafter through 2025 is yet to be achieved. Due to a lack of common understanding, several estimates of what has flown as climate finance are available. While the promised amount must be reached as quickly as possible, there is a need now to substantially enhance the ambition to ensure adequate resource flow under the new quantified goal post-2024.

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PIONEER, NOV 5, 2022

Winter is coming

Politicians are big on promises but fail to ensure something as basic as clean air

In the famous TV series Game of Thrones, ‘winter is coming’ is uttered with a sense of foreboding about the impending dangerous times. In north India, too, the onset of winter fills people with dread — not of some fiendish creatures but of the air pollution that soars in the first few weeks of the season. The air quality index (AQI) rises threateningly; often the national Capital becomes a gas chamber. This results in... not efforts to make the air clean, but with experts suggesting remedial measures, courts scolding the authorities to do something and, most painfully, a political slugfest in which parties and leaders trade allegations and counter-allegations. This time, too, it’s no different. Air pollution is a national crisis, with many parts of north India recording severe air pollution, Delhi Chief Minister and Aam Aadmi Party boss Arvind Kejriwal said on Friday as the AQI in Delhi hit ‘severe’ category for the second consecutive day. He was addressing a press conference with his Punjab counterpart Bhagwant Mann. “We take full responsibility for increasing farm fires in Punjab,” Kejriwal said, but expressed helplessness as his party’s Government in Punjab has been there for just six months. Is it any different from the Narendra Modi Government blaming decades of Congress rule for the national problems? Or the Congress blaming the British before it for poverty? And, typically, he added: “We have taken steps to control it. Stubble burning will come down by next year.” In other words, don’t worry about the present; the future is bright; achhe din will arrive soon.

In the meantime, the AAP Government in Delhi has ordered shut primary schools and banned the entry of trucks. There already are restrictions on construction and demolition activities; the State Government is also reportedly contemplating bringing back the odd-even scheme to check pollution. Secondary and higher secondary schools will remain open but without outdoor activities. These are all short-term, fire-fighting measures; neither the AAP nor the Central Government has come up

with anything that can address the major issue. In its World Air Quality Report 2021, IQAir, a Swiss firm, said that Delhi was the most polluted Capital and 63 out of top 100 polluted cities in the world were in India. “No cities in India met the WHO air quality guideline of 5 µg/m<sup>3</sup>. In 2021, 48 per cent of India's cities exceeded 50 µg/m<sup>3</sup>, or more than 10 times the WHO guideline,” the report said. Addressing the inaugural function of Invest Karnataka 2022 on Wednesday, Prime Minister Narendra Modi had urged global investors to put money into India: “Investing in India means investing in inclusion, investing in democracy, investing for the world, and investing for a better, cleaner and a safer planet.” A better, cleaner and safer planet is a good idea, as also is the PM’s appeal to invest in India, but that also presupposes a cleaner environment. That, unfortunately, is not happening.

PIONEER,NOV5,2022

The scary wages of speciesism

Hiranmay Karlekar

The scary wages of speciesism

With millions of animal and plant species under threat, the coming human extinction could well be caused by plundering the world and its environment

The current uproar over stray dogs attacking humans is a part of the human-animal conflict worldwide. This conflict, in turn, is part of growing human activity on earth which is hurting both human and non-human living beings and driving increasingly numerous categories of the latter to extinction. According to Professor Josef Settele (Germany) who co-chaired the Global Assessment Report on Biodiversity and Ecosystems Services at the seventh plenary session of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (Paris, April 29-May 4, 2019), along with Professors Sandra Diaz (Argentina) and Eduardo S Brondizio (Brazil and USA), “Ecosystems, species, wild populations, local varieties and breeds of domesticate plants and animals are shrinking, deteriorating or vanishing. . . . This loss is a direct result of human activity and constitutes a direct threat to human well-being in all regions of the world.”

The report states, one “million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history”. The World Wildlife Fund’s Living Planet Report 2022 reveals an average decline of 69 per cent in species populations since 1970. Not surprisingly, people are talking of the world being in the midst of the sixth great extinction till date. Elizabeth Kolbert wrote in *The Sixth Extinction: An Unnatural History*, “Very, very occasionally in the distant past, the planet has undergone change so wrenching that the diversity of life has plummeted. Five of these ancient events were catastrophic enough that they’re put in their own category: the so-called Big Five. In what seems like a fantastic coincidence....the history of these events is recovered just as people come to realise that they are causing another one.”

The losses referred to by Professor Settele is a result of humans treating the entire world and its environment as colonial rulers treated their colonies — exploiting and plundering these at will and treating native inhabitants as second-class citizens at best and sub-human beings at worst, in the same way white humans treated their coloured counterparts. In his landmark work, *Animal Liberation: A News Ethics for Our Treatment of Animals*, Peter Singer wrote, “This tyranny [of human over non-human animals] has caused and today is still causing an amount of pain and suffering that can only be compared with that which resulted from the centuries of tyranny by white humans over black humans. The struggle against this tyranny is a struggle as important as any of the moral and social issues that have been fought over in recent years.”

The tyranny Singer mentions is a result of speciesism, a term first used by Richard D. Ryder in a pamphlet titled *Speciesism* in 1970. The term connotes a mindset that membership of the category *Homo Sapiens* is the critical criterion and provides one the morality-based protection which is denied to all other species of living beings. Singer elaborates that the term stands for an “attitude of bias towards interests of one’s own species and against those of members of other species”. Singer says, “The speciesist allows the interests of his own species to over-ride the greater interests of members of other species,” and adds, “Most human beings are speciesists” and that the “overwhelming majority of humans” takes “an active part in, acquiesce in, allow their taxes to pay for practices that require the sacrifice of the most important interests of other species in order to promote the most trivial interests of their own species”. Singer explores deeply the terrible exploitation of animals — inflicting intense pain and suffering on them — by humans in areas like breeding them in factory farms for slaughter (keeping them under the most horrible conditions while they are alive) and subjecting them repeatedly, for prolonged periods, to experiments and testing of products on them. In the case of the latter, he says, citing numerous experiments, “The conclusions of the experiments cited show clearly enough that experimental psychologists have put a lot of effort in telling us in scientific jargon



what we knew all along, and what we could have confirmed in more harmless ways with a little thought.” He further asks, “Should hundreds of animals suffer so that a new kind of lipstick or mouthwash can be put on the market?”

The speciesist attitude towards non-human living beings conduces to their extinction through the destruction of their habitats through the construction of roads, railway lines, human settlements and industrial establishments. Encroachments into their habitat also bring humans into closer contact with them, causing growing human-animal conflicts. The result is the extinction of animals we have been talking about. Animals being a vital part of the ecological support system that sustains human existence, their extinction will also pave the way to human extinction. Those inclined to smirk at this thought, should remember what Desmond Morris wrote in *The Naked Ape: A Zoologist’s Study of the Human Animal*, “We tend to suffer from a strange complacency that this can never happen, that there is something special about us, that we are somehow above biological control. But we are not. Many exciting species have become extinct in the past and we are no exception.”

(The author is Consulting Editor, *The Pioneer*. The views expressed are personal.)

INDIAN EXPRESS, NOV 6, 2022

Need to clear the fog behind pollution

Last week, the national capital again recorded a string of bad air days, with Delhiites looking out of their windows on Thursday morning to see a blanket of grey – that day, the 24-hour average Air Quality Index touched 426.

Dr Gufran Beig

In 2010, when India hosted the Commonwealth Games (CWG) in Delhi, I was given the responsibility to lead SAFAR (System of Air Quality and Weather Forecasting and Research), a project conceived, designed, and developed under the guidance of the Indian Institute of Tropical Meteorology and then secretary of Ministry of Earth Sciences, Dr Nayak. While my team and I successfully launched the project, air quality, a major aspect of our research, received scant attention in the media due to a lack of awareness. Despite frantic efforts by our team, air pollution was a subject that barely got any attention in newspapers and television channels. Until, of course, it became virtually difficult to breathe.

But since then, we have covered considerable ground, a measure of which can be gauged by a statistic – in 2010, if 20 calls to media organisations by SAFAR yielded a small news item, if at all, in 2022, we have had to make no calls but the subject of pollution and air quality has been getting blanket coverage.

Last week, the national capital again recorded a string of bad air days, with Delhiites looking out of their windows on Thursday morning to see a blanket of grey – that day, the 24-hour average Air Quality Index touched 426. AQI between 401 and 500 is considered ‘severe’ and can affect even healthy people and seriously impact those with existing diseases. We are today standing on the edge, realising the adverse impact of elevated concentrations of pollutants on our health. We often witness thick, black smoke belching out of the exhaust pipes of vehicles, swirls of dust, ash and soot from burning garbage, dry leaves, wood and stubble, and smokestacks at factories, power plants and auto paint shops.

SAFAR performs a major role in providing air quality forecasts along with precautions and advisories to the public in a simple and user-friendly format. Some particles suspended in the air are large enough to be seen, others are so small that they can only be detected with an electron microscope. The most dominant air pollutant in metro cities is PM 2.5, which are particles having a size less than 2.5 micrometres. The air quality index (AQI) in Delhi as well as most parts of India improves during the monsoon as PM 2.5 gets washed off. In winter, stagnant weather patterns (calm winds) and falling temperature combined with an increase in emissions due to stubble burning or fireworks during the festive season lead to dense grey smog during October-November. The smog caused due to pollution combines with the fog in December-January, enveloping many Indian cities, reducing visibility and forcing flight cancellations/delays.

The smog also causes respiratory distress such as cough and nose irritation. There is no discernible trend in Delhi’s air quality if data from the past 12 years is scientifically analysed, though a slight decline is noticed after 2015. The annual PM 2.5 average in Delhi is hovering between 90-100  $\mu\text{g}/\text{m}^3$ . However, the alarming part is that the frequency and duration of extreme pollution events have been increasing in recent years. It is, for sure, linked to meteorology and transboundary transport, but the bigger and more serious question is whether these events are manifestations of climate change.

Currently, each one of us is trying to be a part of the ambitious “Swachh Bharat Mission”. We have enthusiastically helped in keeping our surroundings such as roads, offices, public places etc. clean. But few of us are aware of the quality of the air we breathe. We don’t know what goes inside our lungs when we take 28,000 breaths and inhale 12,000 litres of air per day. But is there anything you can do except drink more water to help the body discharge the toxins? Yes, you can. You can help

reduce combustion by conserving energy in your home and at the workplace. Remember the regulations for open burning; make sure that your vehicle is serviced periodically; and think about alternative ways to travel such as walking, biking, taking the bus, or ridesharing. If there is dust, smoke, or any other air quality issues near your home, school and office, please educate people about it.

## CURRENT EVENTS

PIB,OCT31,2022

Vice President urges bureaucracy to take the lead in making India a developed nation during the ‘Amrit Kaal’

VP calls upon civil servants to abide by the Constitution irrespective of political dispensations

Vice President attends 68th Annual General Body Meeting of Indian Institute of Public Administration

The Vice President, Shri Jagdeep Dhankhar today called upon civil servants to take the lead in making India a developed nation during the ‘Amrit Kaal’ over the next 25 years. He suggested that they go by the spirit of the Prime Minister’s principle of “Minimum Government - Maximum Governance”, observing that ‘it is not a mere slogan, but the need of the hour’. Shri Dhankhar, who is also the President of Indian Institute of Public Administration (IIPA), was attending its 68th Annual General Body Meeting in New Delhi today. It also marked the first visit of the Vice President to IIPA after assuming office.

Reflecting on the achievements of IIPA over the year, Shri Dhankhar said that ‘Mission Karmayogi enables an ecosystem that allows every individual in the government to exploit his/her potential. IIPA, with its enormous potential, has to catalyse that change’. The Vice President observed that the Prime Minister’s exhortation of ‘Sabka Saath, Sabka Vikas, Sabka Vishwas, Sabka Prayas’ encapsulates the Indian civilisational ethos and the vision of the Indian constitution makers. He called upon the bureaucracy to make the vision a reality and work towards taking the government’s developmental vision to the last individual.

Shri Dhankhar also urged civil servants, in discharge of their duties, to stick to the Constitutional rulebook, irrespective of the political dispensation in power. “Pernicious tendency of systemic corruption has to be rooted out by the bureaucracy, the civil society and people at large”, he said. Speaking on the occasion, Union Minister, Dr Jitendra Singh said that the future ready bureaucracy needs to tackle the triple problems of aging population, rising income inequality and climate justice.

Lauding IIPA for contributing to the field of Capacity Building very proactively, Dr Singh complimented the institution for conducting more than a hundred offline and online training programmes during Covid-19 pandemic and quickly transforming itself into a powerhouse of Digital Training. During the meeting, the Vice President conferred the Paul H. Appleby Award for

distinguished service to IIPA, Dr. Rajendra Prasad Award for Academic Excellence and other awards to the winners. He also released various publications of the institute.

Dr. Jitendra Singh, Union Minister and Chairman, IIPA, Shri Surendra Nath Tripathi, Director General, IIPA, Shri S. S. Kshatriya, Chairman IIPA Maharashtra Regional Branch, Shri Amitabh Ranjan, Registrar, IIPA and various other dignitaries were present.

**PIB,OCT31,2022**

PIB,OCT31,2022

INDIA WATER WEEK TO BE CELEBRATED FROM 1ST - 5TH NOVEMBER, 2022

PRESIDENT OF INDIA, SMT. DROUPADI MURMU TO INAUGURATE INDIA WATER WEEK ON 1ST NOVEMBER, 2022

THEME FOR IWW 2022: “WATER SECURITY FOR SUSTAINABLE DEVELOPMENT AND EQUITY”

In an effort to raise awareness, conserve and use water resources in an integrated manner, Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India is organizing the 7th edition of India Water Week (IWW) from 1st to 5th November. The platform will be used to elicit ideas and opinions from global level decisions makers, politicians, researchers, and entrepreneurs. The theme of 7th India Water Week is “Water Security for Sustainable Development and Equity”. The five daylong events will bring together experts, planners and stake holders from across the globe. Event to address issues of sustainability of water resources development and management in the line with sustainable development goals

Denmark, Singapore and Finland will be the partner country for IWW 2022

Event will host seminars, panel discussions, exhibitions and cultural programs

Multi- disciplinary dialogue on “Water Security for Sustainable development and Equity” will be one of the major components of the event

Exhibition on technologies and solutions available for the areas under deliberation

The event will be inaugurated by the President of India, Smt. Droupadi Murmu. Her presence will be an inspiration for all to carry out water related challenges and management. The event will also be graced by the Governor, Uttar Pradesh, Smt. Anandiben Patel, Chief Minister, Uttar Pradesh, Shri Yogi Adityanath, Union Minister of Jal Shakti, Shri Gajendra Singh Shekhawat, Ministers of State for Jal Shakti, Shri Prahlad Singh Patel and Shri Bishweswar Tudu.

The event will address the issues of sustainability of water resources development and management in the line with sustainable development goals. The event will host conferences with seminars, panel discussions, side events, exhibitions and cultural programs. Denmark, Singapore and Finland will be the partner country for this event. The event is being organized by the Ministry of Agriculture & Farmers' Welfare, Ministry of Power, Ministry of Rural Development, Ministry of Housing and Urban Affairs, Ministry of Environment, Forest & Climate Change, various state Governments, Expert organizations, PSUs, key International Bodies and Private and Public business groups. The IWW- 2022 will be celebrated with a multi-disciplinary conference and a concurrently running exhibition enriching the theme and showcasing the technologies and solutions available for the areas under deliberation of the meet.

A multi- disciplinary dialogue in form of a conference discussing around the theme of “Water Security for Sustainable development and Equity” will be one of the major components of the event. A large group of international and national persons of eminence will be sharing their experiences in the field of water management. In addition to this, an exhibition will be running parallel supporting the theme and showcasing the technologies, latest development and solutions available for the areas of water management for sustainable development. The exhibitors will also have an opportunity of direct contact with thousands of potential clients, highly qualified visitors, and promotional opportunities to find joint ventures to enable them to expand their business in the rapidly growing India water market and to increase brand visibility/image.

The event will have four Technical Sessions comprising of 10 seminars, 10 panels discussions, Events organized by Ministry of Jal Shakti and divisions like CWC, NMCG, NRCO, NWM and many more. There will be many side events being organized

by Young Professionals, World Bank, School Children, ICID, IWRS, NGOs etc. who are working continuously in direction of conservation and management of this precious natural resource. Also, a special side event will be organized by Denmark

PIB,OCT31,2022

CSIR-NIScPR Celebrates “International Open Access Week-2022”

International Open Access Week is celebrated worldwide to create awareness about the open access scholarly publishing among researchers and publishers. It is celebrated globally during the last full week of October. To highlight the different aspects and opportunities of the Open Access Publishing, the different outreach activities are organized including talks, seminars, symposia, or the announcement of open access mandates or other milestones in open access. In the year 2022, The International Open Access Week, entered in its fifteenth year of celebration. Open Access advocate Mr. M. Madhan delivering the lecture on “Need of Open Access Scholarly Publishing”

CSIR-NIScPR is the one of largest Open Access publishers of India which publishes 15 Diamond Open Access scholarly journals. CSIR-NIScPR neither charges any publication fee to authors nor any subscription fee to the readers. To celebrate the “International Open Access Week”, a lecture has been organized entitled “Non-commercial open access journals: How to sell Diamonds in the rush for (fool’s) Gold” which was delivered by Open Access advocate and information science expert Mr M. Madhan on 31 October 2022 at CSIR-NIScPR, Pusa Campus. He highlighted the need of Open Access scholarly publishing and discussed the challenges of such publishing model. The international status on the diamond open access publishing was also discussed in detail. He highlighted that the scholarly data must be open to all without any political and economic boundaries for the sustainable growth of not only a country but also the whole world. The lecture was followed by a Q&A session.

The session was chaired by Prof. Ranjana Aggarwal, Director, CSIR-NIScPR. Prof. Ranjana Aggarwal elaborated the institute's commitment to support the publishing of the Diamond Open Access scholarly journals. She highlighted that the CSIR-NIScPR is going to play a very crucial role in nation development through its open access scholarly journals.

Prof. Ranjana Aggarwal, Director CSIR-NIScPR addressing the audience

Dr. Meher Wan, Scientist at CSIR-NIScPR welcomed the gathering and Dr. G Mahesh, Chief Scientist & Head, Research Journals Division presented the vote of thanks.

PIB,NOV1,2022

Prime Minister Shri Narendra Modi, in the latest edition of Mann Ki Baat, highlights the importance of various festivals, celebrations and sports in uniting people and bringing out the spirit of 'Ek Bharat Shrestha Bharat'

Prime Minister Shri Narendra Modi, during the 94th Edition of 'Mann Ki Baat' on 30th October, 2022 has highlighted the importance of various festivals, celebrations and sports like Chhath, National Unity Day, Janjatiya Gaurav Divas , Gurupurab, Navratri and National Games in uniting people and bringing out the spirit of Ek Bharat Shrestha Bharat.

The Prime Minister said that 'Chhath', the great festival of sun worship is being celebrated in many parts of the country . The festival of Chhath is an example of 'Ek Bharat- Shrestha Bharat', the Prime Minister said. Today, wherever the people of Bihar and Purvanchal are in any corner of the country, Chhath is being celebrated with great pomp. Chhath is now getting organized on a large scale in different districts of Maharashtra along with Delhi, Mumbai and many parts of Gujarat. The Prime Minister said that he remembers that earlier in Gujarat, Chhath Pooja was not performed to this extent. But with the passage of time, the colors of Chhath Puja have started getting dissolved in almost the whole of Gujarat. Nowadays we see, how many grand pictures of Chhath Puja come from abroad too. That is, the rich heritage of India, our faith, is re-inforcing its identity in every corner of the world.

Talking about the Nation Unity Day, the PM said that on the birth anniversary of Sardar Vallabhbhai Patel, Run for Unity is organized in every corner of the country. This race strengthens the thread of unity in the country, inspires our youth. Prime Minister elaborated that the same sentiment has been seen during our National Games as well. With the theme 'Judega India to Jeetega India', National Games, on the one hand, have given a strong message of unity, on the other, have promoted India's sports culture. The National Games this time was the biggest ever organized in India, the Prime Minister said. 36 sports were included in this, in which, 7 new and two indigenous competitions, Yogasan and Mallakhamb were also included. The PM



said that in Gujarat, the National Games were held during Navratri. While the players also used to participate in the games during the day; in the evening they used to get immersed in the colors of Garba and Dandiya. The way art, sports and culture came together during the National Games in Ahmedabad, it filled all with joy. They also shared a lot of pictures of Gujarati food and Navratri on social media. After all, through games like these, one comes to know about the diverse cultures of India. They equally strengthen the spirit of 'Ek Bharat-Shreshtha Bharat', the Prime Minister said.

PM further said that on the 15th of November, our country will celebrate the Janjatiya Gaurav Divas. The country started this last year to celebrate the tribal heritage and pride on the birth anniversary of Bhagwan Birsa Munda. Bahgwan Birsa Munda had united millions of people against the British rule in his short lifetime. He had sacrificed his life to protect India's independence and tribal culture. There is so much that we can learn from Dharti Aba Birsa Munda. He had always emphasized that we should not forget our tribal culture, we should not go far from it at all. Even today, we can learn a lot about nature and environment from the tribal societies of the country. The Prime Minister reiterated that last year on the occasion of the birth anniversary of Bhagwan Birsa Munda, he had the privilege of inaugurating the Bhagwan Birsa Munda Museum in Ranchi.

PM added that the 8th of November is Gurupurab. As much as the Prakash Parv of Guru Nanak ji is important for our faith, we equally get to learn from it. Throughout his life, Guru Nanak Dev Ji spread light for the sake of humanity. In the last few years, the country has made many efforts to spread the light of Gurus to the masses. We had the privilege of celebrating the 550th Prakash Parv of Guru Nanak Dev Ji on a large scale in the country and abroad. We have to continuously learn from the teachings of our Gurus and remain devoted to them, he said. This day is also Kartik Purnima. On this day, at places of pilgrimages, we bathe and perform service and charity. The PM extended extend warm greetings to everybody on these festivals. PM Shri Narendra Modi has accorded Ek Bharat Shrestha Bharat the pride of place in various editions of Mann ki Baat.

**PIB,NOV3,2022**

President of India inaugurates the Indian Institute of Mass Communication (IIMC) North Eastern Regional Campus at Aizawl

Smt. Droupadi Murmu, the President of India on her visit to Mizoram inaugurates the Campus of IIMC North East located at Mizoram University in virtual mode. The Indian Institute of Mass Communication (IIMC) is an autonomous Institution under the Ministry of I&B.

The IIMC North East Campus began functioning in 2011 from a temporary building made available by Mizoram University. The construction work for the campus began in 2015 and completed in 2019. The total cost is 25 crores. The IIMC permanent campus on the 8 acres of land given by Mizoram University has separate Administrative and Academic buildings along with hostels and staff quarters.

Since its inception, the campus is offering PG Diploma course in English Journalism for which most of the students come from other parts of India and some from the North East States. This year, the Institute takes pride in having a topper in English Journalism for the second time. The Campus also enables its students to secure employments in reputed media organisations across the country through campus placements and their own efforts. Year after year, students are establishing their own niche in well-known media organizations like Doordarshan. From the 2022-23 session, the North East Campus has been chosen to start PG Diploma Course in Digital Media along with two other Campuses of IIMC. This course is started keeping in view the importance and significance of digital media in the present situation. The Institute express gratitude to all the people who has made contribution one way or the other, particularly MZU for providing both Academic and Administrative support ever since it began functioning in the MZU Campus.

Since its inauguration in 2011, the Institute is headed by Shri. LR Sailo, Regional Director, who has decades of experience in the field of public relations and also served as the Director, Information and Public Relation, Govt. of Mizoram, for over twenty years.

The Indian Institute of Mass Communication (IIMC) is a premiere Journalism Institute under the Ministry of Information and Broadcasting. It was inaugurated in 1965 to cater the training needs of media professionals in the country and other developing countries. It has ever since function as a training institute for Indian Information Service and later on started courses for aspiring journalists through competitive entrance examination. The IIMC has expanded and has institutionalized 5 regional campuses in different part of the country with the aim to meet the need of Media education in the country.