



Today's Thought

Neither a wise man nor a brave man lies down on the tracks of history to wait for the train of the future to run over him.
Dwight D. Eisenhower.

**Separate flag and separate Constitution
On the basis of history ?**

Despite Article 370 which gave the provisions of a separate flag and Constitution to Jammu and Kashmir being abrogated under the line that there cannot be two flags and two Constitutions in one country, the NSCN (IM) is insisting on the same, before a final deal is inked with the Government of India. This is what has been stressed in a statement issued by the information and publicity wing of the Naga armed outfit a few days back. The stand of the NSCN (IM) is all that more significant given that the ongoing political dialogue with New Delhi is reportedly at its final stage and giving it more sense of urgency is the reported instruction of Prime Minister Narendra Modi to Interlocutor and Governor of Nagaland RN Ravi to wrap up the dialogue within three months. The instruction was reportedly given just before RN Ravi took over as Governor of Nagaland and in effect this means that the time frame given for the negotiation to wrap up is just a little over two months now. With the Government of India yet to respond to the open statement of the NSCN (IM) or make it known to the public, it is difficult to say how the outcome would be, but it is very likely that the NSCN (IM) has put forward such a proposal in the backdrop of the 'unique history of the Nagas,' a tag or recognition given by the BJP Government when Atal Behari Vajpayee was the Prime Minister. In all probability, it is on the strength of the 'unique history of the Nagas' that the NSCN (IM) has put forward such a proposal despite the fact that the BJP led Government has done away with the separate Constitution and flag of Jammu and Kashmir.

The history of each and every community is unique in its own way, but it is probably on the strength of the recognition given by the Government of India that the NSCN (IM) has raised such a proposition. And this is where it becomes interesting. The tag 'unique history of the Nagas' could have come from the fact that Nagaland was never a part of India before it was taken over by the British, much like many parts of North East India. Moreover it also stands that the immediate foreign neighbour of Nagaland is Myanmar and not Pakistan and this is one point which would not have blown over the heads of New Delhi. Moreover remember the Nagas of Nagaland and elsewhere are tribals or Scheduled Tribes which made Union Home Minister Amit Shah assure that the special provisions given to Nagaland and other North East States would not be negated. It was probably in recognition of all these attributes that the BJP led Government under Vajpayee first gave the tag 'unique history of Nagas' and it is probably on the strength of this tag that the NSCN (IM) has raised their demand. Still too early to say which way the wind will blow, but the NSCN (IM) has already made their stand known and while this may just be symbolic points which remain to be sorted out, as RN Ravi said, to the NSCN (IM), it means something substantial, particularly something which can make them assert their identity.

Green bonus not enough to solve the Himalayan environmental problems?

Debapriya Mukherjee



Image source : Google

Eleven States belonging to Indian Himalayan Region (IHR) sought 'Green Bonus' from the center considering their contribution in environmental conservation and demanded to set up a dedicated Ministry for this region in the presence of Finance Minister and Chairman of the 15th Finance Commission N.K. Singhata a meeting in Mussoorie. Green Bonus practically denotes the money to be given for the effort made by a country, state or community for preservation of green cover that benefits humanity as a whole. This is a new transformative approach to integrating environmental and development concerns in the Himalaya that is the world's youngest and the most fragile mountain range, represents a unique eco-region, rich in natural resources. Forests represent the most important among them and play an important role in the life of the people through the ecosystem services, such as Supporting services (nutrient dispersal and cycling), Provisioning services (food, energy, timber, medicines), Regulating services (carbon stocking, pest & disease control, productivity of the soil and purification of water and air) and cultural services (recreational, scientific, spiritual) and many more. Most importantly, forest coverage in water catchment areas helps to maintain clean and adequate water. The payment demanded by the Himalayan states is reasonable as they are providing this clean water that flows down from the hills to the plains for the benefit of the entire country at the cost of preserving the forests.

Green bonus is technically and logically good idea because the forest surplus states live with a lot of handicaps due to the overbearing existence of forests, its benefit of ecosystem services and environmental amelioration shared by forest deficit states. In these states, more forest cover means poverty, and backwardness. They are forgoing the revenue by not putting up a factory or new commercial places on slope. The opportunities for development are lost due to forest cover and the society suffers. This green bonus practically acts as green security to check further loss of forests. Simply preserving the existing forest or fragmented afforestation based on green bonus is not enough to overcome the prevailing environmental crisis in IHR as environmental quality has already been degraded on account of reckless and senseless urbanization, deforestation and industrialization including mining activities. The loss of forest and prevailing environmental crisis along with climate risk do not fall from the sky. Mainly some development policies and practices coupled with existing social differentiation in the Himalayas exacerbate the impact of hazards on the society and environment. In this piquant situation, this approach demands critical debates around current policies and practices in relation to Himalayan development and sustainability.

Presently in IHR, mountainous cities sprawled into sensitive ecological areas, such as floodplains, water catchments, and steep hillsides, which were prone to natural/ecological disasters. Extending the urbanized area into the edges of nearby high mountains and to the adjacent steeply slopes and even on the top of mountain ranges in IHR is the root cause overcrowding, congestion, water scarcity, air pollution, and associated natural hazards, such as landslides, debris flow, and landslides. In this year, entire nation is in the grip of flood fury as never before. In IHR, particularly Himachal and Uttarakhand, heavy landslide mountains have come down on roads blocking traffic and dam-

aging properties. The rapid transformation from concentration to diffusion and the acceleration of its development breaking the natural barriers through bridges and tunnels imposed constant challenges on the traditional wisdom. The people particularly in IHR cleared their forests in the name of development but the planners of mountainous cities was not sensitive to the mountainous environments and treasure traditional ecological wisdom that respects natural processes. Deteriorating forest cover and increased fragmentation eventually accentuate to habitat loss by causing a decline in many forest as well as faunal species and are the primary causes of ecosystem degradation in IHR. The past decades had witnessed a series of unprecedented ecological, weather related and geotectonic disasters that have highlighted the vulnerability of this fragile region. The Himalayas, which are also described as the Water Tower of Asia, can have downstream consequences across political borders in terms of water related disasters. Despite massive development efforts, poverty (especially in terms of human security and development) remains, while environmental vulnerabilities have increased. The population growth and mountain deforestation particularly ground-holding trees, already caused severe soil erosion that may be presumed to cause downstream flooding. The problem is further aggravated on account of farming onto ever steeper slopes by farmers. These slopes are unfit for sustained farming even with the astonishingly elaborate terracing practiced. No detailed study has been carried out to assess the adverse impact of these urban cities based on a variety of factors of physical and built environments including temperature, noise, air pollution, solid waste, wastewater, vegetation, impervious surface, building height, population density, and accessibility to pollution-affected areas considering the unique mountainous environment that is highly variable in time and space, including their climate, terrain, geology, and ecology. In this context it is pertinent to mention that there is no commonly acknowledged definition or assessment of the prevailing environmental quality and ecological services because of its complexity and inherent interdisciplinary characteristics. The major flaw is that investigations have been

carried on the productivity, diversity, poverty, vulnerability, and sustainability of natural mountain systems but not on the environmental sustainability of mountainous communities. Generalization of the vast complexity of the Himalayas is not realistic because there is no single Himalayan problem and, therefore, no single solution; there were numerous problems and numerous potential solutions. The problems are not primarily environmental; they are socio-economic and, above all, political. The Himalayas are also not a uniform entity. They encompass a range of variations in environmental, social and cultural terms, with some basic elements and uniqueness, such as mountains, ice-fed river systems, remoteness, fragility and marginality, niche environment, and socio-ecological complexity. Another critical issue to solve the Himalayan problems is a lack of recognition of the nexus between water-land-energy-livelihoods and politics. Thereby involvement of any institutions holding particular agenda such as only green cover or protecting the loss of existing forest will become fragmented and disconnected and often fail to understand and address the above interrelated nexus and thus Himalayan challenges go unabated.

Now we are going to face a new Himalayan crisis in the face of changing climate, development trends and persistent socio-political failures in representing and addressing the crisis in ways that lead to resilience and improvement of mountain ecosystems and the livelihoods of the people in IHR. A key challenge lies in the methodological approach to linking science and thereby the present Himalayan problems must be seen through an interdisciplinary lens, blending social and natural science perspectives. Some important issues including the politics of knowledge, crossing institutional boundaries, cross-boundary collaboration, and multi-scale interactions must be addressed. Simultaneously there is an emergent need for locally engaged policymaking and strengthening of local institutions for evidence-based decision-making. A new form of research and development cooperation must be inculcated based on the trans-formative pathway involving more deliberative, demand-driven, outcome-oriented, locally empowering and innovative efforts. There is also a need for more deliberative and cooperative politics, crossing the geopolitical boundaries of the Himalayas. In addition to these, new development around particularly vulnerable areas, especially high mountains and steep slopes, and big rivers and streams, must be rigorously prohibited. Also development activities which may cause natural hazards, such as cut and fill, site grading and terracing, stream breaks, clearance of vegetation, must be minimized as much as possible. The fraction of impervious surfaces in the watersheds prone to natural hazards must be regulated by land-use control measures, according to environmental sensitive analysis. For millennia the Himalaya has been a source of inspiration and they are part of the world's priceless natural and cultural heritage. The security of a very large proportion of humankind may be determined on how the resources of the Himalaya are managed.

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Achieving 100:100:100 and zero HIV transmission is must to end AIDS

Shobha Shukla

It has been 38 years and 1 month since the first case of HIV infection was detected in 1981, reminded Dr Anthony Fauci, Director of US National Institute of Allergy and Infectious Diseases (NIAID) at the 10th IAS Conference on HIV Science (#IAS2019) taking place in Mexico City. Dr Fauci is a recipient of Robert Koch Award and US Presidential Medal for Freedom. Over 5000 delegates from 140 countries have converged at IAS 2019 to address issues around the global response to AIDS. "We have indeed come a long way. Life expectancy for a 20 year old newly diagnosed with HIV was 1-2 years in the 1980s but is now around 53 years if on ART", he shared.

HISTORIC OBLIGATION TO 39 MILLION PEOPLE WHO DIED OF AIDS: We now have the knowledge, expertise and evidence-based tools to prevent transmission of HIV (like Pre-Exposure Prophylaxis (PrEP), Prevention of Parents to Child Transmission of HIV (PPTCT), treatment as prevention, medical male circumcision, condoms, among others) as well as simple to take ART, which allows HIV control for all, said Dr Juergen Rockstroh, Professor of Medicine, University of Bonn, Germany. For him ending the AIDS epidemic is more than a historic obligation to the 39 million people who have died of the disease. It also represents a momentous opportunity to lay the foundation for a healthier, more just and equitable world for future generations.

JUST 17 MONTHS TO BRIDGE THE GAP: Yet, despite all this, as per the latest UNAIDS report, there are 37.9 million people living with HIV (PLHIV) out of which 14.6 million are still not able to

access antiretroviral therapy (ART). In 2018 there were 1.8 million new infections (5,000 new HIV infections each day) - which was just 0.1 million less as compared to 2017. Thus global reduction in new HIV infections are off the 90-90-90 targets for 2020. It has to be brought down to 0.5 million by 2020 in order to achieve the 90-90-90 targets of UNAIDS. In fact, there is a gap of 7.7 million to reach all the three 90s of these targets. And we have just 17 months to bridge this gap. "It is high time to set our eyes, not on just the 2020 targets but on the targets to end AIDS by 2030, which are 100% of people living with HIV must know their status, 100% of people living with HIV must get ART, and 100% of HIV positive people must be virally suppressed and new HIV transmission rate must be zero", said Dr Ishwar Gilada, Governing Council member of International AIDS Society (IAS) and President of AIDS Society of India. While conceding that some places (like Thailand, Malawi, New South Wales, London and San Francisco) have dramatically reduced HIV incidence and mortality, Dr Adebba Kamarulzaman, President-elect of IAS and Dean, Faculty of Medicine, University of Malaya, Malaysia, rued that there are many countries where uptake and scale up of prevention and treatment programmes have been slow. She cited HIV associated stigma, criminalisation of sex work and of men who have sex with men, lack of sustainable funding and political inertia, as the biggest barriers in implement-

ing evidence-based interventions to prevent and treat HIV. Echoing similar sentiments, Dr N Kumarasamy, Director of Infectious Diseases Medical Centre at VHS Hospital, Chennai said that the required science and biomedical tools are available to achieve this target, but challenges around linkages and retention should be addressed.

SEIZE THIS OPPORTUNITY THAT WE HAVE NOW: In the words of Dr Quarraisha Abdoool Karim, Associate Scientific Director, CAPRISA, South Africa and UNAIDS Special Ambassador for Adolescents and HIV: "We have the evidence to achieve HIV control, an important first step. But we need to do much more to realize this goal. We need to sustain and expand current achievements in treatment and enhance prevention efforts; we need to reach those we have been unable to reach; we need local, national and international political commitment; we need partnerships with communities and the private sector; we need innovations to improve current treatment and prevention modalities, and for a vaccine and a cure; and we need an appreciation that investments today will be more cost-effective with massive human capital gains compared to finances that will be needed in the future if current trajectories remain unchanged. We need to seize this opportunity that we have now." And as someone said, it is not simple anywhere but possible everywhere. We are aiming to reach there and we will get there, provided policy makers know the cost of inaction and prevent the epidemic of bad policies from blocking the path that leads to an AIDS free world. Courtesy :Citizen News Service

Science News

How microbes generate and use their energy to grow

Aug 26: How do cells generate and use energy? This question might seem simple, but the answer is far from simple. Furthermore, knowing how microbial cell factories consume energy and how proteins are allocated to do so is crucial when working with industrial fermentations.

Now, researchers have shown that it is possible to evoke a shift in the metabolism from fermentation to respiration of E. coli and baker's yeast by optimizing fermentation conditions. This shift means that the cells can be pushed into producing more internal energy (ATP).

"This information can be used to design new, improved cell factories," corresponding author Professor at Chalmers University of Technology, Sweden, and Scientific Director at The Novo Nordisk Foundation Center for Biosustainability at DTU in Denmark Jens Nielsen says.

Together with first-author Postdoc Yu Chen from Department of Biology and Biological Engineering at Chalmers, Jens Nielsen has studied the metabolism of E. coli and baker's yeast through the use of mathematical models and biological experiments. The research has now been published in Proceedings of the National Academy of Sciences (PNAS).

Cells constantly generate high-energy molecules called ATP from the sugar glucose. ATP is the cellular "food" consumed by the workers -- enzymes -- within cells. The enzymes use this energy to build biomass or do other cellular work. The more ATP available, the better the microbial workhorses perform in fermentations; at least in principle - many other aspects play a part as well.

Using a computational approach, the researchers found out that ATP can be generated by either of two pathways: a high-yielding respiratory pathway resulting in 23.5 ATP's per glucose molecule or a low-yielding fermentative pathway, which only generates 11 ATP's per glucose molecule. The two pathways supplement each other, but the researchers were able to shift the natural balance between the two by changing the conditions of the fermentation and the amount of sugar and protein available. Furthermore, they showed that the high-yielding pathway needs more protein mass than the low-yielding pathway for consuming glucose at the same rate.

They also showed that making some key enzymes perform better meant that the cells changed from doing low yielding fermentative metabolism to breathing through the high yielding respiratory metabolism. AGENCIES

Contd from previous issue

And obviously with no job security also. Not to forget they have to part with significant percentage of their meagre remuneration to their recruitment agents also (perhaps these pimps are the only sector to laugh all the way to bank today)! So previously new recruits in permanent jobs used to start new innings of life by entering into matrimonial bonds after few years; but how many hapless contractual employees can dare to venture in that path! Has this "novel methodology" of contractual employment been adopted to put a break on "population explosion"!

Thus we are witnessing how despite bounty of potential jobs, despite gold mine of able-bodied huge population who can perform the jobs with ease rendering smooth brilliant service to the society be it as peon nurse teacher or judge; we are saddled with ever growing army of unemployed under-employed exploited personnel with no ray of hope in future. With loss of job or shrinkage in income of even an individual, his/her spouse parents or children also suffer. So one can easily imagine how many billions are suffering directly or indirectly in the country due to such shrinkage in job market. In contrast no problem in funds to sponsor religious shrines, festivals, Mass Yoga, Mars Mission, statues, luxurious trains or purchase of ordinary players in

Two years ago, this month, a nine-judge bench of the Supreme Court unanimously held that Indians have a constitutionally protected fundamental right to privacy. It held that privacy is a natural right that inheres in all natural persons, and that the right may be restricted only by state action that passes each of the three tests: First, such state action must have a legislative mandate; Second, it must be pursuing a legitimate state purpose; and third, it must be proportionate, i.e., such state action — both in its nature and extent, must be necessary in a democratic society and the action ought to be the least intrusive of the available alternatives to accomplish the ends.

Prescribing a higher standard: That judgment in Justice K.S. Puttaswamy (Retd) vs Union Of India fundamentally changed the way in which the government viewed its citizens' privacy, both in practice and prescription. It undertook structural reforms and brought transparency and openness in the process of commissioning and executing its surveillance projects, and built a mechanism of judicial oversight over surveillance requests. It demonstrated great care and sensitivity in dealing with personal information of its citizens. It legislated a transformative, rights-oriented data protection law that held all powerful entities that deal with citizens' personal data (data controllers), including the state, accountable. The data protection law embodied the principle that the state must be a model data controller and prescribed a higher standard of observance for the state. The law also recognised and proscribed the practice of making access to essential services contingent on the citizen parting with irrelevant personal information. This law established an effective privacy commission that is tasked with enforcing, protecting and fulfilling the fundamental right to privacy implemented through the specific rights under the legislation. The data protection law also revolutionised the technology sector landscape in the country, paving way for

Population - A National asset
Kajal Chatterjee

astronomical prices! All funds simply extinguish when it comes to recruit personnel, pay salary or pension to them! It is high time instead of taking refuge in the jargon of "population explosion" so as to escape away from their responsibilities and hide their failures in creating jobs or economic opportunities for the youth, the concerned individuals or authorities should accord time to visualise how can this invaluable asset be turned towards positive constructive action both for the sake of the individuals, their families and the country. If retrenchment is followed, even the children of the hapless job losers will have to forsake education and either starve beg or enter the ruthless exploitative market of child labour. If more job openings will be created along with filling up of all vacancies in all sectors; our borders can be protected with more vigilance, our medical centres can provide better service, our educational sector can ensure better teaching, policing in society can be more stringent, people would have more money in their pockets, their children can get highly edu-

cated, increase in purchasing power will increase demand thereby providing that much needed boost to economy and economic inequality will also decrease with all-round prosperity. China to USA have brilliantly used its population strength in Olympic sports always ranking in top grade. More well harnessed population translate to more doctors technocrats scientists artists earning reputation for the country and contributing to the welfare of the international community. Now which path would the concerned authorities adopt is their prerogative, but this excuse of "population explosion" must stop immediately. And last but not the least. Judging one's patriotism by his/her number of children is nothing but highly objectionable and distasteful. Is there any law that exceeding particular number of children is illegal? Reproduction is a matter of absolutely personal domain in the life of the individual or couples. It is highly bizarre to suggest that a criminal with a single child is a "patriot" while an honest upright citizen with say 3 children is "unpatriot"! And those who moan about "population explosion" should remember that their sheer presence itself bears proof of their "indirect contribution" behind that very "explosion" and so there lies nothing to remain "upright" revolving this sensitive issue!

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Privacy no longer supreme
Prasanna S

innovative privacy-aware and privacy-preserving technical solution providers to thrive and flourish, and establishing the country as a global leader in the space. This fairytale would have been the story of the last two years if the government had followed the script. But it did the exact opposite. The judgment in K.S. Puttaswamy effected little change in the government's thinking or practice as it related to privacy and the personal data of its citizens.

National security as reason: It continued to commission and execute mass surveillance programmes with little regard for necessity or proportionality, with justifications always voiced in terms of broad national security talking points. The Ministry of Home Affairs, in December last year, authorised 10 Central agencies to "intercept, monitor and decrypt any information generated, transmitted, received or stored in any computer in the country". This notification is presently under challenge before the Supreme Court. In July last year, it became known that the Ministry of Information Broadcasting had floated a tender for 'Social Media Monitoring Hub', a technical solution to snoop on all social media communications, including e-mail. The government had to withdraw the project following the top court's stinging rebuke. A request for proposal for a similar social media surveillance programme was floated in August last year by the Unique Identification Authority of India (UIDAI), which is presently under challenge before the Supreme Court. The Income-Tax department has its 'Project Insight' which also has similar mass surveillance ends. These are but a few examples.

Data use vs. privacy: The

government has shunned a rights-oriented approach in the collection, storage and processing of personal data and has stuck to its 'public good' and 'data is the new oil' discourse. In other words, personal data in the custody of the state is for the state to use, monetise and exploit in any manner it desires so long as it guards against security incidents such as breaches and unauthorised access — i.e. unauthorised by the government. This convenient redux of the idea of privacy to mere information security appears to inform all its policies. This is evident from this year's Economic Survey as it commends the government for having been able to sell and monetise the vehicle owners' data in the Vahan database and exhorts it to replicate the success with other databases. The Justice Srikrishna committee which has published the draft Personal Data Protection Bill uses a similar language of 'free and fair digital economy', with the digital economy being the ends and the notion of privacy merely being a shaper of the

means — not only misrepresenting the purpose of the bill, but also its history and the mischief that it intended to tackle. The committee made the choices it made despite being aware that the courts are likely to interpret every provision of the legislation purposively, taking note that the purpose is couched in terms of the economy as opposed to the bill having a singular focus on the fulfilment of the right to privacy. As K.S. Puttaswamy ages and steps into its third year, the script is still on the table. A rights-oriented data protection legislation — which includes comprehensive surveillance reform prohibiting mass surveillance and institution of a judicial oversight mechanism for targeted surveillance — and which recognises the principle that the state ought to be a model data controller as it deals with its citizens' personal information; is still possible, one hopes. Courtesy The Hindu
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