

VEDHIK
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ANALYSIS
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FOREWORD

We, at Team Vedhik is happy to introduce a new initiative - "Daily Current Affairs_The Hindu" compilations to help you with UPSC Civil Services Examination preparation. We believe this initiative - "Daily Current Affairs_The Hindu" would help students, especially beginners save time and streamline their preparations with regard to Current Affairs. A content page and an Appendix has been added segregating and mapping the content to the syllabus.

It is an appreciable efforts by Vedhik IAS Academy helping aspirants of UPSC Civil Services Examinations. I would like to express my sincere gratitude to Dr. Babu Sebastian, former VC - MG University in extending all support to this endeavour. Finally I also extend my thanks to thank Ms. Shilpa Sasidharan and Mr. Shahul Hameed for their assistance in the preparing the compilations.

We welcome your valuable comments so that further improvement may be made in the forthcoming material. We look forward to feedback, comments and suggestions on how to improve and add value for students. Every care has been taken to avoid typing errors and if any reader comes across any such error, the authors shall feel obliged if they are informed at their Email ID.

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Kushinagar connect to Sri Lanka

Premier Mahinda's son to lead 125-member team at airport opening by PM Modi

MEERA SRINIVASAN
COLOMBO

When Prime Minister Narendra Modi declares open the Kushinagar International Airport in Uttar Pradesh on October 20, a sizeable Sri Lankan contingent, led by a member of the first family, will be present.

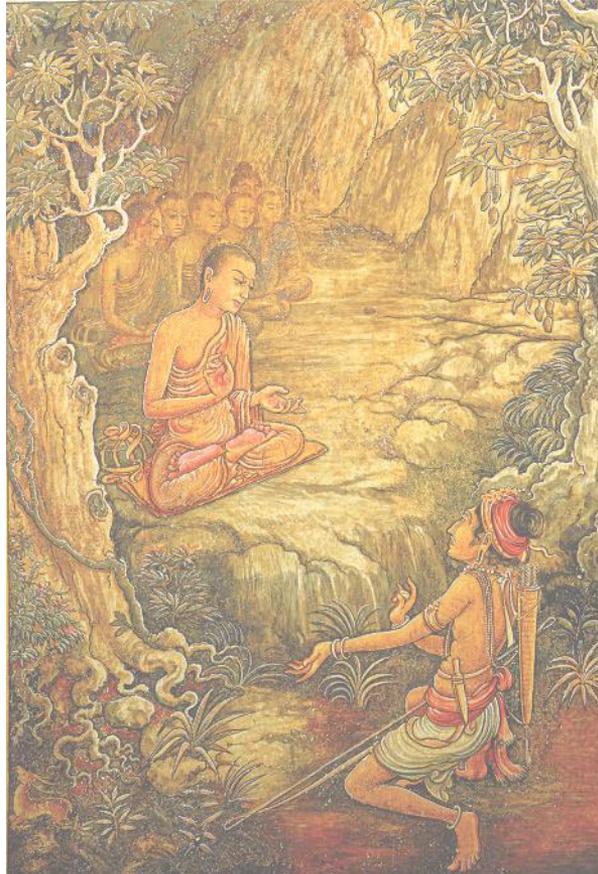
Sports Minister Namal Rajapaksa, nephew of President Gotabaya Rajapaksa and son of Prime Minister Mahinda Rajapaksa, will travel to Uttar Pradesh, along with ministerial colleagues and a group of 100 Buddhist monks to attend the event, according to officials in Colombo.

Buddhist circuit

The airport is expected to provide seamless connectivity to tourists from Sri Lanka, Japan, Taiwan, South Korea, China, Thailand, Vietnam, Singapore and so on. Kushinagar is the centre of the Buddhist circuit, which consists of pilgrimage sites at Lumbini, Sarnath and Gaya. Buddhist pilgrims consider Kushinagar a sacred site where, they believe, Gautama Buddha delivered his last sermon and attained 'Mahaparinirvana' or salvation.

The inaugural flight on Wednesday will land at the airport from Colombo, Sri Lanka, carrying the 125-member delegation of dignitaries and Buddhist monks.

To mark the occasion, Sri Lanka will present to India photographs of two murals painted by renowned Sri



One of the murals, by Sri Lankan artist Solias Mendis, that will be gifted to India on the occasion. ■SPECIAL ARRANGEMENT

Lankan artist Solias Mendis at the Kelaniya Rajamaha Vihara, a popular Buddhist temple near Colombo, officials at the Sri Lankan High Commission in New Delhi told *The Hindu*.

One of the murals depicts 'Arahat Bhikkhu' Mahinda, son of Emperor Ashoka delivering the message of the Buddha to King Devanampiyatissa of Sri Lanka. The oth-

er shows the arrival of 'Theri Bhikkhuni' Sanghamitta, the daughter of the Emperor, in Sri Lanka, bearing a sapling of the 'sacred Bodhi tree' under which Siddhārtha Gautama is believed to have obtained enlightenment.

The gesture comes at a time when Sri Lanka and India have agreed to strengthen ties through their shared Buddhist heritage.

Despite India's known support to the Mahinda Rajapaksa administration in defeating the LTTE, sections among Sri Lanka's southern population remain India-sceptics, wary of the big neighbour who "interfered" in Sri Lanka's ethnic conflict, "sided with Tamils".

Cultural diplomacy

In the decade after the civil war, which coincides with China's growing influence, New Delhi seems keen on recasting its image as a friend, using religious and cultural diplomacy.

When India sent the first consignment of 5 lakh doses of Covishield vaccine to Sri Lanka in January this year, the Indian High Commission in Colombo in a tweet linked its arrival to a "blessed Poya Day", or full moon day considered holy by Buddhists.

Sri Lanka, too, considers promoting shared Buddhist ties a matter of "paramount importance", as was outlined in the Integrated Country Strategy prepared by Sri Lanka's High Commissioner to India.

On the growing emphasis on shared Buddhist ties, senior political scientist Jayadeva Uyangoda said: "A cynic might say this marks the beginning of a soft saffronisation [of bilateral ties], but it signals that India is going to have a more assertive foreign policy stance towards Sri Lanka."

(With inputs from Jagriti Chandra in New Delhi)

A shadow foreign policy for the first time

A document suggesting an alternative foreign policy has been put forth, but will the Opposition consider it?



T.P. SREENIVASAN

India does not have a tradition of shadow cabinets lurking behind the government in power with ready alternative approaches to policy matters. The opposition challenges government policies, but provides no alternatives to be adopted in the event of a change in government. It is only at the time of elections that a manifesto is put forward, but that does not become the policy of the government automatically. The opposition uses think tanks and NGOs to float ideas, which may become part of policy if they become publicly acceptable. Since there has been a consensus on foreign policy, a shadow foreign policy was out of the question. But for the first time, a document has emerged from the Centre for Policy Research (CPR) in the nature of an alternative to the present foreign and defence policies named 'India's Path to Power: Strategy in a world adrift'. It is authored by eight well-known strategists and thinkers.

In 2012, many of the same authors had produced another document, 'Non-alignment 2.0', in the light of the global changes at that time, as a contribution to policymaking, without criticising the policies of the government. But the new government in 2014 had its own ideas and not much attention was given to the study. The present document, however, is in the nature of an alternative to the foreign and defence policies of the Modi government, as some of its tenets are not considered conducive to finding a path to power for India in the post-pandemic world. The eight conclusions are quite logical and reasonable, but the tenor and tone of the paper is one of criticism and need for course correction.

Change in foreign policy

The first term of the Modi government was remarkable for its innovative, bold and assertive foreign policy, which received general approbation. Prime Minister Narendra Modi led from the front and took



PTI

the credit for overcoming the hesitations of history. He laid out his priorities and pursued them with vigour. After his unconventional peace initiatives with Pakistan failed, he took a firm stand and gained popularity at home. His wish to have close relations with the other neighbours did not materialise, but his helpful attitude to them even in difficult situations averted any crisis. He brought a new symphony into India-U.S. relations and engaged China continuously to find a new equation with it. India's relations with Israel and the Arab countries became productive. Mr. Modi's enhanced majority in the second term was partly on account of his foreign policy successes.

It was when the second Modi government dealt with some of the unfinished sensitive matters, which were essentially of a domestic nature (Article 370, citizenship issues and farming regulations), that their external dimensions led to a challenge to its foreign policy. Questions were raised in the West about human rights and the state of democracy in India. The opposition in India began to question the foreign policy postures of the government. The pandemic, the economic meltdown and China's incursion into Ladakh added to the woes of the government.

The cumulative effect of these developments is reflected in the CPR report. It says, "The foundational source of India's influence in the world is the power of its example. This rests on four pillars, domestic economic growth, social inclusion, political democracy and a broadly liberal constitutional order. If these integral pillars remain strong, there is no stopping India... The most significant change in the last decade or so is that we cannot take for granted

the success of India's development model... But the fundamental sources of India's development and international influence look increasingly precarious. We must confront this changed outlook... Nourishing the foundations of India's success requires a conscious political effort, and it is a strategic imperative..."

Set the house in order

This assertion at the beginning of the report is the heart of the report and it is repeated in different forms. In other words, the finding is that domestic issues have impacted foreign policy and, therefore, India should set its house in order to stem the tide of international reaction. "It is important that we acknowledge the perverse impact of domestic political and ideological factors that are driving our foreign policy... Political polarisation and majoritarianism will lead to a diminished India – one that may struggle to meet the challenges and opportunities that lie... ahead," asserts the report. It also says that the confused international order that followed the global crisis saw an "omni-directional Indian foreign policy." These harsh statements are likely to be challenged by the government, which will claim that India has stood true to its own foundational values and there is no "authoritarian model of development".

Once the basic premise is set aside, the report has many positive elements, which will help policymakers to rethink policy. For instance, the report rightly points out that "it would be incorrect and counterproductive for India to turn its back on globalisation..." It also suggests that SAARC should be revived and that India should rejoin the Regional Comprehensive Economic Partnership

and continue its long-standing quest for membership in the Asia-Pacific Economic Cooperation.

The report also stresses the importance of strategic autonomy in today's world where change is the only certainty. As for the India-U.S.-China triangle, the report makes the unusual suggestion that India should have better relations individually with both the U.S. and China than they have with each other.

The report contains detailed analyses on different regions and key countries, but the general thrust is that all is not well with Indian foreign policy and a fundamental change is necessary to meet the present situation. The report concludes that since China will influence India's external environment politically, economically and infrastructurally, there is no feasible alternative to a combination of engagement and competition with China. The approach of the present government is not very different. There is implicit criticism of the Pakistan policy when the report asserts, "as long as our objectives of policy towards Pakistan are modest, resumption of dialogue and a gradual revival of trade, transport and other links are worth pursuing."

A considerable part of the report is devoted to issues relating to defence, the nuclear doctrine, space, cyberspace and the ecological crisis. On the looming environmental disaster, the report states that since India is still at an early stage of its modern development trajectory, it is not yet locked into an energy-intensive pattern of growth. Much of its infrastructure remains to be built. It suggests all is not well with the present strategy for environmental protection and economic development.

The eminent stature of the authors and the CPR will certainly compel detailed studies of the report in the run-up to the next elections and beyond as the time frame suggested for change is the next decade. But the significance of the report is that it reveals the end of the era of consensus foreign policy and presents a shadow foreign policy for the first time in India. It remains to be seen whether any of the opposition parties will adopt it and fight the next election on the platform provided by the report.

T.P. Sreenivasan is former Ambassador of India and Governor for India of the IAEA

Bangladesh violence needs to stop: UN

'Attacks on minority Hindus are against the country's constitutional values'

KALLOL BHATTACHERJEE
SUHASINI HAIDAR
NEW DELHI

The attacks on minority Hindus in Bangladesh are against the values enshrined in its Constitution and Prime Minister Sheikh Hasina's government needs to ensure an impartial inquiry into the incidents, the UN said on Monday. Communal tension continued to remain high in Bangladesh as violence spread to northern district of Rangpur during the weekend.

"Recent attacks on Hindus in Bangladesh, fuelled by hate speech on social media, are against the values of the Constitution and need to stop. We call upon the Go-

vernment to ensure protection of minorities and an impartial probe. We call upon all to join hands to strengthen inclusive tolerant Bangladesh," said Mia Seppo, UN Resident Coordinator in Bangladesh.

The developments of the past several days have already drawn international attention. Sources told *The Hindu* that "all of the community leaders including ISKCON" met the Indian High Commissioner Vikram Doraiswamy at the Indian mission in Dhaka on Monday evening.

The message from the top UN official based in Dhaka was prompted by a nearly week-long spell of commu-

nal violence targeting the minority Hindus during the just concluded Durga puja celebrations. The violence reached Pirganj of Rangpur district during Sunday night when a village of fisherfolks in the area was targeted by a group of arsonists.

Arson attack

Late on Sunday, a large number of properties belonging to the minority community were set on fire by groups of people. The attacks in Rangpur followed the script of the incidents that unfolded earlier in Comilla, Noakhali, Chittagong and other areas.

"The incident in Comilla that triggered the violence was orchestrated by some

people to disturb inter-community ties and defame our government," said Home Minister Asaduzzaman Khan to the media.

A reported incident of desecration of the Quran during the Durga puja celebrations in Comilla town went viral on social media last Wednesday, which quickly triggered mob attacks against puja pandals.

On Monday, the situation remained tense in Chittagong and Comilla where some of the worst communal attacks were witnessed that led to the death of at least four attackers in police firing and two devotees of the ISKCON temple in Noakhali district.

Long-pending trade talks between India, Israel to resume

Jaishankar, Israeli counterpart meet; hold quadrilateral talks with the U.S., UAE

SUHASINI HAIDAR
NEW DELHI

India and Israel agreed to resume long-pending negotiations on a free trade agreement, as External Affairs Minister S. Jaishankar met his Israeli counterpart Yair Lapid in Jerusalem on Monday.

Both also joined a virtual quadrilateral meeting with U.S. Secretary of State Antony Blinken and UAE Foreign Minister Sheikh Abdullah bin Zayed.

The quadrilateral meeting, seen as an outcome of last year's Abraham Accords brokered by the U.S. that saw the UAE and Israel establish diplomatic relations, also underlines India's close relationships with both the West Asian countries and Washington.

Welcoming Mr. Jaishankar, Mr. Lapid said in a tweet, "In the last year, India and Israel have dealt with the COVID-19 pandemic, and have helped one another amidst this crisis. This is how friends and partners behave."

During the bilateral talks,



Stark reminder: External Affairs Minister S. Jaishankar relighting the eternal flame at the Yad Vashem Holocaust Memorial museum in Jerusalem. • AFP

Mr. Jaishankar, who was meeting the recently installed Israeli Government for the first time, said he was confident that the India-Israel relationship, which would enter its 30th year, would "shift gears into a new phase".

He stated, "I am therefore, particularly pleased that just as we came to this visit, our officials have agreed on the resumption of the India-Israel Free Trade negotiations."

The FTA talks would begin in November and concluded by June 2022, he added.

The push for an FTA between the two countries is the latest in a series of attempts to negotiate a trade agreement over the past 14 years.

Lapsed talks

Both in 2007, then Prime Minister Manmohan Singh, and in 2017, Prime Minister Narendra Modi announced that an FTA would be completed, but talks have lapsed over a number of issues.

During the last round of talks, both sides explored the possibility of a limited trade deal or a Preferential

Trade Agreement for about 200 goods, which had also not been concluded. The latest effort for an FTA with Israel comes on the back of the government's recent drive to resume a number of trade negotiations, and the government has thus far committed to resumed talks with the U.K., Australia and the European Union, expressing the hope they would also be concluded in 2022.

During the talks, India and Israel also agreed to mutually recognise each other's vaccination process "in principle", although for the moment Israel will only allow Indians vaccinated with Covishield to travel there, but not those vaccinated with Covaxin, which is still awaiting an Emergency Use Authorisation (EUA) from the World Health Organisation.

Mr. Jaishankar said it was a "great pleasure" that Israel also announced it would join the India-France led International Solar Alliance (ISA), ahead of the next U.N. Climate Change COP26 summit in Glasgow this November.

NCLT gives nod for meet on Future deal

PRESS TRUST OF INDIA
MUMBAI

The National Company Law Tribunal (NCLT) on Monday allowed the creditors and shareholders of Reliance Retail Ventures to hold meetings to seek approval for the firm's proposed ₹24,700 crore deal with the Future Group.

The Mumbai bench of NCLT allowed the application by Reliance Retail's creditors and shareholders to convene meetings to seek approval for the deal.

Reliance Retail Ventures is a subsidiary of Reliance Industries. On June 22, the tribunal had reserved its order on Reliance Retail's plea to seek consensus of the shareholders on the company's deal with Future Group.

Lacking in nutrition

India was ranked 101 out of 116 countries in the recently released Global Hunger Index. It was one among the 31 nations where hunger has been classified as "serious". The country's rank has been on the downward trend since 2016. Four indicators were used to compute the score – share of the population that is undernourished, share of children under five who are wasted (low weight for height), share of children under five who are stunted (low height for age), and the under-five mortality rate. Among these, while wasting has increased compared to 2012, stunting and mortality have reduced. The results of the National Family Health Survey-5 (2019-20) also showed that in the majority of the States for which data were released, stunting and wasting increased compared to the 2015-16 survey round. By **The Hindu Data Team**



Declining trend

India's rank in the Global Hunger Index has consistently worsened in the last 10 years. The country's rank has become quite poor since 2016

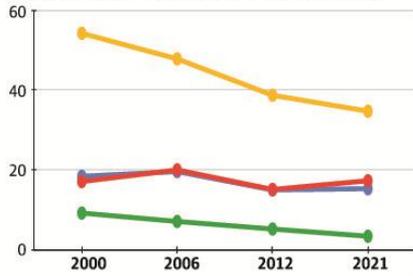
Year	India's rank	Number of countries analysed
2021	101	116
2020	94	107
2019	102	117
2018	103	132
2017	100	119
2016	97	118
2015	80	117
2014	55	120
2013	63	120
2012	65	120
2011	67	122



Nutrition assessment

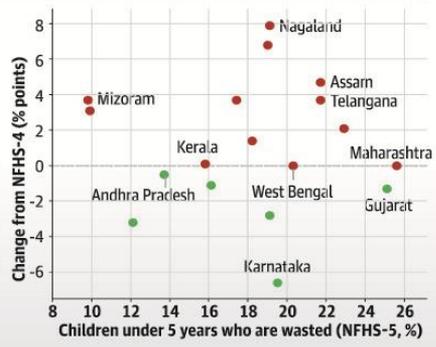
According to the GHI, the prevalence of wasting in children under five in India increased in 2021 compared to 2012, the earlier year for which data are available. On the other hand, the prevalence of stunting in children under five and the under-five mortality rate have consistently declined since 2000

- Under-five mortality rate (%)
- Share of undernourished in the population (%)
- Prevalence of wasting in children under five years (%)
- Prevalence of stunting in children under five years (%)



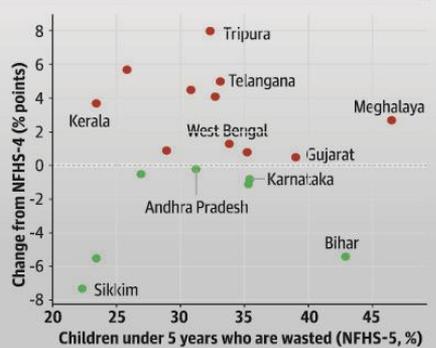
Prevalence of wasting

The chart plots the share of children under five who were wasted according to NFHS-5 (2019-20) against the change from NFHS-4 (2015-16). In 10 out of the 18 States, a higher % of children were wasted in 2019-20 compared to 2015-16. Only six States performed better on this count. No change was recorded in two States



Prevalence of stunting

The chart plots the share of children under five who were stunted according to NFHS-5 (2019-20) against the change from NFHS-4 (2015-16). In 11 out of the 18 States, a higher % of children were stunted in 2019-20 compared to 2015-16.



SOURCE: GLOBAL HUNGER INDEX, NFHS-5, NFHS-4

'Economic activity resurged to a post-COVID peak last week'

Nomura India economists flag supply side risks including coal, power situation

SPECIAL CORRESPONDENT
NEW DELHI

Economic activity hit a fresh post-pandemic high last week, the Nomura India Business Resumption Index signalled, with most indicators showing improvements even as power demand declined from the previous week.

The index rose to an all-time high of 108.8 for the week ended October 17, from 105 in the prior period, Nomura said in a research note. A reading of 100 on the index, which uses February 23, 2020, as its base, relates to the pre-pandemic economic activity level.

While mobility rose sharply, and the labour force



Driving a rebound: Mobility rose sharply in the week ended Oct. 17, labour participation inched up. • GIRI KVS

participation rate inched up to 41.6% from 40.4%, power demand slid 1.7% after a 0.3% uptick in the previous week, Nomura economists Sonal Varma and Aurodeep Nandi wrote in the note.

The economists, however, raised concerns about supply side risks, including the coal and power situation.

Last week, Nomura had warned that if power outages widened, then industrial

output could suffer.

"Even as demand is recovering, supply bottlenecks have emerged as a bigger constraint. Coal shortages are resulting in supply disruptions to non-power customers, while chip shortages have hurt passenger vehicle sales during the festive season. As supply struggles to tango with demand, we see higher inflation as a bigger risk," they noted.

With domestic flights allowed to operate at full capacity from Monday, the transportation sector would get a further boost, the Nomura economists pointed out. Vaccine coverage was enabling reopening, they added.

Private industrial investments set to bounce back, says Crisil

'New cycle to depend on implementation of govt. policy'

SPECIAL CORRESPONDENT
NEW DELHI

India's private industrial investment cycle is poised to bounce back, ratings agency Crisil said in a research note on Monday, citing a rise beyond pre-pandemic levels in Industrial Entrepreneur Memorandum (IEM) filings with the government, the pace of environmental approvals, and the surge in foreign direct investments.

The Production Linked Incentive (PLI) schemes for 13 sectors and the surge in commodity prices will influence fresh private investments, aided by accommodative monetary policies, lower interest rates, rising merchandise exports and

Without the PLI scheme, capex may have taken 2 more years to touch pre-pandemic level

the supply chain diversification underway globally, Crisil projected. The macro and micro triggers for recovering from the collapse in private investments last year include flush global liquidity and healthier corporate balance sheets, it noted.

'New growth drivers'

"Overall, private industrial capex appears to be getting into a whole new cycle after the pandemic hiccup – this time around armed with a new set of growth drivers,"

Crisil's research analysts said in the note, stressing that the new capex cycle will depend on the implementation of government support and policy measures.

Estimating that industrial investments will rise 30% over the period 2021-22 to 2023-24, Crisil said that the PLI scheme had given a 'much-needed booster dose to flailing capex', which may have likely taken almost two more years to touch pre-pandemic levels in its absence.

"Actualisation of the scheme will result in aggregate industrial capex rising 1.3 times through fiscals 2022-2024 in comparison to fiscals 2018-2020," they said.

China's economy stumbles on power crunch, property woes

Q3 GDP grows 4.9% missing forecasts, slowest pace in a year

REUTERS
BEIJING

China's economy hit its slowest pace of growth in a year in the third quarter, hurt by power shortages, supply chain bottlenecks and major wobbles in the property market, raising pressure on policymakers to do more to boost the faltering recovery.

Data released on Monday showed gross domestic product (GDP) grew 4.9% in July-September from a year earlier, the weakest clip since the third quarter of 2020 and missing forecasts.

The world's second-largest economy is facing several major challenges, including the China Evergrande Group debt crisis, and a critical electricity crunch, which sent factory output to



its weakest since early 2020, when heavy COVID-19 curbs were in place.

"The domestic economic recovery is still unstable and uneven," said National Bureau of Statistics (NBS) spokesperson Fu Linghui at a briefing on Monday.

China's economy had staged an impressive rebound from last year's pandemic slump thanks to effec-

tive virus containment and hot overseas demand for the country's manufactured goods. But the recovery has lost steam from the blistering 18.3% growth clocked in the first quarter of this year.

"In response to the ugly growth numbers we expect in coming months, we think policymakers will take more steps to shore up growth, including ensuring ample liquidity in the interbank market, accelerating infrastructure development and relaxing some aspects of overall credit and real estate policies," said Louis Kuijs, head of Asia economics at Oxford Economics.

New construction starts in September slumped for a sixth straight month, NBS data showed.

Over-simplified models, complex social systems

Along with fundamental epistemic limitations, western scientific methods are showing up ethical weaknesses too



ARUN MAIRA

The 2021 Nobel Prize for Physics has been shared by three physicists (with one half jointly to Syukuro Manabe and Klaus Hasselmann) “for the physical modelling of Earth’s climate, quantifying variability and reliably predicting global warming” and (and the other half to Giorgio Parisi) “for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales”, according to the citation by the Nobel selection committee.

Nod for modelling methods

The 2021 Nobel Prize in Economics (or the The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2021) was awarded to David Card, for proving that rises in minimum wages increase employment levels (and improve overall societal well-being), contrary to the views of most mainstream economists that because higher wages increase firms’ costs, the well-being of firms (and societies) will be harmed. The other half of the Economics Nobel went to Joshua D. Angrist and Guido W. Imbens for improving economists’ tools for understanding complex systems, which were tools David Card had also used. Thus, the Physics and Economics Nobel prizes were for contributions to methods of modelling complex systems (apart from the half in economics for insights into wages and labour markets using new methods in economics).

A quarter century ago, Nobel laureates in economics, Kenneth J. Arrow and Brian Arthur, had arranged a meeting, at the Santa Fe

Institute, of economists with physicists including Nobel Laureates, Murray Gell-Mann and Philip Anderson, to understand what economists can learn from physicists about the formulation of theories and models. The economists presented their models.

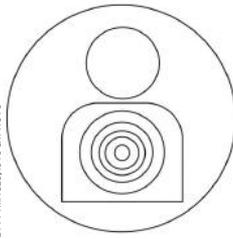
M. Mitchell Waldrop gives an account of the meeting in his book, *Complexity: The Emerging Science at the Edge of Order and Chaos*.

“And indeed, as the axioms and theorems and proofs marched across the overhead projector screen, the physicists could only be awe-struck at their counterparts’ mathematical prowess – awe-struck and appalled. It seemed as if though they were dazzling themselves with fancy mathematics, until they couldn’t see the forest for the trees. They weren’t looking at what the models were for, and whether the underlying assumptions were any good. In a lot of cases, what was required was just common sense.”

Realised a long while ago

Physicists had realised the limitations of human minds to understand how the world really works a century ago. The Nobel Prizes in Physics were awarded to Max Planck (1918), Albert Einstein (1921), Niels Bohr (1922), Louis de Broglie (1929) and Werner Heisenberg (1932). They displaced the Newtonian paradigm of physics, which had reigned for three centuries, which saw Nature as a machine that could be described with linear theories of cause-and-effect. The essence of the new physics was that reality is not what it seems to be to the rational mind. More startling was the conclusion that the human mind can never know what reality is because it is limited to models that can satisfy only its internal logic.

The science of economics lags physics by a century. Economists continue to model economies as machines whose efficiency can be increased by managing inputs to



GETTY IMAGES/ISTOCKPHOTO

produce more outputs, thus also increasing the overall sizes of economies. The saving grace for physicists is that they attempt to model only the physics of the universe, as the winners of the 2021 Prize have done. Whereas economists try to develop rigorous mathematical proofs of social phenomena. Now, some economists are reluctantly accepting that economies are affected by fuzzy human and societal irrationalities. Recently, some have won Nobel Prizes for (finally) including emotions and concepts of ‘identity’ into their models. Which common sense alone should have revealed to them long ago.

Nature’s workings, humans

Systems’ sciences have advanced since the seminal meeting at the Santa Fe Institute in 1987. Engineers design machines, applying the laws of mechanics, to produce greater outputs with lesser inputs. Similarly, 20th century economists have been attempting to design more efficient economies, looking for levers to pull within them, such as prices of money and carbon, to improve their performance. Now they are beginning to look at Nature with greater respect, to understand how Nature designs itself. Nature is an adaptive system that produces innovations from within itself, such as new species. And species too adapt their abilities as Nature around them changes. *Homo sapiens* is the most complicated of all

species because, unlike other species, it has intentions to master Nature, not just adapt to it. With human agency come complications of egos and ethics. Humans want to have power over Nature and over other humans too. Even when their actions are well-intended, they are ill-informed because they do not comprehend the power of the system of which they are only small parts, which the paradigm-changing physicists of the 20th century had realised.

A flawed construct

The harm that measurements derived from over-simplified models can cause to the health of complex self-adaptive social systems has become evident with the recent imbroglio of the World Bank’s Ease of Doing Business Framework. The intentions of the measurer will determine what is measured. Stock market indices, ease of doing business, and profits of firms are measures of what financial investors are looking for. Whereas levels of incomes at the bottom of the pyramid, and equity in ease of living for all human beings are better indicators of the health of a society and its economy. GDP is an indicator of the material performance of an economy; not its social and environmental health.

According to the paradigm-changing physicists of the early 20th century, the “logical”, linear, way of thinking is only a construct of the human mind. Nevertheless, economists (and even some physicists) persist in thinking that there must be causal, linear relationships amongst all variables in a system. New statistical methods (like Angrist and Imbens’) apparently enable causation to be separated from mere correlation. Jordan Ellenberg explains, in *How Not to be Wrong: The Power of Mathematical Thinking*, how mathematical methods can reveal hidden structures beneath the messy and chaotic structures of our daily lives,. He warns: “Mathematics is a

way not to be wrong. There is a real danger that, by strengthening our abilities to analyse some questions mathematically, we acquire a general confidence in our beliefs, which extends unjustifiably to those things we’re still wrong about.”

Too little listening now

Along with fundamental epistemic limitations, western scientific methods are revealing ethical weaknesses too. The dignity of human beings is squeezed out to convert humans into quantities to fit into economists and social scientists’ mathematical equations. Scientists arrogantly claim they know best what is good for everybody; and that their views must prevail because they are more ‘rational’. There is too much mathematical calculation in the world of modern scientists; too little listening to people not like themselves.

We have the dialogue series, *The Limits of Thought* (1998), by David Bohm (who was nominated for the Nobel Prize in physics) and Jiddu Krishnamurthy, the Indian philosopher. Scientific models of the climate as a physical system only in which economists can determine a price of carbon that will make the world alright again are fundamentally flawed. Bohm had said that the end of science means the coming of western civilisation, in its own time and in its own way, into the higher dimensions of human experience. Those higher dimensions include humility within the world that has created the human mind, and which humans cannot logically explain.

The time has come for more equity in global governance, and for an “Eastern” philosophical way of thinking to save the world from a scientific apocalypse.

Arun Maira is the author of *Transforming Systems. Why the World Needs a New Ethical Toolkit*. He is also a former Member of the Planning Commission

Improving livestock breeding

Revised schemes will enhance the productivity and traceability standards of India's livestock

ATUL CHATURVEDI

Livestock breeding in India has been largely unorganised because of which there have been gaps in forward and backward integration across the value chain. Such a scenario impacts the quality of livestock that is produced and in turn negatively impacts the return on investment for livestock farmers. Approximately 200 million Indians are involved in livestock farming, including around 100 million dairy farmers. Roughly 80% bovines in the country are low on productivity and are reared by small and marginal farmers. To enhance the productivity of cattle, the Rashtriya Gokul Mission was initiated in 2014 with a focus on the genetic upgradation of the bovine population through widespread initiatives on artificial insemination, sex-sorted semen, and in vitro fertilization.

Entrepreneurship development

The revised version of the Rashtriya Gokul Mission and National Livestock Mission (NLM) proposes to bring focus on entrepreneurship development and breed improvement in cattle, buffalo, poultry, sheep, goat, and piggery by providing incentives to individual entrepreneurs, farmer producer organisations, farmer cooperatives, joint liability groups, self-help groups, Section 8 companies for entrepreneurship development and State governments for breed improvement infrastructure.

The breed multiplication farm component of the Rashtriya Gokul Mission is going to provide for capital subsidy up to ₹200 lakh for setting up breeding farm with at least 200 milch cows/ buffalo using latest breeding technology. The entrepreneur will be responsible for the arrangement of and would be able to sell at least 116 elite female calves every year out of this farm from the third year. The entrepreneur will also start generating income out of the sale of 15 kg of milk per animal per day for around 180 animals from the first year. This breeding farm will break even from the first year of the project after induction of milk in animals. Moreover, the strategy of incentivising breed multiplication farm will result in the employment of 1 lakh farmers.

The grassroots initiatives in this sphere will be further amplified by web applications like e-Gopala that provide real-time information to livestock farmers on the availability of disease-free germplasm in relevant centres, veterinary care, etc.

The poultry entrepreneurship programme of the NLM will provide for capital subsidy up to ₹25 lakh for setting up of a parent farm with a capacity to rear 1,000 chicks. Under this model, the hatchery is expected to produce at least 500 eggs daily, followed by the birth of chicks that are in turn reared for four weeks. Thereafter, the chicks can be supplied to local farmers for rearing. Under this model, the rural entrepreneur running the hatchery will be supplying chicks to the farmers. An entrepreneur will be able to break even within 18 months after launching the business. This is expected to provide employment to at least 14 lakh people.

In the context of sheep and goat entrepreneurship, there is a provision of capital subsidy of 50% up to 50 lakh. An entrepreneur under this model shall set up a breeder farm, develop the whole chain will eventually sell the animals to the farmers or in the open market. Each entrepreneur can avail assistance for a breeder farm with 500 does/ewe and 25 buck/ram animals with high genetic merit from the Central/State government university farms. This model is projected to generate a net profit of more than ₹33 lakh for the entrepreneur per year.

For piggery, the NLM will provide 50% capital subsidy of up to ₹30 lakh. Each entrepreneur will be aided with establishment of breeder farms with 100 sows and 10 boars, expected to produce 2,400 piglets in a year. A new batch of piglets will be ready for sale every six months. This model is expected to generate a profit of ₹1.37 crore after 16 months and 1.5 lakh jobs. The revised scheme of NLM coupled with the Rashtriya Gokul Mission and the Animal Husbandry Infrastructure Development Fund has the potential to dramatically enhance the productivity and traceability standards of our livestock.

Atul Chaturvedi is Secretary, Ministry of Animal Husbandry and Dairying

China denies testing 'hypersonic missile'

It's a routine test of space vehicle to verify technology of spacecraft's reusability, says Foreign Ministry

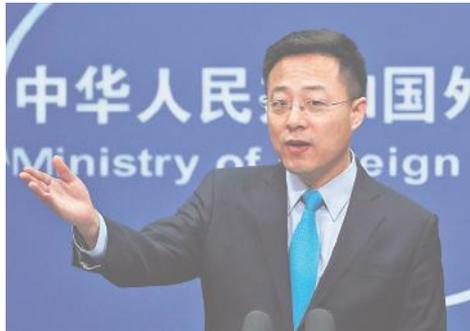
ANANTH KRISHNAN

China's government on Monday denied a recent report saying it had carried out a test of a nuclear capable hypersonic missile, stating that the launch was a "routine test of a space vehicle".

On Sunday, the *Financial Times* reported China's military in August carried out its first ever test of a "nuclear capable hypersonic missile", adding that the test "circled the globe before speeding towards its target, demonstrating an advanced space capability that caught U.S. intelligence by surprise".

The newspaper quoted five people familiar with the test as saying the Chinese military launched a rocket that carried a hypersonic glide vehicle "which flew through low-orbit space before cruising down towards its target".

Two of those people told the newspaper the test "showed that China had made astounding progress



Quick reaction: A file photo of Chinese Foreign Ministry spokesperson Zhao Lijian in Beijing. ■ AP

on hypersonic weapons and was far more advanced than U.S. officials realised." Only the U.S., Russia and China were developing the hypersonic glide vehicles, the newspaper said, noting they are far more difficult to track than ballistic missiles.

The Chinese Foreign Ministry, however, denied the report. "As we understand," spokesperson Zhao Lijian said, "this was a routine test

of space vehicle to verify technology of spacecraft's reusability."

"It is of great significance to reducing the cost of using space vehicle and providing a convenient and cheap way for mankind's two-way transportation in the peaceful use of space," he added. "Several companies around the world have conducted similar tests. After separating from the space vehicle be-

fore its return, the supporting devices will burn up when it's falling in the atmosphere and the debris will fall into the high seas. China will work with other countries in the world for the peaceful use of space for the benefit of mankind."

The *Financial Times* quoted security experts as saying the test was conducted in August. It noted that the China Academy of Launch Vehi-

cle Technology, which carries out launches, had in July announced its 77th launch of a Long March rocket, and in end-August said it had carried out a 79th flight, sparking speculation about a secretive 78th launch that had not been reported.

Asked if he was referring to the same launch as reported by the *Financial Times*, Mr. Zhao said, "It's not a missile, but a space vehicle."

'Mumbai lost 40% green cover between 1991 and 2018'

City lost 81% of its open land, says survey

ALOK DESHPANDE
MUMBAI

Mumbai lost 81% of its open land (barren spaces without any vegetation), 40% green cover (forests & scrublands) and approximately 30% of its water bodies (lakes, ponds, floodplains) between 1991 and 2018, while the built-up area (areas developed upon) rose by 66% in the same period, says a recent study. It concludes that the city witnessed a 2-degree Celsius average temperature rise across 27 years.

Researchers from the Faculty of Natural Sciences, Jamia Millia Islamia in New Delhi; Osmania University



The extreme heat that one experiences when strolling through any urban landscape is caused by the Urban Heat Island effect, according to experts. ■ FILE PHOTO

in Hyderabad; and Aligarh Muslim University in Uttar Pradesh through their study - Urban Heat Island Dynamics in Response to Land-Use/Land-Cover Change in the Coastal City of Mumbai - published in the peer-reviewed *Springer Journal of the Indian Society of Remote Sensing* found that with this

pace of urbanisation and landscape transformation, it is expected that the Urban Heat Island intensity will further increase in the city.

Using satellite imagery (USA-NASA Landsat datasets freely available), the authors studied an area of 603 sq km of Mumbai region (both city and suburbs) to understand

the land-use and land-cover changes, difference in maximum, minimum and average temperatures (for Urban Heat Island intensity), land surface temperatures, changes in vegetation cover versus urban built-up density between 1991 and 2018.

The extreme heat that one experiences while

strolling through any urban landscape is caused by the Urban Heat Island effect, a micro-climatic phenomenon. This is due to a number of causes, the most prominent being the usage of materials such as concrete, according to Atiqur Rahman from the Department of Geography, Faculty of Natural Sciences, Jamia Millia Islamia.

Health risks

"This will not only deteriorate the urban thermal environment but also increase the serious risks to health for city dwellers. This rise in heat intensity in Mumbai is linked to the declining green cover in the city, which is the result of the large-scale transformation of the green cover into built-up land for the infrastructural development in the city," he said.

Slippery slopes

To face heavy monsoons, States must preserve the integrity of rivers and mountains

Even as the Southwest monsoon retreats along parts of northern Karnataka, Telangana, Odisha, Bengal and the northeastern States in October, it is leaving a trail of destruction in several districts. Significant loss of life has occurred in Kerala. While the heaviest recent downpour has been reported from west Madhya Pradesh, Odisha, east Rajasthan and Uttarakhand, with as much as 31 cm in Sheopur on Monday, there has been very heavy rain in Kerala and Gangetic West Bengal. The Indian monsoon is an invaluable resource that sustains hundreds of millions of people, but variations in its patterns and intensity pose a rising challenge. Kerala, which hosts a vast stretch of the Western Ghats, is having to contend with these changes with almost no respite between severe spells. The recurrent bursts show that anomalies in precipitation over the State, spectacularly demonstrated by the inundation of idyllic towns in 2018 and by mudslides that killed many a year later, require a comprehensive adaptation plan. This year's torrential rain in the State, which has killed at least 35 people so far, is causing alarm as large reservoirs in mountainous reaches start filling up fast, while the Northeast monsoon lies ahead. The Government has responded by issuing alerts for several dams, including Idukki, and put in place plans to release water to avoid a repeat of the flooding witnessed three years ago. Significantly, the IMD has issued an alert for more heavy rainfall in Kerala from October 20.

The precarity of living conditions in much of the country make the annual monsoon a persistent threat for millions, and governments should do more to reduce the risk to life and property. Nurturing the health of rivers and keeping them free of encroachments, protecting the integrity of mountain slopes by ending mining, deforestation and incompatible construction hold the key. The ecological imperative should be clear to Kerala with successive years of devastation, echoing the warnings in the Madhav Gadgil committee report on the Western Ghats. Land may be an extremely scarce resource, but expanding extractive economic activity to montane forests is certain to cause incalculable losses. One estimate by researchers in 2017 put quarrying area in Kerala at over 7,157 hectares, much of it in central districts that were hit later by mudslides. It should be evident to governments that it is unconscionable to allow the pursuit of short-term profits at the cost of helpless communities. A more benign development policy should treat nature as an asset, and not an impediment. Accurately mapped hazard zones should inform all decisions. There is a similar threat from extreme weather, breaking glaciers and cloudbursts to Uttarakhand and Himachal Pradesh. Several States face climate change impacts and extreme weather, and the response must be to strengthen natural defences.

India needs a caste count

A new intervention strategy can then be fashioned to emancipate groups that are still at the bottom of the ladder



MANISH TEWARI

The Constituent Assembly sat together 114 times to draft a visionary Constitution for India, targeted at transforming an ancient civilisation into a modern nation state. The Preamble *inter alia* stated that there would be justice (social, economic and political) and equality of status and opportunity.

An economic and social fillip

In order to fulfil the egalitarian construct of the Constitution, the makers of modern India incorporated into the chapter on Fundamental Rights three path-breaking postulates: Article 17 (abolishing untouchability), Article 23 (prohibition of traffic in human beings and forced labour) and Article 24 (prohibition of child labour). The Constitution outlawed discrimination on the grounds of religion, race, caste, sex and place of birth and mandates equality of opportunity in matters of public employment albeit with caveats to promote the interests of the underprivileged. Part XVI delineates Special Provisions relating to certain classes, including reservation of seats for Scheduled Castes (SCs), Scheduled Tribes (STs) and Anglo-Indians in the Legislatures. This reservation system was supposed to end 10 years after the commencement of the Constitution. However, it has been extended every 10 years since. The objective is to provide a political voice to the disempowered. Article 335 provides for reservations for SCs and STs in public employment both under the Union and the States. The Constitution thus provides both an economic and social fillip to the weaker sections who had been discriminated against historically. The aim is to bring about social integration that could pave the way for the creation of a classless ethos.

In 1990, another step was taken in this direction when the then Prime Minister V.P. Singh decided to act on the recommendations of the Mandal Commission report and provide 27% reservation in public employment to Other Backward Classes (OBCs). This was subsequently extended to educational institutions. This added to the existing 22.5% reservation quota for SCs and STs thereby increasing reservations in educational institutions to 49.5%. This decision led to a nationwide tumult in university campuses and a legal challenge in the Supreme Court.

In *Indra Sawhney v. Union of India*, the

Supreme Court upheld 27% reservation for OBCs but struck down the 10% quota based on economic criteria. It further fixed the ceiling of reservations at 50%. It also held that a "caste can be and quite often is a social class. If it is backward socially, it would be a backward class for the purposes of Article 16(4)." It also evolved the concept of a creamy layer. This was done to ensure that those who really require reservation get it. The OBC reservations sparked off similar demands from socially powerful and upwardly mobile caste groups. Reservations provided by successive governments either within the 27% quota for OBCs or beyond the 50% ceiling to various communities were struck down by various courts or are still being challenged.

Demand for a caste census

The demand for a caste census is growing louder as its findings can be used to cross the 50% hurdle. If it can be empirically established that the OBCs are numerically higher, perhaps it could be argued that the 50% cap on reservation is redundant. But where would that leave merit? Nations are built by an intricate interplay of social inclusion and meritocracies. The UPA government had, albeit reluctantly, acquiesced to a Socio-Economic and Caste Census in 2011 that it then rigorously implemented. In 2016, the Parliamentary Standing Committee of Rural Development observed that "the data has been examined and 98.87% data on individuals' caste and religion is error free". However, the NDA government told the Supreme Court and Parliament that the caste census data are flawed and cannot be released.

Over time, what has been forgotten is the original dream of transforming India into an egalitarian and classless society. Undoubtedly, while reservations have ameliorated socio-economic backwardness, they have equally created silos whereby the benefits of reservation have been more far-reaching vertically than horizontally. Therefore, a new paradigm of affirmative action is required to fulfil the vision of the makers of independent India given that economic stimuli have not brought about societal integration. Since it has been judicially determined that caste is synonymous with class, a fresh socio-economic caste census is imperative if the previous one is flawed and cannot be released.

Once it is known what the economic and social status of every caste group is, a new intervention strategy can then be fashioned to emancipate caste groups that are still at the bottom of the ladder. Only when all castes are equal can society become egalitarian.

Manish Tewari is lawyer, MP & former Union Minister of Information and Broadcasting, Government of India

Vaccine campaign lags despite pile-up of stock

Daily average drops to 50 lakh doses from peak of 2.5 crore

REUTERS
NEW DELHI

The country's vaccination campaign has slowed despite amassing record stockpiles of vaccine, Health Ministry data showed on Monday, as authorities maintain a wider-than-usual gap between doses in a strategy that has boosted coverage.

Domestic production of the AstraZeneca vaccine has more than tripled since May, when a supply shortage prompted the country to double the period between doses to between 12 and 16 weeks.

That gap, exceeding the eight to 12 weeks recommended by the World Health Organization (WHO), has allowed the government to give at least one vaccine dose to 74% of the country's more than 94 crore adults, with just 30% getting the full complement of two.

Over the past few days,



The Health Ministry said daily stocks of vaccines had exceeded 10 crore doses.

daily stocks of all COVID-19 vaccines have exceeded 10 crore doses, the Health Ministry figures show.

In contrast, daily vaccinations have dropped to an average of 50 lakh doses this month and even fewer in the past week, off a daily peak of 2.5 crore last month.

The Health Ministry said it followed recommendations from a group of experts in making any changes to dosage, arrived at by weigh-

ing up "scientific and empirical" evidence.

"NTAGI is actively considering the matter of dose interval between Covishield doses," its spokesperson said, referring to the Ministry's National Technical Advisory Group on Immunisation (NTAGI).

However, vaccine supply alone should not determine the gap, said Chandrakant Lahariya, a physician and epidemiologist in New Delhi.

"There is no scientific rationale for reducing the gap," Mr. Lahariya added. "In fact, retaining this gap has the possibility of giving stronger protection and longer-lasting immunity."

A 12-week gap was more logical and scientific for vaccinations drive in the country, where some studies have shown many people already had antibodies against COVID-19 infection, Mr. Lahariya said.

Army trains officers posted along LAC in Tibetology

Lamas from Bomdila Monastery engaged for teaching; first batch of 15 soldiers finished course in May

DINAKAR PERI
NEW DELHI

With a view to orienting its officers and men posted along the Line of Actual Control (LAC) in Tibetan culture and also preparing them to better understand the information warfare, the Army has begun a course in Tibetology in a tie-up with the Central Institute of Himalayan Cultural Studies in Arunachal Pradesh.

The first batch of 15 participants was trained from March to May this year. "Understanding Tibetan traditions, cultural peculiarities, democracy and political influence and so on empowers our men and officers to understand where we are going and

where we are operating," said a senior Army officer at the 5 Mountain Division at Tenga in Arunachal Pradesh. Officers posted in the area would be considered for the course.

The Army's Training Command, ARTRAC, has identified seven institutes for Tibetology across the country, two of which are in the northeast. The other one is the Namgyal Institute of Tibetology in Sikkim.

Second course soon

Such training was happening earlier too but now it has been formalised. On a trial basis, the first batch was held from March to May, and the Army has entered into a Memorandum



Ground work: Army personnel near the India-China border in Arunachal Pradesh • FILE PHOTO

of Understanding with the institute. The second course is scheduled to begin next month. Currently, two courses a year are planned with about 15-20

participants in each course.

Around 150 officers have been trained so far across the country at various centres, the officer stated.

A longer course was being

planned and a proposal for a three-month course had been sent to ARTRAC, another officer noted.

"The officers who are trained will function as trainers in their battalions and in a few years, we will have a sizable number of personnel with understanding of Tibetan issues," the officer explained.

During the 42 days of the preliminary course, Tibetan history, geopolitics and current political dynamics were covered in the form of lectures and case studies, the officer added. Lamas who were proficient in Tibetan issues were hired from the Bomdila Monastery to teach the course.

Recent attacks in J&K reveal terror outfits' new strategy: NIA

Blog post outlines plans to derail Government's development thrust: agency

DEVESH K. PANDEY
NEW DELHI

The latest spate of attacks in Jammu and Kashmir is a part of the terror outfits' new strategy to derail the measures being taken by the Government to promote industrial development and extend domicile status to various categories of people, making them eligible for jobs and other benefits, according to the National Investigation Agency's (NIA) findings.

A blog post uploaded in the last week of September spelt out the strategy to be adopted by terrorists in view of several measures taken by the Government after the dilution of J&K's special status



Tense future: Non-local labourers waiting at a railway station in Srinagar to return to their native place. ■ NISSAR AHMAD

in August 2019 and its subsequent bifurcation into Union Territories (UTs).

The blog has now been blocked on the orders of the Ministry of Electronics and

Information Technology.

"The blog's content was circulated among the terror outfits, following which 11 civilians have been murdered in J&K so far. The victims in-

clude migrant workers," said an official. On Sunday, the terrorists entered a rented accommodation and gunned down two migrant workers in Kulgam. Another labourer was injured in the attack.

In counter-terror operations, the security forces eliminated 13 terrorists in the past 10 days. The NIA also arrested nine persons having alleged links with various banned outfits. It is learnt that the blog post exhorted terror outfits to target non-local employees and individuals who had been issued domicile certificates.

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Govt. starts campaign to reduce air pollution

STAFF REPORTER
NEW DELHI

The Delhi government on Monday started the "Red Light On, Gaadi Off" campaign in the Capital. Environment Minister Gopal Rai appealed to the citizens to turn their cars off at red lights to help reduce air pollution.

"Research data show that vehicular pollution plays a very prominent role in polluting the air. The Delhi government is running a campaign against dust pollution and similarly, the 'Red Light On, Gaadi Off' campaign has been started to reduce vehicular pollution," Mr. Rai said.

Under the campaign, volunteers at traffic signals are requesting people to switch off their vehicles when the signal is red.

The Minister said the government can't do anything to stop stubble burning in neighbouring States and that is why it is important to reduce air pollution in Delhi.

"The number of vehicles



Minister Gopal Rai at the launch of the campaign in New Delhi on Monday. ■ SHIV KUMAR PUSHPAKAR

running inside Delhi in September is still the same. But at that time, the level of pollution was normal. The pollution levels are increasing in winter due to changing weather and stubble burning. As the incidents of stubble burning are increasing, the pollution levels in Delhi are rising rapidly. We cannot do anything to stop the stubble burning that is going on in other States. That's why our effort is to reduce vehicular pollution in Delhi for some relief. For this, the 'Red Light On, Gaadi Off' campaign has been started," Mr. Rai said.

Tracked, attacked Army patrol: new terror outfit

In video, it claims responsibility for Poonch encounter

VIJAITA SINGH
NEW DELHI

A new terrorist group on Monday released an eight-minute video about the ongoing encounter in Jammu and Kashmir's Poonch region along the Line of Control, in which nine soldiers have been killed so far.

In the video, the group, calling itself the PAFF (People's Anti Fascists Front), claimed responsibility for the attack.

Shared on multiple channels on the Telegram app, the video features a man narrating events around October 11, the day the encoun-



A jawan near the encounter site in Nar Khas area in Poonch on Monday. ■ PTI

ter started. It claims two unidentified terrorists tracked an Army patrol for around 10 hours before ambushing their tent around dawn the next day (October 11).

CONTINUED ON ► PAGE 10

General Studies Paper I

A	History of Indian culture will cover the salient aspects of art forms, literature and architecture from ancient to modern times;
B	Modern Indian history from about the middle of the eighteenth century until the present-significant events, personalities, issues;
C	Freedom struggle-its various stages and important contributors / contributions from different parts of the country;
D	Post-independence consolidation and reorganization within the country;
E	History of the world will include events from 18 th century such as industrial revolution, world wars, re-drawing of national boundaries, colonization, decolonization,
F	Political philosophies like communism, capitalism, socialism etc.-their forms and effect on the society
G	Salient features of Indian Society, Diversity of India;
H	Effects of globalization on Indian society;
I	Role of women and women's organization;
J	Social empowerment, communalism, regionalism & secularism
K	Salient features of world's physical geography;
L	Geographical features and their location- changes in critical geographical features (including water bodies and ice-caps) and in flora and fauna and the effects of such changes;
M	Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.
N	Distribution of key natural resources across the world (including South Asia and the Indian subcontinent);
O	Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India);
P	Population and associated issues;
Q	Urbanization, their problems and their remedies

General Studies Paper II

A	India and its neighbourhood- relations;
B	Important International institutions, agencies and fora- their structure, mandate;
C	Effect of policies and politics of developed and developing countries on India's interests;
D	Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
E	Indian Constitution, historical underpinnings, evolution, features, amendments, significant provisions and basic structure;
F	Comparison of the Indian Constitutional scheme with other countries;
G	Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein; Inclusive growth and issues arising from it;
H	Parliament and State Legislatures - structure, functioning, conduct of business, powers & privileges and issues arising out of these;
I	Structure, organization and functioning of the executive and the judiciary, Ministries and Departments;
J	Separation of powers between various organs dispute redressal mechanisms and institutions;

K	Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional bodies;
L	Statutory, regulatory and various quasi-judicial bodies;
M	Mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections;
N	Salient features of the Representation of People's Act;
O	Important aspects of governance, transparency and accountability, e-governance- applications, models, successes, limitations, and potential;
P	Citizens charters, transparency & accountability and institutional and other measures;
Q	Issues relating to poverty and hunger,
R	Welfare schemes for vulnerable sections of the population by the Centre and States, Performance of these schemes;
S	Issues relating to development and management of social sector / services relating to education and human resources;
T	Issues relating to development and management of social sector / services relating to health
General Studies Paper III	
A	Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment;
B	Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth;
C	Inclusive growth and issues arising from it;
D	Infrastructure Energy, Ports, Roads, Airports, Railways etc. Government budgeting;
E	Land reforms in India
F	Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems;
G	Storage, transport and marketing of agricultural produce and issues and related constraints;
H	e-technology in the aid of farmers; Technology Missions; Economics of Animal-Rearing.
I	Issues of buffer stocks and food security, Public Distribution System- objectives, functioning, limitations, revamping;
J	Food processing and related industries in India – scope and significance, location, upstream and downstream requirements, supply chain management;
K	Issues related to direct and indirect farm subsidies and minimum support prices
L	Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology;
M	Indigenization of technology and developing new technology;
N	Developments and their applications and effects in everyday life;
O	Issues relating to intellectual property rights
P	Conservation, environmental pollution and degradation, environmental impact assessment
Q	Disaster and disaster management
R	Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security;
S	Money-laundering and its prevention;
T	Various forces and their mandate;
U	Security challenges and their management in border areas;

V	Linkages of organized crime with terrorism;
W	Role of external state and non-state actors in creating challenges to internal security;
X	Linkages between development and spread of extremism.
General Studies Paper IV	
A	Ethics and Human Interface: Essence, determinants and consequences of Ethics in human actions;
B	Dimensions of ethics;
C	Ethics in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators;
D	Role of family, society and educational institutions in inculcating values.
E	Attitude: Content, structure, function; its influence and relation with thought and behaviour;
F	Moral and political attitudes;
G	Social influence and persuasion.
H	Aptitude and foundational values for Civil Service , integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker sections.
I	Emotional intelligence-concepts, and their utilities and application in administration and governance.
J	Contributions of moral thinkers and philosophers from India and world.
K	Public/Civil service values and Ethics in Public administration: Status and problems;
L	Ethical concerns and dilemmas in government and private institutions;
M	Laws, rules, regulations and conscience as
N	sources of ethical guidance;
O	Accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding;
P	Corporate governance.
Q	Probity in Governance: Concept of public service;
R	Philosophical basis of governance and probity;
S	Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
T	Case Studies on above issues.