

## Chamoli Flash Floods



- A chunk of the Nanda Devi glacier broke off at Joshimath in the Tapovan-Reni area of Chamoli District and created massive flash floods in parts of Uttarakhand.
- The glacial break led to a massive Flash Flood in Dhauliganga and Alaknanda Rivers, damaging houses and the nearby Rishiganga power project.
- Local authorities have described it as a glacial burst
- Scientists say this probably means that a gigantic chunk of ice broke away from a glacier and caused the water level in the associated glacial lake to abruptly rise and possibly trigger a “moraine breach event” — the breach of a natural dam made from rock and debris that has been holding the water back.
- But it is unclear whether there was an avalanche in the area recently or whether the lake breach was the result of construction, anthropological activities, climate change, etc.

### Glacial Lake Outburst Flood (GLOF)

- Glacial lake outburst flood (GLOFs) is the sudden release of water retained in a glacial lake.
- Retreating glaciers, like several in the Himalayas, usually result in the formation of lakes at their tips, called proglacial lakes.
- Large lakes located in front of the glacier are mainly dammed by loose moraine (glacial debris left behind after the ice has retreated)
- Terminal moraines act as natural dams for these glacial lakes.
- GLOF occurs when weak moraine dams crumble and the stored water in the lake bursts out.
- GLOF is a release of meltwater which can be either from a moraine- or ice-dam glacial lake due to a dam failure.
- GLOF leads to massive floods and debris flows with potentially extensive damage downstream, including loss of life and infrastructure

## US officially re-joins Paris climate agreement



- The work to reduce US emissions has already begun, and we will waste no time in engaging our partners around the world to build our global resilience.
- The US had officially exited the agreement late last year on the order of the then President Donald Trump.
- Under the Paris agreement, countries are expected to enhance their commitments to curb greenhouse gas emissions every five years.
- The goals of the global pact are to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C.
- President Biden plans to host a climate summit of world leaders on Earth Day, April 22, where he will roll out the US' goal for reductions of carbon emissions by 2030 -- known as the nationally determined contribution under the Paris accord.
- Mr Alok Sharma, the President of 26th United Nations Climate Change Conference, welcomed the US' return to the Paris accord.

## Mission one nation one standard



- It's time to embark on Mission one nation one standard and make India the leader in setting global benchmarks in setting standards
- This was said by Shri Piyush Goyal Minister for Railways and Commerce & Industry and Consumer Affairs, Food & Public Distribution while reviewing the work of Bureau of Indian Standards (BIS).
- Shri Piyush Goyal said that while all areas of production and services be included in this national mission, bringing a national uniformity and standardization in all kinds of public procurement and tendering can be an immediate deliverable.
- Shri Goyal said that strength & character of nation is often exemplified by the standards it sets for the quality of its products and services. Its time for India to settle for nothing less than the best.
- Speaking on the occasion, he said that BIS should explore International partnerships and associations to achieve synergy in the field.
- Speaking on occasion Shri Goyal said that lab testing in India should be world standards. Modern equipments and latest technologies should be used there. He added that Gap analysis of BIS and Government labs be taken up on priority basis as well.

- It may be noted that in management parlance, gap analysis refers to the comparison of actual performance with potential or desired performance

## Khajuraho Dance Festival



- In Madhya Pradesh, the seven-day 47th Khajuraho Dance Festival is being organized from the 20th to the 26th of February, 2021 at the world-famous tourist destination Khajuraho.
- Significantly, this ceremony will be held once again in the temple complex after a gap of 44 years. This will give the audience a chance to watch the performance amid the aura of the temple.
- 6-day festival showcased classical dances including Kathak, Odissi, Bharatnatyam, Kuchipudi, Kathakali and Mohiniattam.
- Khajuraho Temple
- It is a group of Hindu and Jain Temples in Madhya Pradesh build by Chandela Dynasty between 950 and 1050 AD. They are UNESCO World heritage Site.
- The temples are famous for their nagara-style architectural symbolism and their erotic sculptures (about 10% of total sculptures).
- The temples at Khajuraho are all made of Sandstone. The largest temple at Khajuraho is the Kandariya Mahadeva temple which is attributed to king Ganda.
- All the towers or shikhara of temple rise high, upward in curved pyramidal fashion, emphasizing temple's vertical thrust ending in horizontal fluted disc called Amalaka topped with Kalasha or vase.
- The erotic expression of sculptures in these temples gives equal importance in human experience as a spiritual pursuit, and it is seen as a part of the larger cosmic whole

## Competitive & Cooperative federalism



- Prime Minister stressed that centre and states should work together and make cooperative federalism more meaningful.
- He also urged to bring competitive, cooperative federalism not only among states but also among districts.
- COMPETITIVE FEDERALISM is a term often used in analysis of constitutional doctrine or working governmental practice.



- Competitive federalism is closely related to dual federalism, and in contrast with cooperative federalism stresses the conflict between the national government and the states.
- Cooperative federalism is a concept or subset of federalism where national, state and local governments interact cooperatively and collectively to solve common problems.
- It is also known as marble-cake federalism, is defined as a flexible relationship between the federal and state governments in which both work together on a variety of issues and programs.

## **Govt approves new schemes for industrial development worth Rs 28,000 crore for J&K**



- Government has announced a new Central Sector Scheme for Industrial Development of Jammu and Kashmir.
- The scheme is approved with a total outlay of 28 thousand 400 crore rupees.
- It will be effective from 1st April this year and will remain in force up to 31st March 2037.
- The main purpose of the scheme is to generate employment which directly leads to the socio economic development of Jammu and Kashmir.
- The Scheme is made attractive for both smaller and larger units. Smaller units with an investment in plant and machinery upto 50 crore rupees will get a capital incentive upto seven crore 50 lakh and get capital interest subvention at the rate of six per cent for maximum 7 years.
- It is anticipated that the scheme is likely to attract unprecedented investment and give direct and indirect employment to about four lakh 50 thousand persons.
- The scheme aims to take industrial development to the block level in Jammu and Kashmir.
- It has been simplified on the lines of ease of doing business by bringing one major incentive- GST Linked Incentive- that will ensure less compliance burden without compromising on transparency.

# Too many IITs, unrealistic expectations

(By Philip G. Altbach, Eldho Mathews)

- According to current plans, the IIT “system” has expanded beyond its capacity to maintain its high standards and is in danger of sinking into mediocrity.
- The recent decision of the University Grants Commission to permit select IITs under the ‘Institutions of Eminence’ category to set up campuses abroad could further weaken these already stretched institutions.
- The original five IITs were established in the 1950s and early 1960s
- Four had a foreign collaborator: IIT Bombay (the Soviet Union), IIT Madras (Germany), IIT Kanpur (the United States), and IIT Delhi (the United Kingdom).
- Funded generously by the central government, the IITs focused exclusively on technology and engineering.
- They later added the humanities and social sciences — but these programmes were modest until the 2020 National Education Policy emphasised the IITs should focus more on “holistic and multidisciplinary education”.
- The IITs started as undergraduate institutions; they gradually added small post-graduate programmes, but some are now adding significant post-graduate offerings.
- The IITs have traditionally attracted high quality faculty, where most have doctorates from the most respected western universities.
- Top quality professors have been attracted to the IITs because of the quality of the students, the chance to work with the best academic minds in India, and a commitment to India’s development.
- While salaries do not compare well on the international market, working and living conditions on the older IIT campuses are comfortable.
- The IITs could not attract a sufficient number of young faculty to fill vacancies resulting from retirements
- The emerging IT and related industries in India offered much more attractive salaries
- At the same time, the government dramatically expanded the number of IITs, spreading them around the country.
- Most of the new IITs are located in smaller towns such as Mandi (Himachal Pradesh), Palakkad (Kerala), Dharwad (Karnataka), and others.
- In the future enough top-quality faculty to staff all of the new institutes, especially those in mofussil locations. Facilities and infrastructure are unlikely to be “world class.”
- It is, thus, inevitable that quality will decline and the “IIT brand” diluted.
- Another area is the lack of correlation between the local needs and IITs
- Most of the IITs and other prominent “Institutes of National Importance” are ‘academic enclaves’ with little connection with their regions.

- Only a few State governments are effectively utilising the presence of IITs in the local milieu through knowledge sharing networks involving universities, colleges and schools, and local industries and firms.
- Some of the newly established institutes can be renamed and provided with sufficient resources to produce high quality graduates and good research.
- A more limited “IIT system” needs to be funded at “world class” levels and staffed by “world class” faculty, perhaps with some recruited from top universities internationally
- Recent decision to liberalise the recruitment rules to attract more foreign faculty is a good step in the right direction.
- In depth collaboration with the best global universities, and hiring foreign faculty, perhaps as visiting scholars, would yield excellent results, and further build the IITs international brand.

### **A growing rights crisis in Lanka (Meenakshi Ganguly)**

- Indian leaders have committed to supporting the rights of minority Tamils in Sri Lanka to “live with equity, equality, justice, peace and dignity”.
- In pledges to the United Nations, the Indian government has also vowed to uphold global human rights.
- In January, the authorities bulldozed a memorial at Jaffna university that commemorated Tamil civilian victims of the civil war.
- People who participated in a protest march in February are now facing criminal investigation.
- The Rajapaksa government, in 2020, renounced its commitments under the 2015 Human Rights Council resolution and is threatening victims’ families and activists who supported it.
- The UNHRC should recognise the government’s actions for what they are — an effort to impede justice.
- A new resolution is urgently needed to protect vulnerable minority communities in Sri Lanka, by upholding the principle of accountability for the worst crimes.

### **An ambiguous levy**

- One change to the income tax law proposed in the Finance Bill, 2021, has triggered anxieties for the salaried class: withdrawing tax exemption on interest income accrued into Provident Fund accounts arising out of employee contributions exceeding ₹2.5 lakh ‘in a previous year in that fund,’ on or after April 1, 2021.
- The rationale — some employees are contributing huge amounts into their PF accounts and getting tax-free incomes.
- Subsequently, the Revenue Department has pointed out the tax will only affect a small group of ‘high net-worth individuals’ (HNIs); the 100 largest employees’ PF (EPF) accounts had a combined balance of over ₹2,000 crore.

- It can be no one's case that a social security scheme for formal sector workers should become an investment haven for the well-heeled corporate top brass.

## Slow on safety

- India has, according to the just-released World Bank-commissioned report, Traffic Crash Injuries and Disabilities, 1% of the world's vehicles but 11% of all road accident deaths; the Union Transport Ministry put the number of dead in 2019 at 1,51,113, and injured at 4,51,361.
- Those who suffer the most are from low income households, especially in rural areas, and women bear the long-term financial and psychological impact of the losses more.
- Such a cringeworthy performance, affecting the fundamental right to life of the average citizen, should have led to intensive measures and a determined campaign to end the carnage, but the Centre and the States are evidently prepared to take only incremental steps.
- Most States have been lukewarm towards hard steps to bring order to the roads, viewing zero tolerance rule enforcement through the lens of populism.
- This is reflected in the spate of accidents on India's highways, which witnessed 61% of deaths from just 5% of all accidents, as per 2019 data.
- The Centre must now set a timeline to operationalise the National Road Safety Board, for which draft rules were circulated in December last year, to lay down engineering standards and complaints procedures that will help citizens hold States to account.
- Transport departments continue to take an indulgent view of rule violations. Political parties and others fix illegal flag poles and spears on car bonnets and metal contraptions to SUV bumpers, which are deadly in an accident.
- Meeting the SDGs on transport and reduced road deaths and injuries will need actions that go beyond pious declarations.

## Hitting the right notes with the health budget Moscow aims for fully electric bus fleet by 2030



- Russian capital Moscow is planning to quadruple the number of electric buses (e-buses) operating in the city and replace all petrol or diesel-powered public transport vehicles with greener alternatives by 2030
- The city plans to expand its fleet of around 600 e-buses by 400 vehicles by the end of 2021, by another 420 the following year, and then by 855.

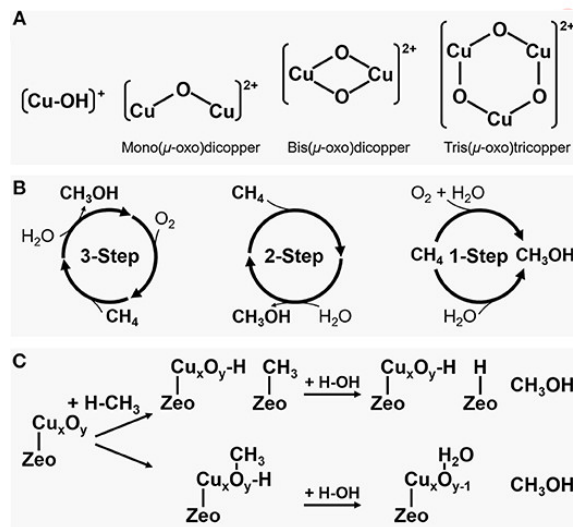


## Sonam Wangchuk invents solar-heated tent for Army in Ladakh



- Indian scientist Sonam Wangchuk, whose life inspired a character in the movie '3 Idiots', has invented solar heated tent for the Indian Army's use in Ladakh's Galwan Valley, where minimum temperatures drop to as low as  $-14^{\circ}\text{C}$ .
- Sharing pictures of the tent, Wangchuk said it can maintain a  $15^{\circ}\text{C}$  temperature at night and doesn't cause pollution due to kerosene.

## Method to convert methane in natural gas to methanol at room temperature found



- University of Illinois, Chicago researchers claim to have discovered a way to convert methane in natural gas into liquid methanol at room temperature.
- Researchers have identified a catalyst material that helps bring down the energy needed to break the hydrocarbon bonds in methane gas, the first step in producing methanol, so that the reaction can take place at room temperature.

## Passport applicants can now submit documents from DigiLocker: Govt



- Minister of State for External Affairs V Muraleedharan has launched a new scheme to integrate the Passport Seva system with the government's DigiLocker platform.
- Under this, those applying for passport services can submit links to their documents uploaded in the DigiLocker and don't have to carry original documents.
- The Ministry is also planning to roll out e-Passport for citizens soon



## Scientists clone highly-endangered ferret using DNA from identical animal in US



- US scientists have successfully cloned a highly-endangered black-footed ferret using DNA from an identical animal that has been frozen since 1988.
- The birth of the ferret, named Elizabeth Ann, on December 10 was announced as a "bold step forward" by the US Fish and Wildlife Service (USFWS) on Thursday.
- The cloning is a first for a US endangered species.

## An Alligator gar



- Pictures of a creature with "huge jaws and teeth", which washed up by a reservoir in Singapore, have surfaced online.
- The pictures of the dead creature were shared by Karen Lythgoe who said it looked "prehistoric".
- It was later identified by Singapore's water agency and National Parks Board as an alligator gar - a fish native to the southern US.
- The alligator gar bears no relation to alligators, but with its wide, crocodilian head and razor-sharp teeth, it's easy to see how this giant fish got its name.
- The largest of seven known gar species, this megafish has a torpedo-shaped body in olive brown and comes armored with glistening scales.
- It can grow up to 10 feet long, and historical reports suggest it may grow to weigh nearly 350 pounds.
- This makes it the largest fish species in North America that spends almost all its time in freshwater. (The white sturgeon is often considered North America's largest freshwater fish, but it spends substantial time in salt water.)
- The prehistoric relatives of the species first appeared 157 million years ago and inhabited many parts of the world.
- Today, however, gars live only in North and Central America.
- Alligator gars were historically found throughout the Mississippi River Valley and may have even existed as far north as Iowa and as far west as Kansas and Nebraska.

## Rare yellow penguin spotted in South Georgia



- Wildlife photographer Yves Adams has captured images of what he believes to be a "never before seen" yellow penguin in South Georgia.
- "There were 120,000 birds on that beach and this was the only yellow one there," Adams said.
- He claimed it's a leucistic penguin, stating that its cells don't create melanin anymore so its black feathers become this yellow.

## 1st black hole ever detected 50% more massive than thought: Scientists



- Scientists have reported that the black hole in the Cygnus X-1 system, the first black hole ever detected, is 50% more massive than estimated, ICRAR said.
- They observed the black hole for six days using the Very Long Baseline Array, a network of 10 radio telescopes sited across the US. It is over 20 times the mass of our Sun