

08.02.21

Glacial Outburst Flood



- Glacial lake outburst floods (GLOFs) occur from an unstable natural dam formed from a glacial retreat.
- Glaciers are large bodies of ice moving slowly. So, when a glacier retreats, it leaves behind a large impression in the ground, filling it with water and a lake is formed.
- This is known as a moraine, which can be impounded by precarious pile of debris and buried ice
- The moraine dammed lakes weaken as the water level rises and the glacier retreats
- They might crumble under pressure from the swelling lake, leading to massive floods
- Glacial lakes may vary in volume but may hold millions to hundreds of millions of cubic metre of water, say experts.
- The outburst of water can also happen due to erosion, an avalanche of snow or rock, an earthquake or volcanic eruptions under the ice.
- A moraine-dammed lake forms as a glacier retreats, and meltwater fills the space between the proglacial moraine (in front of the glacier) and the retreating glacier
- In the Hindu Kush Himalaya, moraine-dammed glacial lakes are common and numerous GLOF events have been traced back to the failure of moraine dams

Yudh Abhyas 20



- The India-US joint military exercise "Yudh Abhyas 20" commenced today in Mahajan Field Firing Range of Bikaner district in Rajasthan
- This is the 16th edition of annual bilateral joint exercise of both the armies
- It will continue till the 21st of this month. The previous version of the joint exercise was held at Seattle in the United States.
- About 250 US and 250 Indian army soldiers are participating in the exercise.
- Both the armies will share their war-related techniques, skills and experience with each other during this exercise.
- The exercise is one of the largest military training and defense cooperation efforts between India and the United States.

- This exercise is another step in the growing military cooperation between the two countries, which shows the growth in Indo-US relations.
- It is also a sign that both India and the US understand the threat of terrorism and are standing shoulder to shoulder in combating the same.

India's first geothermal power project



- India's first geothermal power project will be established at Puga village of eastern Ladakh.
- Puga has been identified as the hotspot of geothermal energy in the country by the scientists.
- India's first ever geothermal power project, known as Geothermal Field Development Project is planned to commission by the end of 2022.
- The tripartite MOU was signed between ONGC Energy, LAHDC, Leh and the Power Department of UT Ladakh.
- In the first phase, the pilot project implemented by the ONGC-OEC will explore within the depth of 500 metres and it is planned to supply 24 hours free power to 10 neighbouring villages which are not connected with the northern grid for power supply.
- The second Phase is proposed for deeper and lateral exploration of geothermal reservoirs by drilling optimal number of wells and setting up of a higher capacity demo plant in Ladakh.
- The second phase will be the Research and Development stage or demonstration of the project.
- In the third phase, it is planned to promote joint ventures and commercial projects. Puga is a place where it is uncovered with a potential of more than 100 mw of geothermal energies.

National Crisis Management Committee (NCMC)



- At the national level, Cabinet Committee on Security (CCS) and National Crisis Management Committee (NCMC) are the key committees involved in the top-level decision-making with respect to Disaster Management (DM).
- A National Crisis Management Committee(NCMC) has been constituted in the Cabinet Secretariat.
- It deals with major crisis which have serious or national ramifications.

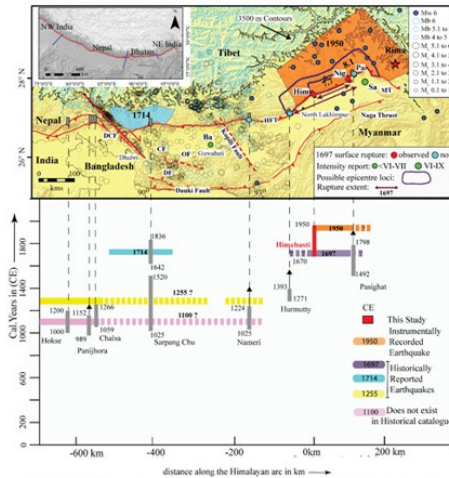
Key functions:

- Oversee the Command, Control and Coordination of the disaster response.
- Give direction to the Crisis Management Group (CMG) as deemed necessary.

Composition:

- Cabinet Secretary (Chairperson).
- Secretaries of Ministries / Departments and agencies with specific Disaster management responsibilities.

Scientists find geological evidence of eastern Himalaya earthquake recorded in history



- Scientists have found the first geological evidence of an earthquake at Himebasti Village on the border of Assam and Arunachal Pradesh, documented by historians as Sadiya earthquake in history, which is recorded to have caused massive destruction in the region and almost destroyed the town in 1697 CE.
- This finding could contribute to a seismic hazard map of the eastern Himalaya, which can facilitate construction and planning in the region.
- Historical archives refer to often recurring earthquakes along the Eastern Himalaya for which geological evidence is lacking, raising the question of whether these events ruptured the surface or remained blind and how they contribute to the seismic budget of the region, which is home to millions of inhabitants.
- The study of the earthquake at Sadiya standing on a grassy plain, almost surrounded by forested Eastern Himalayas on the right bank of Lohit River, adds an important site to the seismic hazard assessment of the eastern Himalaya, which will benefit the inhabitants and help in providing better infrastructure across the Eastern Himalayan foothills which is one of the most densely populated regions in the world.

The cost of Internet shutdowns (Written by Anil K. Antony)

- Indian laws have vague provisions for suspending telecommunication services, including the Internet, during times of public emergencies, or, if required, for protecting 'public interest'.
- Meanwhile, the Supreme Court had declared in January 2020 that the right to access the Internet is one of our fundamental rights, alongside the freedom to carry on any trade, business or occupation over the medium of Internet, under Article 19 of the Constitution.
- Blanket bans on digital connectivity during the COVID-19 crisis may breed deep-rooted societal difficulties.

- The most vulnerable among us may be cut off from health and welfare alerts; there could be breaks in vital digital services, including those currently being used by hospitals to monitor the well-being of their patients at risk of infection, including the elderly, and pregnant women; students may lose access to avenues of learning as classes shift online; journalists may find it impossible to do ground-reporting from already volatile areas.
- Today, almost all white-collar employment sectors, including IT, financial and consulting services, are encouraging their employees to work from home.
- Internet shutdowns will freeze economic activity in affected areas and cause large-scale disruptions in economic output. India is estimated to have lost over ₹20,000 crore in 2020 because of Internet shutdowns.
- As the pace of globalisation, digitisation and connectivity accelerates, balancing civil liberties with security concerns will become an increasingly difficult task.
- Governments, especially in democracies, will have to create modern, independent institutions that have the authority and expertise to create frameworks that meet these challenges, without falling back on measures that result in state overreach.

An India-EU trade pact may still remain elusive

(Written by : Krishnan Srinivasan)

- After its invitation to British Prime Minister and arch-Brexiteer Boris Johnson to visit India, New Delhi plans to start negotiations on investment and trade agreements with the European Union (EU).
- The discussions that began on a comprehensive free trade agreement in 2007 but were aborted due to differences on movement of professionals, labour, human rights and environmental issues and India's high tariffs, inconsistent tax regime and non-payment of arbitral awards.
- Being the largest democracies and unions of linguistically, culturally and ethnically diverse States, both the EU and India are well suited for a special relationship
- The EU now finds itself in an unusually turbulent situation. COVID-19, Brexit and international tensions caused by former U.S. President Donald Trump have unsettled the EU and exacerbated internal discords.
- The crises of 2020 obfuscated the structural lack of unity in the EU, because despite its desire for greater integration, it faces obstacles from adherence to the rule of law to a strategy for dealing with China, Russia, Turkey and Iran.
- After months of tortuous negotiation over Hungary and Poland's objections, member States finally agreed on a long-term budget and a COVID-19 recovery package of \$2 trillion.
- It was not only Britain that spawned a populist movement agitating to leave the EU.
- Europe's many Eurosceptic parties now focus on preventing closer unity, which has been lacking on the eurozone and migration crises and implementing COVID-19 lockdowns.

- Elections are due in many EU States, including Germany and the Netherlands, which both have strong Eurosceptic movements.
- The Alternative für Deutschland (Alternative for Germany) is the official opposition in Germany, while in the Netherlands, Geert Wilders leads the largest opposition party.
- The Trump presidency forced Europe to reassess its relationship with America, which stimulated the EU's drive for greater self-reliance in security, economics, supply chains and climate change, and an attempt to emerge as a major global pillar alongside the United States and China.

Infrastructure push now, fiscal consolidation later

(Written by : C. Rangarajan & D.K. Srivastava)

- The fiscal year 2020-21 has been an extraordinary one, where India had to face an acute economic crisis triggered by a non-economic factor — a pandemic.
- Proposed growth in central expenditure, both in 2020-21 Revised Estimates (RE) and in 2021-22 Budget Estimates (BE), indicates the extent of contemplated fiscal stimulus.
- A good part of expenditure for the last quarter of 2020-21 may also pertain to clearing unpaid dues of various stakeholders including the private sector, autonomous bodies and government-aided institutions.
- Clearing these payments is desirable and would add to demand. It is these overdue expenditures which would enable the government to reach the high expenditure growth levels in the last quarter of this fiscal year.
- Significant increases are planned in non-tax revenues and non-debt capital receipts. From a contraction of 35.6% in 2020-21 (RE), non-tax revenues are budgeted to grow by 15.4% in 2021-22.
- This increase is mainly predicated on higher dividends from non-departmental undertakings and spectrum sales. In the case of non-debt capital receipts, mainly covering disinvestment, a budgeted growth of 304.3% in 2021-22 stands in contrast with the contraction of 32.2% in 2020-21 (RE).
- An important initiative pertains to the launching of a National Monetisation Pipeline.
- This would be the first practical step towards asset monetisation. The pipeline may eventually start yielding revenues
- The budgeted increase in capital outlay would provide the central government's share to the National Infrastructure Pipeline.
- Some of the proposed Budget initiatives include setting up of a Development Finance Institution (DFI) with an initial capital of ₹20,000 crore, to serve as a catalyst for facilitating infrastructure investment.
- In order to manage non-performing assets of public sector banks, there is a proposal to set up an Asset Reconstruction Company and an Asset Management Company.
- These institutional initiatives may prove to be effective.

- In the action taken report, the Union government has accepted the recommended vertical share of 41% for the States in the shareable pool of central taxes.
- The government has accepted the Fifteenth Finance Commission's recommendation for revenue deficit grants, local body grants and disaster-related grants.
- The scope of revenue deficit grants has been extended to cover 17 States in the initial years.
- The COVID-19 shock has fortified the sharp upsurge in fiscal deficits in 2020-21 and 2021-22.
- The Fifteenth Finance Commission has also proposed a revised fiscal consolidation road map for the Centre and States.
- The Fifteenth Finance Commission has recommended the setting up of a High-Powered Intergovernmental Group to re-examine the fiscal responsibility legislations of the Centre and States.

Tapovan Hydro-Electric Power Dam



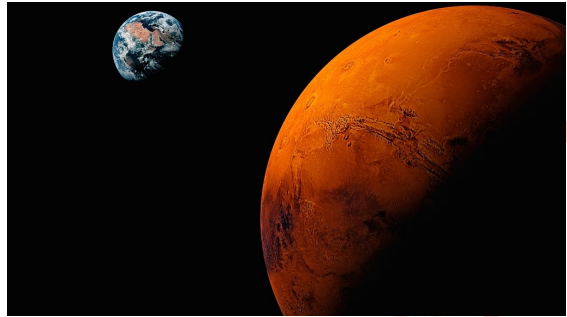
- The Tapovan Vishnugad Hydropower Plant is a 520 MW run-of-river hydroelectric project being constructed on Dhauliganga River in Chamoli District of Uttarakhand, India
- The plant is expected to generate over 2.5k GWh of electricity annually.
- Tapovan Vishnugad is NTPC's second hydro power project since its foray into the sector.
- The 520 MW run-of-the-river project is situated on river Dhauliganga in Chamoli district of Uttarakhand
- The power plant is located downstream on the Alaknanda River and will contain four 130 MW Pelton turbine-generators.
- The barrage is being constructed across the Dhauliganga River and has a catchment area of 3,100 km².
- BHEL was awarded the contract to supply four 130MW Pelton type turbines for the Tapovan Vishnugad hydroelectric power project.
- The contractual scope also included the testing, commissioning and operation of the generators, switchgear and excitation system.
- It was severely damaged in the 2021 Uttarakhand glacier burst, by the rushing water and Avalanche.

India gifts 5 lakh doses of Covishield vaccine to Afghanistan



- India's gift of 5 lakh doses of Covishield coronavirus vaccine to Afghanistan arrived in Kabul on Sunday.
- "India is the first responder to deliver COVID-19 vaccines to Afghanistan," the Indian Embassy in Afghanistan said.
- "Afghan President Ashraf Ghani expresses his gratitude for the timely assistance provided by...India on behalf of...Afghanistan," an official statement said.

UAE's Mars probe to reach Mars before China, US probes this month



- UAE's 'Hope' probe, which was launched in July last year, is expected to reach Mars' orbit on February 9.
- The probe will reach Mars before the probes sent by China and the US, which were also launched in July.
- Earlier, China's Tianwen-1 spacecraft sent back its first Mars image which it took from a distance of around 2.2 million kilometres.