

My Notes....

NATIONAL

MONOLITHIC SHIVA LINGA DISCOVERED

The Archeological Survey of India (ASI) discovered a monolithic sandstone Shiva linga from the 9th century CE, during the ongoing conservation project at My Son — a cluster of abandoned and partially ruined Hindu temples in Quang Nam province in central Vietnam. External Affairs Minister S. Jaishankar calling it “a great cultural **example of India’s development partnership**”. The artefact reaffirmed the “civilisational connect” between India and Vietnam.

What

1. The temple complex was built in the 9th century A.D. under the reign of King Indravarman II who also built the famous Dong Duong Buddhist Monastery in Quang Nam Province.
2. French experts in 1903-1904 had discovered the temple complex in a dilapidated condition. During excavations at that time, the French archaeologists had described the presence of one **Shiva Linga in Group ‘A’ at the temple site**.
3. However due to limited excavation capability at that time, it could not be recovered. Subsequently, political disturbances and wars in Vietnam led to further destruction of the temple complex.
4. According to a senior officer in the Ministry of External Affairs, **“During the restoration works of Group ‘A’ temples, our ASI team has recovered the Shiva Linga.**
5. It is a monolithic structure with decorative patterns of very exquisite cultural value. Before this, six other Shiva Lingas have already been recovered in the My Son Temple complex. But the latest find is believed to be most magnificent.
6. Earlier this year, in the Ministry of External Affairs a new Development Partnership Division (DPA-IV) was created which will help in coordinating and undertaking development partnership abroad for culture and heritage conservation projects.
7. And, in consultation with relevant technical agencies include identification, planning and implementation of such projects.
8. This new division is also going to be the repository of all such projects India is undertaking abroad, and would be instrumental in dissemination of information of such projects and co-operation in the area of culture and heritage.



India has carried out such restoration in Cambodia

1. In fact India was the first country which responded to an appeal made by Cambodia to the world community in 1980.
2. Cambodia had sought help to save the Angkor Vat which was the center of the Khmer Kingdom for several centuries.

My Son sanctuary, Vietnam

1. My Son sanctuary in Vietnam is a designated UNESCO world heritage centre and a home to a cluster of Hindu temples built over 10 centuries.
2. The temples there are dedicated to Lord Shiva, known under various local names, the most important of which is Bhadreswara.
3. **The UNESCO site describes the ancient complex as follows:** “Between the 4th and 13th centuries, a unique culture which owed its spiritual origins to Indian Hinduism developed on the coast of contemporary Viet Nam.
4. This is graphically illustrated by the remains of a series of impressive tower-temples located in a dramatic site that was the religious and political capital of the Champa Kingdom for most of its existence.

CHARDHAM PROJECT

Union minister Nitin Gadkari on 26 May 2020 lauded the Border Roads Organisation (BRO) for achieving breakthrough in the 440-metre long tunnel below the busy Chamba town and termed it as an 'extraordinary feat' in nation-building during the pandemic. The BRO achieved the major milestone by successfully digging up the 440-metre long tunnel below the busy Chamba town on Rishikesh-Dharasu road, National Highway no 94, which will facilitate all-weather connectivity to Chardham - Gangotri, Kedarnath, Yamunotri and Badrinath - a Rs 12,000 crore ambitious project.

What

1. The breakthrough was completed amidst threat of Covid-19 and nationwide lockdown.
2. The breakthrough of this tunnel will go a long way in facilitating speedy movement of traffic, reducing congestion and distance to Chamba town and easing the movement of yatis on Chardham Yatra and bring economic prosperity.
3. The latest Austrian technology has been used in construction of the Chamba tunnel. The tunnel will be through for traffic by October 2020 almost three months before its scheduled date of completion of January 2021.
4. BRO has been working in some of the very difficult terrain and ensuring implementation of critical projects.
5. BRO started the work on the North Portal of this tunnel in January 2019 but work on South Portal could be started only after October 2019 due to stiff resistance from locals on account of safety concerns and compensation issues.
6. The loss in time was compensated by day and night working shifts along with use of modern technology.
7. The Chamba tunnel is a Horse shoe type tunnel with 10 metre carriage way width and 5.5 metre vertical clearance.
8. The sanctioned cost of this tunnel is Rs 107.07 crore and the awarded cost is Rs 86 crore, including Rs 43 crore for tunnel and Rs 43 crore for 4.2 Km approach roads to tunnel.
9. BRO has been entrusted with 251 km and this consists of 17 packages out of which



- 10 projects of 151 km have been sanctioned.
10. These include five projects of 99 km length on Rishikesh – Dharasu(NH-94), two projects for constructing 22 km on Dharasu- Gangotri Highway (NH-108) and three projects for constructing 32 km on Joshimath to Mana (NH-58) road.
 11. BRO is slated to complete four projects aggregating a length of 53 Km out of 10 ongoing projects ahead of their scheduled between June and October 2020.
 12. The BRO to ensure beautification drive along the highway including plantation of green species besides other methods.
 13. The BRO was formed on 7 May 1960 to secure India's borders and develop infrastructure in remote areas of the north and north-east states of the country.

SHEKATKAR RECOMMENDATIONS ACCEPTED

In a **major boost to building strategic roads along India's northern border with China**, the government accepted and implemented three important recommendations relating to border infrastructure, made by the Shekatkar Committee in 2016. The recommendations accepted were aimed at speeding up road construction in remote areas, providing easier access to the military and leading to socio economic development in the border areas.

First recommendation

1. First, the government has implemented the Shekatkar Committee recommendation "to outsource road construction work beyond the optimal capacity of Border Roads Organisation (BRO). This is aimed at bringing in private sector road construction agencies and taking the load off a heavily overstretched BRO, which is struggling to maintain the existing network of borders roads and highways; while also building new roads to areas that have remained outside the road network since independence. To ensure oversight, the government has made it mandatory to adhere to the Engineering Procurement Contract (EPC) for executing all projects that cost more than Rs 100 crore.

Flashback

1. The 11-member committee was constituted, headed by Lt Gen DB Shekatkar (retd) for measures to enhance the combat capabilities of the over 13-lakh strong armed forces in May 2016.
2. The committee focused on re-balancing the overall defence expenditure in view of the escalating salary and pension bills.
3. The appointment of the committee is in tune with the Government's 'Save and Raise' policy adopted in the aftermath of the 1999 Kargil conflict.
4. The policy is aimed at improving combat capabilities of the armed forces without any increase in manpower.
5. To achieve this, the focus has been on induction of cutting-edge technologies and manpower optimization.

Second recommendation

1. Second, the government has accepted a Shekatkar Committee recommendation that makes it easier to introduce modern construction plant, equipment and machinery. **For this, the BRO's "enhanced procurement powers" for domestic and foreign procurements have been increased from Rs 7.5 crore to Rs 100 crore.**
2. This is deemed essential, with the BRO engaged in sophisticated road and tunnel construction projects, such as the Atal Behari Vajpayee Tunnel near Manali that underpasses the Rohtang Pass; and the 80-kilometre-long road on the Amarnath

Yatra route from Dharchula (Uttarakhand) to Lipulekh (China Border).

3. **For projects like these, the “BRO has recently inducted** Hot-Mix Plant 20/30 TPH for speedier laying of roads, remote operated hydraulic Rock Drills DC-400 R for hard rock cutting, a range of F-90 series of self-propelled snow-cutters/blowers for speedier snow clearance, stated the defence ministry (MoD).
4. The BRO is also introducing advanced new technologies to speed up construction, such as precision blasting, use of geo-textiles for soil stabilisation, using cementitious base for pavements and plastic coated aggregates for surfacing.
5. With the empowerment of field officers through enhanced delegation of financial and administrative powers, there has been significant improvement in faster financial closure of works.

Third recommendation

1. Finally, completing land acquisition and obtaining statutory clearances such as forest and environmental clearance will now be pre-requisites for approving the Detailed Project Report (DPR) for a new road. Work can be awarded only after at least 90 per cent of the statutory clearances have been obtained.
2. The Shekatkar Committee submitted a total of 99 recommendations. Details of the report and its recommendations have not been placed in the public domain as it “covers operational aspects of the armed forces, disclosure of which is not in the interest of national security, the government told Parliament in February 2019.

COP26 CLIMATE TALKS TO TAKE PLACE NEXT YEAR

The 26th meeting of the Conference of the Parties (COP 26) to the UNFCCC, which was **scheduled to meet in November this year in UK’s Glasgow**, will now take place from November 1-20, 2021 due to the Covid-19 pandemic, the United Nations announced on 29 May 2020. A decision, in this regard, was agreed upon between the UK government, the UN climate body and member states late on 28 May 2020.

What

1. The development comes two days after the European Union (EU) unveiled the EUR 750 billion green stimulus plan to shore up the sagging economy due to the Covid-19 pandemic while also making sure that the 27-nation trading bloc achieves climate neutrality by 2050.
2. COP26 President Alok Sharma said that nations must not lose sight of the huge challenges of climate change while rightly focusing on the fight to contain coronavirus.
3. With the new dates for COP26 now agreed we are working with our international partners on an ambitious roadmap for global climate action between now and November 2021. The steps we take to rebuild our

Flashback

1. The UNFCCC is one of three Conventions that have come out of the historic 1992 Earth Summit in Rio de Janeiro.
2. The Rio summit gave rise to the UN Framework Convention on Climate Change (UNFCCC) under which countries have agreed to restrict the emissions of greenhouse gases, first through the Kyoto Protocol of 1997 and now through the Paris Agreement.
3. It also gave rise to the Convention on Biological Diversity (CBD) which too has delivered an international arrangement to protect and use biodiversity.
4. It also gave rise to the UN Convention to combat Desertification (UNCCD) which has not yet resulted in any international treaty or protocol to fight desertification.
5. The UNFCCC holds its general meetings every year, while CBD and CCD meet every two years.

economies will have a profound impact on our societies' future sustainability, resilience and well-being and COP26 can be a moment where the world unites behind a clean resilient recovery.

4. Other climate leaders such as **European Climate Foundation's CEO Laurence Tubiana**, one of the main architects of the Paris Climate Agreement, said that this **additional time should be used to** "ensure climate plans are the basis of a cleaner, healthier global recovery".
5. The COP26 is being dubbed as one of the most crucial since the 2015 Paris agreement in ramping up climate ambitions.
6. The protracted negotiations in Madrid last year delivered a weak outcome and failed to resolve core issues such as trading in carbon credit markets and providing financial assistance to developing countries for climate damages.
7. The confirmation of the COP26 date also comes in the backdrop of repeated warnings issued by the global scientific community about the lack of urgency in addressing climate action among nations despite the Intergovernmental Panel on Climate Change (IPCC) warning that going beyond 1.5 degrees Celsius above pre-industrial levels means the bringing of even wider-ranging and more destructive climate impacts.

ISRO RECEIVES PATENT FOR LUNAR SOIL

Indian Space Research Organisation (Isro) has received a patent for its method of manufacturing highland lunar soil simulant. The simulant is made in bulk from similar rock samples identified and picked out from Sittampundi Anorthosite Complex, almost 67 km from Salem, in Tamil Nadu. The procedure has satisfied all aspects such as mineralogy, bulk chemistry, grain size distribution and geo-mechanical properties. The method used for preparing the lunar simulant is cost-effective, reproducible and easy to scale up, said the patent specification filed by the Space Agency.

What

1. The simulant is quite similar to the regolith (loose unconsolidated rock and dust that sits atop a layer of bedrock according to Encyclopaedia Britannica) of the lunar highland region. It can be used to control the mobility of the rover for scientific exploration and for the study of geo-technical or mechanical properties of lunar soil.
2. The simulant could also be used for fundamental theoretical and experimental research for constructing civil engineering structures on the surface of the Moon, and to make headway in lunar locomotive engineering.
3. There are bright and dark areas on the Moon's surface. The dark areas are called Maria or mare, which are mostly flat, while the highlands are heavily cratered and mountainous.
4. Isro's patent application claims that most of the countries produced simulants representing lunar mare region, while the highland crust occupies 83 per cent of the lunar surface. Yet, only a limited number of simulants represent the regolith of this region.
5. It is difficult, expensive, and time-consuming to produce simulants in large numbers. Hence, there is a need for low-priced simulants for diverse lunar applications in order to minimise mission risk.
6. The inventors have ingeniously arrived at a method to make a lunar simulant that has a chemical and mineralogical composition, and mechanical and geotechnical properties that are similar to those of lunar soil.
7. Most future missions propose for soft landing on the lunar highland region. Hence there is an urgent need for a bulk quantity of lunar soil simulants that represent the highland lunar crust, it said in the patent specification filed in 2014.
8. Isro added that its simulant is exclusively manufactured to represent lunar highland region and should also be usable in diverse lunar applications to provide lowest

- possible risk.
9. It may be recalled that for Chandrayaan-2, India's first moon landing experiment, Isro had developed lander and rover indigenously after the Russian promise to offer the technology did not come up.
 10. These were tested in a simulated atmosphere with support of surface created by rocks transported from Salem. These rocks were similar in composition to the Moon's surface.
 11. The rocks were crushed to the required size and moved to Bengaluru where the facility was created. The mission, with an orbiter, a rover and a probe, successfully placed the orbiter which will have an extended lifespan of seven years, while the lander crashed on the Moon's South Pole in September 2019.
 12. Several countries have been developing and producing lunar simulants, including the US, Japan and China, and several attempts have been made in the past to reproduce the lunar environment for research purposes.
 13. There has been renewed interest by many of these countries in probing Earth's only natural satellite for its mineral content in the recent past.
 14. Reports quoting Isro in 2019 said the space agency has plans to explore a joint satellite mission in the Moon's polar region in collaboration with Japan Aerospace Exploration Agency (Jaxa).
 15. According to reports, Isro has announced a Chandrayaan-3 mission similar in configuration to the second Moon mission. It said that Chandrayaan-2 was a highly complex mission, as it brought together an Orbiter, Lander and Rover to explore the Moon's South Pole.
 16. This mission was unique in that it aimed at studying not just one area of the Moon but all areas combining the exosphere, the surface as well as the sub-surface of the satellite in a single mission.
 17. The Moon is the closest cosmic body at which space discovery can be attempted and documented. It is also a promising test bed to demonstrate technologies required for deep-space missions, said Isro in its Chandrayaan-2 mission page.

PMMSY APPROVED

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has given its approval for implementation of the Pradhan Mantri Matsya Sampada Yojana (PMMSY) – A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India under two components namely, Central Sector Scheme (CS) and Centrally Sponsored Scheme (CSS) at a total estimated investment of Rs. 20,050 crore comprising of (i) Central share of Rs. 9,407 crore, (ii) State share of Rs. 4,880 crore **and (iii) Beneficiaries' share of Rs. 5,763 crore.** The Scheme will be implemented during a period of 5 years from FY 2020-21 to FY 2024-25. The PMMSY will be implemented as an umbrella scheme with two separate Components namely (a) Central Sector Scheme (CS) and (b) Centrally Sponsored Scheme (CSS).

The Centrally Sponsored Scheme (CSS) Component is further segregated into Non-beneficiary oriented and Beneficiary orientated sub-components/activities under the following three broad heads:

- Enhancement of Production and Productivity
- Infrastructure and Post-Harvest Management
- Fisheries Management and Regulatory Framework

Funding Pattern: PMSSY will be implemented with the following funding pattern: Central Sector Scheme (CS):

1. The entire project/unit cost will be borne by the Central government (i.e. 100% central funding).

2. Wherever direct beneficiary oriented i.e. individual/group activities are undertaken by the entities of central government including National Fisheries Development Board (NFDB), the central assistance will be up to 40% of the unit/project cost for General category and 60% for SC/ST/Women category.

Centrally Sponsored Scheme (CSS):

For the Non-beneficiary orientated sub-components/activities under CSS component to be implemented by the States/UTs, the entire project/unit cost will be shared between Centre and State as detailed below:

- North Eastern & Himalayan States: 90% Central share and 10% State share.
- Other States: 60% Central share and 40% State share.
- Union Territories (with legislature and without legislature): 100% Central share.

MODIFIED DPR OF UJH MPP IN J&K

The Centre has given approval to a modified detailed project report (DPR) of the Ujh Multipurpose Project (MPP) in Jammu and Kashmir at an estimated cost of Rs 9,167 crore, an official spokesman said on 16 May 2020. The Central Advisory Committee for consideration of techno-economic viability of major and medium irrigation, flood control and multipurpose project proposals accepted the project proposal subject to certain conditions.

What

1. The proposal was approved keeping in view its strategic importance from Indus Waters Treaty angle for utilisation and regulation of waters flowing across the border.
2. The modified Ujh MPP is located on river Ujh, one of the main tributaries of river Ravi, in Kathua district of Jammu and Kashmir. A 116.00 m high dam is proposed at the river with full reservoir level (FRL) at 608 m.
3. The proposed dam site is Barbari village about 1.6 km downstream of Panchtirthi. The powerhouse site is approximately 9.5 km downstream of the dam site near Deoli village.
4. The advisory committee of Department of Water Resources, River Development and Ganga Rejuvenation (DoWR, RD&GR) accorded approval to the modified DPR of the MPP project at a meeting chaired by Union Secretary U P Singh recently.
5. While according approval to the project, the committee directed that "for ensuring consumptive utilisation of water beyond already envisaged through project, possibility of additional utilisation should be explored at the earliest so that the water released to generate hydropower may not flow out of the country and such project should be implemented on priority".
6. The DPR of Ujh MPP was initially prepared by the Indus Basin Organisation of the Central Water Commission in 2013.
7. The Irrigation and Flood Control Department in Jammu and Kashmir framed a modified proposal of Ujh MPP for inclusion of the additional culturable command area (CCA) of 23973 hectares (Ha) beyond the scope of the already approved project.
8. Earlier, the CCA to be irrigated under the project was proposed as 16743 Ha, with the proposed irrigation intensity of 187 per cent.
9. Total CCA has changed from 16743 Ha to 40716 Ha, with the proposed irrigation intensity of 189 percent, while the irrigation potential of the project works out as 76929 Ha.
10. The crop water requirement has been assessed as 557.19 million cubic metre (MCM). In addition to this, drinking water and industrial water requirements have been assessed as 18.92 MCM and 20 MCM respectively.
11. Evaporation losses have tentatively been assessed as 42 MCM that the total consumptive water requirement works out to be 638.11 MCM excluding the

environmental flow to the tune of 97.66 MCM.

12. A dam to power house comprising four units of 2.5 MW each has been proposed to harness the hydro-electric potential of the water meant for environmental releases. The total installed capacity is 196 MW.

INTERNATIONAL

INDIA ELECTED CHAIR OF WHO EXECUTIVE BOARD

Union Minister for Health and Family Welfare Dr Harsh Vardhan took charge as the Chairman of the Executive Board of the World Health Organisation (WHO) on 22 May 2020 at the 147th session of the board. The Indian minister took over the charge from Japan's **Dr Hiroki Nakatani**. The Executive Board of WHO consists of 34 members, all of whom are technically qualified and hold the position for three years.

What

1. Dr Harsh Vardhan as the head of the governing body of the international nodal agency for public health will give India a chance to play a more prominent role in the global public health discourse.
2. The Executive Board is tasked with the implementation of the decisions and policies taken by the World Health Assembly, the decision-making body of the WHO.
3. Apart from this, the board is also required to advise and generally facilitate the work of the Health Assembly.
4. An annual meeting of the Executive Board is organised in January, so that the members can agree upon the agenda for the World Health Assembly and the resolutions that the assembly would take under consideration.
5. Once the Assembly is convened, a second meeting of the Board is called in May. This generally shorter meeting is a follow up to the Assembly.
6. This year, the Health Assembly was convened virtually on May 18 and 19, with the list of its resolutions shortened so that the discussion could be held within two days. Since the Assembly ended on May 19, the Board held a meeting on 22 May 2020 for more administrative matters.
7. The post of Chairman of the Board is held by rotation by the six regional groups of the WHO – Africa, Americas, South-East Asia, Europe, Eastern Mediterranean and Western Pacific regions – for a period of one year each.
8. The report further stated that the bloc had last year taken the unanimous decision of **electing India's nominee to the board for a term lasting three years.**

India at the WHO

1. India became a party to the WHO Constitution on 12 January 1948.
2. The first session of the South East Asia Regional Committee was held on October 4-5, 1948 in the office of the Indian Minister of Health, and was inaugurated by Jawaharlal Nehru, the first Prime Minister.
3. The first Regional Director for South East Asia was an Indian, Dr Chandra Mani, who served between 1948-1968.
4. Currently, the post has again been occupied by an Indian appointee, Dr Poonam Khetrpal Singh, who has been in office since 2014.
5. Since 2019, Dr Soumya Swaminathan has **been the WHO's Chief Scientist.**

The WHO Executive Board

1. The WHO is governed by two decision-making bodies — the World Health Assembly and the Executive Board.

2. **The agency's** headquarters are located at Geneva in Switzerland.
3. The Board is composed of 34 members technically qualified in the field of health, with members being elected for three-year terms.
4. The **Health Assembly is the WHO's decision-making** body, and consists of 194 Member States.
5. **The Board chairman's post is held by rotation for one year by each of the WHO's** six regional groups: African Region, Region of the Americas, South-East Asia Region, European Region, Eastern Mediterranean Region, and Western Pacific Region.
6. At the main Board meeting held in January, the agenda for the forthcoming Health Assembly is agreed upon, and resolutions for forwarding to the Assembly are adopted.
7. A second shorter meeting is held in May, immediately after the Health Assembly, for more administrative matters.
8. The main functions of the Board are to give effect to the decisions and policies of the Health Assembly, to advise it and generally to facilitate its work.
9. The Board and the Assembly create a forum for debate on health issues and for addressing concerns raised by Member States.
10. Both the Board and the Assembly produce three kinds of documents — Resolutions and Decisions passed by the two bodies, Official Records as published in WHO Official publications, and Documents that are presented "in session" of the two bodies.

NEPAL APPROVES NEW MAP

Yubraj Khatiwada, Minister of Finance and Information and Communication has announced that a new political map of Nepal is being issued. The updated map of Nepal presented by the Ministry of Land Management in 19 May 2020 Council of Ministers meeting has been endorsed. The new map incorporates northern, southern, western and eastern International borderlines as well as includes the political and administrative arrangements. This new map will be used in all kinds of documents which have been enforced on by the government.

What

1. Nepal's President Bidhya Devi Bhandari, while reading out Plans and Policies of the Government for the Fiscal Year of 2020-21 last week, had announced a new map incorporating the claimed territories as that of Nepal.
2. Our emblems and logos used for the government purpose will follow the newly released maps. It also would be incorporated in the textbooks and for public use as well.
3. The new map of Nepal was released on 19 May 2020, said Damodar Dhakal, Director-General of Nepal's Department of Survey.
4. The new map also incorporates Limpiyadhura, Lipulekh, and Kalapani, territories claimed by Nepal.
5. India and Nepal share a 1,800km (1,118-mile) open border. Nepal has said it has



- "consistently maintained" that as per the Sugauli Treaty (1816), "all the territories east of Kali (Mahakali) river, including Limpiyadhura, Kalapani and Lipu Lekh, belong to Nepal."
6. The Lipulekh Pass is claimed by Nepal based on the 1816 Treaty of Sugauli it entered with the British colonial rulers to define its western border with India.
 7. Kathmandu also claims the highly strategic areas of Limpiyadhura and Kalapani, although Indian troops have been deployed there since New Delhi fought a war with China in 1962.
 8. After a new road was inaugurated on May 8 by Defence Minister Rajnath Singh connecting the Lipulekh pass in Uttarakhand with Kailash Mansarovar route in China, Nepal has protested against it and is also considering putting up a security post in the area.
 9. India's Ministry of External Affairs (MEA) had said the road going through Uttarakhand's Pithoragarh district "lies completely within the territory of India".
 10. Treaty of Sagauli, (March 4, 1816), agreement between the Gurkha chiefs of Nepal and the British Indian government that ended the Anglo-Nepalese (Gurkha) War (1814–16).
 11. By the treaty, Nepal renounced all claim to the disputed Tarai, or lowland country, and ceded its conquests west of the Kali River and extending to the Sutlej River.

HONG KONG'S CONTROVERSIAL SECURITY LAW

China's parliament has proposed introducing a new security law in Hong Kong, a move expected to fan fresh protests in the semi-autonomous financial hub. The proposal, which has been condemned by the United States and Hong Kong pro-democracy figures as an assault on the city's freedoms, was submitted for deliberation on 22 May 2020. Article 23 of Hong Kong's mini-constitution, known as the Basic Law, says the city must enact national security legislation to prohibit "treason, secession, sedition (and) subversion" against the Chinese government.

What

1. Hong Kong has been trying to introduce a law for years but pro-democracy demonstrations that paralysed the city last year have pushed the issue up the agenda and galvanised Beijing.
2. Last month, Beijing's top official in Hong Kong, Liaison Office director Luo Huining, said the city urgently needed a new national security law to combat violent protesters and independence advocates.
3. On 22 May 2020 Wang Chen, vice chairman of the National People's Congress's (NPC) Standing Committee, its actual law-making organ, warned "powerful measures" were needed to curb the city's pro-democracy movement.
4. Article 23 has never been implemented due to public fears it would curtail Hong Kong's cherished rights, such as freedom of expression and the press.
5. Those liberties are unseen on the mainland and are protected by an agreement made before Britain handed Hong Kong back to China in 1997.
6. An attempt to enact the clause in 2003 was shelved after half a million people took to the streets in protest against it. Then security chief Regina Ip had to resign following the failure.
7. China's move would authorise its lawmakers to circumvent Hong Kong's legislature and directly enact the legislation at a future date.
8. China's legislature is expected to rubber stamp the draft resolution on Thursday, the last day of the annual parliamentary gathering, before the details are fleshed out next month at another meeting of the NPC.
9. The law would then be implemented locally, an unprecedented move that could spark a further wave of protests.

10. Pro-democracy lawmakers have said the legislation marks the end of 'One country, Two systems' -- a reference to the handover agreement that has given Hong Kong a limited form of autonomy since returning from British to Chinese rule in 1997.
11. Even before the proposed security law, there were fears that Beijing was steadily eroding those freedoms.
12. Pro-democracy lawmaker Tanya Chan warned that the legislation "makes us feel that One Country, One System has officially been implemented in Hong Kong."

US TO WITHDRAW FROM OPEN SKIES TREATY

The United States said on 21 May 2020 it would withdraw from the 35-nation Open Skies treaty allowing unarmed surveillance flights over member countries, the Trump administration's latest move to pull the country out of a major global treaty. The administration said Russia had repeatedly violated the pact's terms. Senior officials said the pullout would formally take place in six months, but President Donald Trump held out the possibility that Russia could come into compliance.

What

1. His decision deepens doubts about whether Washington will seek to extend the 2010 New START accord, which imposes the last remaining limits on U.S. and Russian deployments of strategic nuclear arms to no more than 1,550 each. It expires in February.
2. Mr. Trump has repeatedly called for China to join the United States and Russia in talks on an arms control accord to replace New START. China, estimated to have about 300 nuclear weapons, has repeatedly rejected Mr. Trump's proposal.
3. NATO allies and other countries like Ukraine had pressed Washington not to leave the Open Skies Treaty, whose unarmed overflights are aimed at bolstering confidence and providing members forewarning of surprise military attacks.
4. The Open Skies decision followed a six-month review in which officials found multiple instances of Russian refusal to comply with the treaty.
5. Last year, the administration pulled the United States out of the Intermediate-range Nuclear Forces Treaty with Russia.
6. A senior administration said U.S. officials had begun talks in recent days with **Russian officials about a new round of nuclear arms negotiations to "begin crafting the next generation of nuclear arms control measures.**

Treaty took effect in 2002

1. Mr. Trump's arms control negotiator mounted a full-blown defense of the administration's arms control policies, focusing on the president's proposal that China join the United States and Russia on a replacement for New START.
2. The Open Skies treaty, proposed by U.S. President Dwight Eisenhower in 1955, was signed in 1992 and took effect in 2002.
3. The idea is to let member nations make surveillance flights over each other's countries to build trust.
4. The officials cited a years-long effort by Russia to violate the terms, such as by restricting U.S. overflights of Russia's neighbour Georgia and the Russian military enclave in Kaliningrad on the Baltic coast.

G7 SUMMIT POSTPONED

US President Donald Trump postponed the "outdated" Group of Seven summit that he planned to hold in June at the White House, seeking inclusion of India and some other countries to the grouping of world's top economies. Trump told, travelling with him on board the Air Force One from Florida to Washington DC, that he is "postponing it until September" and plans to invite Russia, South Korea, Australia and

India.

What

1. Alyssa Alexandra Farah, White House Director of Strategic Communications, said that this is bringing together "our traditional allies" to talk about how to deal with the future of China.
2. G7 is a forum of the seven countries with the world's largest and most advanced economies — France, Germany, Italy, Japan, the United States, the United Kingdom, and Canada. Heads of States of these countries meet annually on international economic and monetary issues.

3. The US holds the presidency of the G7 this year. During the summit, G7 president normally invites heads of States of one or two countries to attend the meeting as a special invitee. Last year French President Emmanuel Macron had invited Prime Minister Narendra Modi to the G7 Summit.
4. Trump talking about inviting India to the next G7 Summit is reflective of the growing international stature of the country.

How the G-7 summit works

1. The G-7 nations meet at annual summits that are presided over by leaders of member countries on a rotational basis.
2. The summit is an informal gathering that lasts two days, in which leaders of member countries discuss a wide range of global issues.
3. The host country typically gets to invite dignitaries from outside the G-7 to attend the Summit.
4. The groundwork for the summit, including matters to be discussed and follow-up meetings, is done by the "sherpas", who are generally personal representatives or members of diplomatic staff such as ambassadors.
5. **The sherpa for Prime Minister Modi at last year's summit was former Union Minister Suresh Prabhu.**

What is the G7?

1. The G7 (or Group of Seven) is an organisation made up of the world's seven largest so-called advanced economies: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
2. The group regards itself as "a community of values", with freedom and human rights, democracy and the rule of law, and prosperity and sustainable development as its key principles.
3. The initial group of six first met in 1975 "to exchange ideas on possible solutions" to a global economic crisis. Canada joined the following year.
4. Ministers and civil servants from the G7 countries meet throughout the year to discuss matters of mutual interest.
5. Each member nation takes over the G7 presidency for a year on a rolling basis and hosts the annual centrepiece two-day summit meeting.
6. Energy policy, climate change, HIV/Aids and global security are just some of the subjects discussed at past summits.

US JOINS G7 ARTIFICIAL INTELLIGENCE GROUP

The US has joined an international panel for setting ethical guidelines for the use of artificial intelligence. The Trump administration had earlier dismissed the idea. White House's chief technology officer, Michael Kratsios told, it is important to establish shared democratic principles as a counter to China's record of "twisting technology" in ways that threaten civil liberties. Chinese technology companies are attempting to shape international standards on facial recognition and surveillance at the United Nations.

What

1. The Trump administration had been the lone holdout among leaders of the Group of Seven - the world's wealthiest democracies - in setting up the Global Partnership on AI.
2. The partnership launched on 28 May 2020 after a virtual meeting between national technology ministers. It was nearly two years after the leaders of Canada and France announced they were forming a group to guide the responsible adoption of AI based on shared principles of "human rights, inclusion, diversity, innovation and economic growth."
3. The Trump administration objected to that approach, arguing that too much focus on regulation would hamper US innovation. But negotiations over the past year and changes to the group's scope led the US to join.
4. US involvement is important because of the large role that American tech firms play globally and its historic advocacy for human rights, said Kay Mathiesen, an associate professor focused on computer ethics at Northeastern University in Boston.
5. US tech companies such as Microsoft, Google and Apple are all concerned about what guidelines they should be following to use AI responsibly.
6. Given their global presence, the fact that the U.S. wasn't involved does not mean that they would not end up having to follow any regulations developed by the rest of the G7.

What Is Artificial Intelligence (AI)?

1. Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.
2. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.
3. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal.

ECONOMY

AMENDED GFR NOTIFIED

The government has notified amendments to General Financial Rules (GFR) to ensure that goods and services valued less than Rs 200 crore are being procured from domestic firms, a move which will benefit MSMEs. Govt has notified the amendments to the General Financial Rules 2017 to ensure that henceforth global tenders will be disallowed in government procurement up to Rs 200 crore, as announced in the Aatma nirbhar Bharat Package.

What

1. Sitharaman had last week announced an economic support package for micro, small and medium enterprises (MSMEs), which includes disallowing global tender for government procurement up to Rs 200 crore.
2. Amending the GFR, the Department of Expenditure under Ministry of Finance said, No Global Tender Enquiry (GTE), however, shall be invited for tenders up to Rs 200 crore or such limit as may be prescribed by the Department of Expenditure from time to time.
3. Provided that for tenders below such limit, in exceptional cases where the Ministry or Department feels that there are special reasons for GTE, it may record its detailed justification and seek prior approval for relaxation to the rule from competent authority specified by the Department of Expenditure.
4. The MSME package announced last week comprised Rs 3 lakh crore of collateral-free loans, which would benefit about 45 lakh small businesses.
5. Another two lakh such businesses would benefit from a Rs 20,000 crore subordinate debt for stressed or loan defaulting MSMEs, adding a fund of funds for

MSMEs is also being created, which will infuse Rs 50,000 crore equity in units that have growth potential.

6. Also the definition of MSMEs has been changed from a pure investment-based one to one that provides for higher investments and turnover for companies to remain as small businesses, and avail financial and other incentives.
7. Besides, an estimated Rs 1 lakh crore in dues to MSMEs by government and central PSUs will be released within 45 days.
8. Small and mid-sized businesses in India account for about a third of gross domestic product and employ more than 11 crore people and the package announced is aimed at helping them overcome coronavirus disruptions.

Flashback

1. General Financial Rules (GFRs) are a compilation of rules and orders of Government of India to be followed by all while dealing with matters involving public finances.
2. These rules and orders are treated as executive instructions to be observed by all Departments and Organisations under the Government and specified Bodies except otherwise provided for in these Rules.
3. General Financial Rules were issued for the first time in 1947 bringing together in one place all existing orders and instructions pertaining to financial matters. These have subsequently been modified and issued as GFRs 1963, GFRs 2005 and GFRs 2017.
4. GFRs, 2017 have evolved as a result of wide consultations with Central Government Ministries and Departments, some State Governments and other stakeholders at the Task Force stage and thereafter.

FOURTH TRANCHE SELF-RELIANT PACKAGE

Unveiling the fourth tranche of government's mega stimulus, Finance Minister Nirmala Sitharaman laid emphasis on wide-ranging structural reforms across eight critical sectors- Coal, Minerals, Defence Production, Airspace management, Power Distribution companies, Social Infrastructure Projects, Space sectors and Atomic Energy. India must prepare for tough competition that will enable us to counter challenges of global value chains, reiterated Sitharaman laying down the true meaning of 'Self-Reliant Bharat'. In the third tranche finance minister announced a mix of financial, legislative and reform measures aimed largely at increasing the pricing power of farmers – or share of profits in farm incomes. She proposed to dismantle historical domestic trade barriers, bring new laws for freer food and commodities markets, and better infrastructure.

What is the Fourth tranche of economic stimulus-

1. Structural Reforms- Structural reforms enabled India in becoming an attractive investment destination.
2. Fast-track Investment clearances through Empowered Group of Secretaries
3. Upgradation of Industrial Infrastructure- Schemes will be implemented in states through challenge mode for industrial cluster upgradation of common infrastructure facilities and connectivity.
4. Govt's focus on 8 sectors- Coal, Minerals Defence Production, Airspace management, Social Infrastructure Projects, Power distribution companies, Space sectors and Atomic Energy.

Coal Sector

1. Government is introducing the commercial mining of coal. India needs to reduce import of substitutable coal and increase self-reliance in coal production.
2. Nearly 50 blocks will be auctioned.
3. The investment of Rs. 50,000 crores is for the evacuation of the enhanced CIL's (Coal

India Limited) target of 1 billion tons of coal production by 2023-24 plus coal production from private blocks.

Minerals

1. Enhancing private investment in the mineral sector. Nirmala Sitharaman also explained the rationalisation of stamp duty payable at the time of award of mining leases.
2. 500 mining blocks would be offered through an open and transparent auction process, a joint auction of Bauxite & Coal mineral blocks will be introduced to enhance Aluminum industry's competitiveness.

Defence Production

1. Enhancing self-reliance in defence production- Indigenization of imported spares, separate budget provisioning for domestic capital procurement.
2. These steps will improve autonomy, accountability and efficiency in the sector. Foreign Direct Investment limit in defence manufacturing under automatic route is being raised from 49% to 74%. Corporatisation of Ordnance factory board was also announced.

Civil Aviation (Airspace Management, World Class Airports Through PPP, MRO HUB)

1. Restrictions on the utilisation of Indian Air Space will be eased so that civilian flying becomes more efficient.
2. The effort will bring a total benefit of Rs. 1000 crores per year for the aviation sector. Construction of world-class airports through PPP route.
3. The Government is working hard to make India a global hub for aircraft maintenance, repair and overhaul.
4. Airports Authority of India has awarded 3 airports out of 6 bids for operation & maintenance on (PPP) basis. Additional investment by private players in 12 airports in first & second rounds is expected around Rs 13,000 crores.

Power Sector Reforms

1. Power Distribution Companies in Union Territories to be privatised in line with the new tariff policies.
2. This will enable to strengthen industries and bring in efficiency in the entire power sector. This will also enable stability in the sector, announced the FM.
3. Boosting Private Sector investment - Boosting private sector investment in Social Infrastructure through revamped Viability Gap Funding Scheme of Rs 8100 crores.

Space Sector

1. Boosting private participation in space sectors. Government is working on a liberal geo-spatial policy.
2. Private sector to be co-traveller in India's space sector journey through launches, satellite services, commented the Finance Minister.

Atomic Energy

1. The government intends to link India's robust start-up ecosystem to the nuclear sector - Technology Development cum Incubation Centres will be set up for fostering synergy between research facilities and tech entrepreneurs.
2. Establishment of research reactor in PPP mode for production of medical isotopes.

FIFTH TRANCHE OF ECONOMIC PACKAGE

Finance Minister Nirmala Sitharaman on 17 May 2020 announced the fifth tranche of the Rs 20 trillion economic package. The fifth and last set of measures focuses on MGNREGA, health and education (rural and urban), businesses, decriminalisation of Companies Act, etc.

For MGNREGS

1. The FM announced that the government would allocate an additional Rs 40,000 crore, over and above the budgeted Rs 61,000 crore, to the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in order to generate more employment in the rural sector.

Related to ramping up health infrastructure and education

1. The FM said public expenditure on health will be increased. Not only will all districts have an infectious disease block in their hospitals, public health labs will also be set up at all block levels.
2. Research in health will be also increased, and the National Digital Health blueprint will be implemented.
3. For students hit by the pandemic, she said top 100 universities would be automatically permitted to start online courses by May 30, 2020.
4. An initiative for psycho-social support for students, teachers and families for mental health and emotional well-being, known as Manodarpan, will be launched immediately.

Related to companies

1. FM said any debt incurred by companies on account of the coronavirus would not be included in the category of defaults and no fresh insolvency proceedings would be initiated for a year.
2. For MSMEs: A special insolvency framework will be notified under Section 240A of IBC.
3. The finance minister announced that the minimum threshold to initiate insolvency proceedings would be raised to Rs 1 crore from Rs 100,000, in a move that would benefit MSMEs. An ordinance will be passed for raising this threshold.

Related to corporate affairs

1. Sitharaman said companies would be allowed to directly list securities in permissible foreign jurisdictions and listings for non-convertible debentures. Such companies will not be treated as listed companies.
2. She also announced decriminalisation of the Companies Act in violations involving minor technical and procedural defaults including shortcoming in CSR reporting, inadequacies in board reports, filing defaults and delay in holding AGMs.
3. A majority of the compoundable offences sections will be shifted to internal adjudication mechanism (IAM), she said, adding that amendments will be brought through an Ordinance and will de-clog the criminal courts and NCLT.
4. Seven compoundable offences under the Companies Act will be dropped altogether and five will be dealt with under an alternative framework.
5. The government was also working on the next phase of 'ease of doing business' reforms.

Measure deals with public sector enterprise policy

1. The FM said that a self-reliant India needed a coherent policy. In one of the crucial announcements, she said that PSUs will be privatised. All sectors are open to the private sector now.
2. The Govt will announce new policies related to public sector undertakings (PSUs) soon that will define strategic sectors which will have not more than four PSUs.
3. List of strategic sectors requiring presence of PSEs in public interest will be notified.
4. In strategic sectors, at least one enterprise will remain in the public sector, but the private sector will also be allowed.
5. In those sectors only one to four public sector enterprises (PSEs) will be present. She said in order to minimise wasteful administrative costs, the number of enterprises in strategic sectors will ordinarily be only one to four. Others will be

privatised/merged/brought under holding companies.

Measures to support state govts

1. States have so far borrowed only 14 percent of the limit which is authorised for them and 86 per cent of the limit remains unutilised.
2. The Centre has decided to increase borrowing limits of states from 3 per cent to 5 percent of Gross State Domestic Product (GSDP) for 2020-21.
3. States will get to borrow Rs 4.28 trillion more now.

SAFE HARBOUR RULES

The income tax department has notified the 'safe harbour' rates for 2019-20 fiscal for calculation of transfer pricing by foreign companies in India. The Central Board of Direct Taxes (CBDT) has notified changes to Rules 10TD and 10TE of Income Tax Rules relating to Safe Harbour Rules. It said rates applicable from Assessment Year (AY) 2017-18 to 2019-20 will continue to apply for AY 2020-21.

What

1. Transfer pricing implies the prices at which various overseas divisions of a company transact with each other. Generally, safe harbour is defined as circumstances in which the tax authority shall accept the transfer price declared by the taxpayer to be at arm's length.
2. Following the best practices of international tax jurisdiction, the Indian government introduced the concept of Safe Harbour Rules (SHR) in Finance Act 2009.
3. Post that, the first round of SHR provisions was introduced in August 2013 for a period of three years, followed by revision in 2017 in the SHR which was applicable till financial year 2019-20.
4. Different rates were prescribed for different category of international transactions. Of these, the category of software development, ITeS and KPO were popularly opted for.
5. Tax experts said in the past, these were applicable for more than one year but this time the government decided to announce only for one year considering fiscal 2020-21 would be impacted by COVID-19 disruptions.
6. The taxpayers intending to opt for SHR may apply before the statutory due date for undertaking TP compliance for AY 2020-21 on or by October 31, 2020.
7. The government has wisely announced the rate for only one year and it seems reduced rates would be announced for future years to match the sentiments of the industry.

SCIENCE AND TECHNOLOGY

SPACEX PROPELS TWO NASA ASTRONAUTS INTO ORBIT

A rocket ship built by Elon Musk's SpaceX company on 30 May 2020 successfully blasted off with two NASA astronauts into orbit from the US state of Florida on their way to the International Space Station, marking the dawn of a new age in commercial space travel. The blastoff from Kennedy Space Center in Florida also assumes significance as it marks the launch of humans into orbit from US soil for the first time in nearly a decade.

What

1. The SpaceX Crew Dragon spacecraft, carrying NASA astronauts Bob Behnken (49) and Doug Hurley (53), lifted off atop the company's Falcon 9 rocket from Launch Complex 39A at NASA's Kennedy Space Center.
2. With the liftoff, SpaceX became the first private company to launch people into

- orbit, a feat achieved previously by only three governments: the US, Russia and China.
- The reusable, gumdrop-shaped capsule called Crew Dragon, would now take the two American astronauts to a 19-hour journey to the International Space Station (ISS). The spacecraft is scheduled to dock with the ISS on 31 May 2020.
 - The successful launch, which was postponed early this week due to inclement weather, gave Americans something to cheer about as in the last three months they have lost over 100,000 of their countrymen due to the coronavirus that has brought the country's economy to its knee. More than 40 million people have lost their job and the pandemic has pushed the economy into a recession.
 - Top US leadership including President Donald Trump, First Lady Melania Trump, and thousands of curious Americans had gathered to watch the launch live on 31 May 2020.
 - It is the culmination of an incredible amount of work by the SpaceX team, by NASA and by a number of other partners in the process of making this happens.
 - Today a new era in human spaceflight begins as we once again launched American astronauts on American rockets from American soil on their way to the ISS, our national lab orbiting Earth.
 - The launch of this commercial space system designed for humans is a phenomenal demonstration of American excellence and is an important step on our path to expand human exploration to the Moon and Mars.
 - After successfully docking, the crew will be welcomed aboard the International Space Station, where they will become members of the Expedition 63 crew, which currently includes NASA astronaut Chris Cassidy.

SpaceX's astronaut-riding Dragon approaches space station

- SpaceX's astronaut-riding Dragon capsule approached the International Space Station on 31 May 2020, just hours after a historic liftoff from Florida. NASA astronauts Doug Hurley and Bob Behnken reported that the capsule was performing beautifully, as they closed in for the docking.
- The gleaming white capsule was easily visible from the station, its nose cone open exposing its docking hook, as the two spacecraft zoomed a few miles apart above the Atlantic, then Africa, then Asia.
- It's the first time a privately built and owned spacecraft is carrying crew to the orbiting lab. Hurley, the Dragon's commander, prepared to take manual control for a brief test, then shift the capsule into automatic for the linkup, 19 hours after liftoff.

DESERT LOCUST PROBLEM THIS YEAR

Desert locusts normally live and breed in semi-arid/desert regions. For laying eggs, they require bare ground, which is rarely found in areas with dense vegetation. So, they are more likely to breed in Rajasthan than in the Indo-Gangetic plains or Godavari and Cauvery delta. While green vegetation is good for hopper development – the stage between the nymph that has hatched and before its turning into a winged adult moth – **such cover isn't widespread enough** in deserts to allow growth of large locust populations. **Locusts aren't dangerous** as long as they are individual hoppers/moths or **small isolated groups of insects, in what is called the "solitary phase"**.

What

- It is when their population grows to large numbers – the resultant crowding induces behavioral changes and transformation from the **"solitary" to "gregarious" phase** –

- that they start forming swarms. A single swarm contains up to 40-80 million adults in one square km and these can travel up to 150 km in one day.
2. The above large-scale breeding and swarm formation, however, takes place only when conditions turn very favourable in their natural habitat, i.e. desert and semi-arid regions.
 3. These areas should get rains that will produce enough green vegetation to enable both egg laying and hopper development.
 4. It appears that such conditions have been there since the start of this year. The main locust breeding areas in the Horn of Africa, Yemen, Oman, Southern Iran and **Pakistan's Baluchistan and Khyber Pakhtunkhwa** provinces recorded widespread rains in March-April. East Africa, in fact, had its wettest rainfall season in over four decades even during October-November.
 5. The hopper bands and immature adult groups resulting from this large-scale breeding – itself a product of unusually heavy rains – are the ones that started arriving in Rajasthan during the first fortnight of April.
 6. **The Union Agriculture Ministry's Locust Warning Organisation then observed "low-density I & II instar gregarious/transient hoppers" at Jaisalmer and Suratgarh in Rajasthan and Fazilka in Punjab adjoining the Indo-Pakistan border.**
 7. Subsequently, there has been arrival of swarms from the main spring-breeding areas. And these swarms have come not only to western Rajasthan, but also moved to the eastern parts of the state and even Madhya Pradesh and Maharashtra.
 8. Much of this movement, it seems, was aided by the strong westerly winds from Cyclone Amphan in the Bay of Bengal.
 9. Thus, we have had two meteorological drivers behind the current locust invasions: one, unseasonal heavy rains in the main spring-breeding tracts in March-April, and, two, strong westerly winds.
 10. The **United Nations' Food and Agricultural Organisation** has further said that **"several successive waves of invasions can be expected until July in Rajasthan with eastward surges across northern India as far as Bihar and Orissa". But after July,** there would be westward movements of the swarms, as they will return to Rajasthan on the back of the changing winds associated with the southwest monsoon.
 11. **An important thing to note is the current swarms are all of "immature locusts".** These are locusts that voraciously feed on vegetation, but have not yet laid eggs.
 12. Once they start breeding, the swarm movement will cease or slow. Also, the breeding **will happen mainly in Rajasthan. So far, the swarms haven't caused much damage,** since the rabi crop has already been harvested and farmers are yet to start kharif sowings.
 13. One reason for the swarms migrating eastwards – normally they are seen in India **only after July post the monsoon's arrival,** while confining themselves mostly to the desert areas of West Rajasthan where they breed and exist as solitary insects or in isolated groups – has been their search for food.
 14. Remember, these insects need to munch enough – roughly their own weight in fresh food every day – before being ready for mating. With no crops in fields now, they have ended up invading green spaces, including parks, in Jaipur and orange orchards near Nagpur.
 15. The danger would be when the swarms that have already or are about to come will start breeding. A single gregarious female locust can lay 60-80 eggs three times during its average life cycle of 90 days.
 16. If their growth is coterminous with that of the kharif crop, we could well have a situation similar to what maize, sorghum and wheat farmers of Kenya, Ethiopia and Somalia experienced in March-April.
 17. A proactive exercise of control, through aerial spraying of ultra-low volume of concentrated insecticides in all potential breeding sites, is required, along with

continuous monitoring of the crops during the ensuing kharif season.

What kind of damage can they cause?

1. Locusts are polyphagous, i.e. they can feed on a wide variety of crops.
2. Secondly, they have an ability to multiply rapidly. A single female desert locust lays 60-80 eggs thrice during its roughly 90-day life cycle.
3. K L Gurjar, deputy director of LWO, estimates that a 1-square-km area can accommodate 40-80 million of these insects, making the growth of their swarms exponential quite like the Covid-19 virus.
4. The damage potential of locusts has been limited in India only because of the country hosting a single breeding season — unlike Pakistan, Iran and East Africa, where they also multiply during January-June.

EARTH'S MAGNETIC NORTH POLE IS SHIFTING

There is a turf war out there to control the location of **Earth's north magnetic pole**. The winner appears to be visible from a distance. This is due to the sudden sprint observed in the **drift of Earth's magnetic pole** towards Siberia pivoting away fast from Canada. The **pace in the shift isn't a subject of interest for scientists alone**. The **shift would inevitably** change the way world navigates itself using not just ships, maps, smart phones but a plethora of tools to map journey of life.

Earth's north magnetic pole: A brief intro

1. **The location of Earth's north magnetic pole** appears to be controlled from deep within Earth by 2 competing blobs in the magnetic field.
2. One present beneath Canada and the other beneath Siberia. Domain experts now say "The Siberian blob is winning."
3. A look back tells us that until the early 1990s, the magnetic North Pole was known to lie some 1,000 miles south of true north, in Canada.
4. The magnetic north drift had a trajectory observed at a rate of up to about 9 miles (15 km) a year.
5. **The decade preceding the millennium year witnessed the drift of Earth's magnetic North Pole turn into "more of a sprint," say scientists.**
6. Currently its speed is about 30 to nearly 40 miles a year (50-60 km a year) toward Siberia. Scientists, using satellite measurements, have confirmed the rapid cruise.

Speeding drift and Consequence

1. What does the speeding drift mean? Experts say the consequences are far and wide. One of the major consequences being the need to adjust the World Magnetic Model with these changes and the location of the pole.
2. The model is vital for many navigation systems used by ships, Google maps and smartphones, for example, findings on magnetic north, using SWARM satellite data. The SWARM satellites carry sophisticated magnetometers.

Earth's North Magnetic Pole position

1. The data showed that the position of the north magnetic pole is determined largely by a balance, or tug-of-war, between two large lobes of negative flux at the **boundary between Earth's core and mantle under Canada**.
2. Phil Livermore, from the University of Leeds has explained, by examining field maps and how they change after some time, we have been able to deduce why the pole has shifted from Canada to Siberia.
3. A flux in the circulation pattern under the crust geographically located under Canada has caused a patch of magnetic field at the edge of the core, deep within the Earth, to be stretched out.
4. Will the pole will ever return to Canada or continue heading south. Livermore has also explained that the models of the magnetic field within the core suggest that, at least

for the next few decades, the drift of the pole towards Siberia will not stop.

SPICEXPRESS GOT APPROVAL FOR DRONE TRIALS

Budget carrier SpiceJet on 29 May 2020 said its freighter arm SpiceXpress has received approval for conducting drone trials from aviation regulator Directorate General of Civil Aviation (DGCA). Post trials and approvals, the airline plans to use drones in delivery of essential supplies to remote areas, the company said in a release. A SpiceXpress-led consortium had submitted a proposal to the regulator for conducting experimental beyond visual line of sight (BVLOS) operations of remotely piloted aircraft in response to a DGCA notice inviting expression of interest.

What

1. Based on the recommendations of the BVLOS Experiment Assessment and Monitoring Committee, SpiceXpress was granted permission for conducting experimental BVLOS operations.
2. The consortium includes Throttle Aerospace, a drone manufacturing company, AeoLogic, an analytics and software solution firm and Involia, which is a provider of air traffic awareness and collision avoidance services.
3. Testing of drone technology for last mile connectivity and cost-effective cargo deliveries is a big leap in the air transportation of essential and non-essential supplies in India.
4. SpiceJet is optimistic about using this new mode of delivery for products like perishables and medicines which have a smaller shelf-life and need urgent deliveries in the remotest parts of India.
5. SpiceXpress, which is the dedicated freighter arm of SpiceJet, has eight dedicated freighters in the fleet comprising five Boeing 737s and three Bombardier Q400s.
6. Post trials and approvals, SpiceXpress plans to use drones to provide for a quicker, faster and cost-effective delivery of medical, pharma and essential supplies and e-commerce products.
7. SpiceXpress will be looking at last-mile delivery from the warehouse and the prime focus will be on delivering medical emergency parcels and essential supplies in remote areas.
8. Drones will ensure a faster delivery bringing down costs and would go a long way to augment the airline's business to offer express delivery of medicines, perishable items and e-commerce.

NEW 5G CLUB INCLUDING INDIA

The British government has approached the US with the prospect of creating a 5G club of 10 democracies, including India, amid growing security concerns related to Chinese telecom giant Huawei. A so-called **“D10” club of democratic partners**, including G7 countries — UK, US, Italy, Germany, France, Japan and Canada — plus Australia, South Korea and India will aim to create alternative suppliers of 5G equipment and other technologies to avoid relying on China.

What

1. The move to speed up such a club comes as the UK launched an inquiry into Huawei's involvement in the country's mobile network upgrade in the wake of US sanctions against the company.
2. Nokia and Ericsson are the only European suppliers of 5G infra and experts say they cannot provide 5G kit as quickly or as cheaply as Huawei.
3. Britain **has labelled Huawei a “high-risk” vendor** and its involvement in the UK's 5G upgrade comes with a 35 per cent market cap, including a ban on its participation **in the sensitive “core” of the network**.

4. The review into Huawei, launched last week by the UK's National Cyber Security Centre, followed the announcement of US sanctions to block the sale of American chips to the company.
5. UK security officials fear that the ban will prompt China to use cheaper, less secure technologies, instead of verified US versions. Meanwhile, examining proposals to curb the installation of Huawei kit in the 5G network from 2023.
6. Increasing the partnership of like-minded democracies forms part of the ongoing reappraisal of the Chinese firm's involvement in the UK.
7. The US in recent months has increased its action against Huawei, China's first global tech brand and a maker of network equipment and smartphones, preventing it from doing business in the US, as it believes the company known for its technological advancement in 5G is being used by the Chinese leadership to serve their interest.
8. The Trump administration says Huawei is a security risk, which the company denies, and is trying to persuade European and other allies to shun its technology for the next-generation telecom networks.
9. China has accused the US of raising phony security concerns to hurt a rising competitor to American tech companies.

MISCELLANEOUS

US TERMINATES RELATIONSHIP WITH WHO

US President Donald Trump said that America is terminating its relationship with the World Health Organization as he blamed it and China for the deaths and destruction caused by the COVID-19 pandemic across the globe. Stating that the funding of the WHO would now be diverted to other global public health organisations, Trump announced a series of decisions against China including issuing proclamation to deny entry to certain Chinese nationals and tightening of regulations against Chinese investments in America.

What

1. Trump also announced that the US will end special treatment of Hong Kong in response to Chinese imposition of new controls. He said that the US will revise its travel advisory to warn of surveillance in Hong Kong.
2. The world needs answers from China, Trump said in his aggressive speech on a bright sunny day from the Rose Garden of the White House.
3. The president, however, did not take any questions. For decades it has ripped off the US like no one has ever done before, he said, reiterating his charges against China.
4. China not only stole intellectual property, took away billions of dollars from the US and offshored the jobs, but also violated its commitment under the World Trade Organization, he said, adding that it was able to get away with the theft, like no one before because of past politicians and past presidents.
5. China, he alleged, has unlawfully claimed territories in the Indo-Pacific ocean, threatening freedom of navigation and international trade and broke its word to the world on ensuring the autonomy of Hong Kong.
6. The United States wants an open and constructive relationship with China, but achieving this relationship requires us to vigorously defend our national interest.
7. Trump alleged that the Chinese government has continually violated its promises to the US and many other nations. These plain facts cannot be overlooked or swept aside.
8. Observing that the world is now suffering as a result of the malfeasance of the Chinese government, Trump reiterated that China's cover-up of the Wuhan virus allowed the disease to spread all over the world, instigating a global pandemic that has cost more than 100,000 American lives and over one million lives worldwide.
9. Chinese officials ignored their reporting obligations to the World Health Organization and pressured the World Health Organization to mislead the

world when the virus was first discovered by Chinese authorities.

10. Countless lives have been taken, and profound economic hardship has been inflicted all around the globe.
11. China, he said, has total control over the WHO despite only paying USD 40 million per year compared to what the US has been paying which is approximately USD 450 million a year.
12. Asserting that he is also taking action to protect the integrity of America's financial system, Trump said he is instructing his presidential working group on financial markets to study the differing practices of Chinese companies listed on the US financial markets with a goal of protecting American investors.
13. Investment firms should not be subjecting their clients to the hidden and undue risks associated with financing Chinese companies that do not play by the same rules.
14. Referring to the unilateral Chinese action control over Hong Kong security, Trump said that this was a plain violation of Beijing's treaty obligations with the UK in the declaration of 1984 and explicit provisions of Hong Kong's basic law which has 27 years to go. China has replaced its promised formula of one country, two systems with one country, one system.

What is the WHO - and who funds it?

1. Founded in 1948 and based in Geneva, Switzerland, it is the UN agency responsible for global public health
2. Has 194 member states, and aims to "promote health, keep the world safe and serve the vulnerable"
3. Involved in vaccination campaigns, health emergencies and supporting countries in primary care
4. Funded by a combination of members' fees based on wealth and population and voluntary contributions

'RISK INDEX' DEVELOPED

The Indian Institute of Technology (IIT) Delhi has come up with a data science driven identification and mitigation framework for implementing state-by-state lockdown to contain the spread of COVID-19, suggesting that Rajasthan, Uttar Pradesh and Madhya Pradesh are at the highest risk. The framework in the form of a 'risk index' has been developed by the premiere institute's Department of Management Studies through a research based on proxy measures for severity, likelihood and delectability of the pandemic for each of the states.

What

1. It has divided the country into five clusters which will be further sub-divided into the orange, red and green zones. The clusters are High Risk, Medium High-Risk, Medium Risk, Medium-Low Risk and Low Risk.
2. Among the states identified as in the medium high-risk area by the IIT study are Gujarat, Bihar Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh.
3. Delhi, Jammu and Kashmir, Haryana, Punjab, Jharkhand, West Bengal and Chhattisgarh have been identified in the medium-risk cluster.
4. According to Subhadeep Mandal, research scholar at the department, the vulnerability of the state cannot be defined only by looking at the infection and the death rate.
5. We cannot describe the vulnerability of a state by just looking at the infected and death rate, hence had to develop a data-driven risk management framework for a broader picture of the situation.
6. Professor Arpan Kumar Kar, who led the research, said at a time when the country is stuck in a trade-off between saving lives and saving the economy, the IIT team has proposed a risk identification and mitigation framework for the development and

- implication of an orderly state-by-state lockdown instead of a complete nationwide lockdown.
7. At specific time, there may not be a better alternative than a complete lockdown to flatten the curve and give the time to the state administration to prepare for the pandemic.
 8. The researchers considered data from multiple sources such as the count of domestic and foreign incoming travellers, area of the state, average household size, tested-positive rate, tests done per million population, population density, beds per thousand population and the number of testing centres.
 9. The data for these respective fields were collected state-wise and then broadly classified into three main pillars--severity, likelihood and detectability for the disease.
 10. From this, we calculated a risk priority number for every state and union territory where at least one person has been detected positive for COVID-19.
 11. Based on the risk priority numbers of the states, the researchers performed an analysis with an unsupervised machine learning algorithm and divided the country into five clusters of different risk levels.
 12. The lockdown was first announced by Prime Minister Narendra Modi on March 24 for 21 days with effect from March 25. It was then extended till May 3 and again till May 17.
 13. The lockdown has now been extended till May 31. However, certain relaxations have been provided to start economic activities. Certain decisions have been left with states and many state governments are yet to announce their respective guidelines.
 14. The death toll due to COVID-19 rose to 3,029 and the number of cases to 96,169 in the country on 18 May 2020, registering an increase of 157 deaths and a record jump of 5,242 cases in the last 24 hours.

GLOBAL INITIATIVE TO COMBAT MISINFORMATION

The United Nations **launched** ‘verified’, an initiative to combat the growing scourge of Covid-19 misinformation by increasing the volume and reach of trusted, accurate information on 21 May 2020. We cannot cede our virtual spaces to those who traffic in lies, fear and hate, said António Guterres, UN secretary-general, who announced the initiative. **Guterres added**, “Misinformation spreads online, in messaging apps and person to person. Its creators use savvy production and distribution methods. To counter it, scientists and institutions like the UN need to reach people with accurate information they **can trust.**”

What

1. Verified, led by the UN Department for Global Communications (DGC), will provide information around three themes: science – to save lives; solidarity – to promote local and global cooperation; and solutions – to advocate for support to impacted populations.
2. It will also promote recovery packages that tackle the climate crisis and address the root causes of poverty, inequality and hunger.
3. **The initiative is calling on people around the world to sign up to become “information volunteers” to share** trusted content to keep their families and communities safe and connected.
4. Described as digital first responders, the volunteers will receive a daily feed of verified content optimized for social sharing with simple, compelling messaging that either directly counters misinformation or fills an information void.
5. DGC will partner with UN agencies and UN country teams, influencers, civil society, business and media organizations to distribute trusted, accurate content and work with social media platforms to root out hate and harmful assertions about Covid-19.
6. In many countries the misinformation surging across digital channels is impeding the

- public health response and stirring unrest.
7. There are disturbing efforts to exploit the crisis to advance nativism or to target minority groups, which could worsen as the strain on societies grows and the economic and social fallout kicks in.
 8. The Verified initiative will also work to address this trend with hopeful content that celebrates local acts of humanity, the contributions of refugees and migrants, and makes the case for global cooperation.
 9. The initiative is collaboration with Purpose, a social mobilization organization and supported by the IKEA Foundation and Luminate.

WEATHER SERVICES IN UMANG APP

The India Meteorological Department (IMD) added its offerings to the wide variety of services offered by the UMANG app, which earlier included state and central services and bill payments. However, the app will not be giving any real time notifications or updates on extreme weather events. Sources said that another indigenous app from the national forecaster, which has currently been delayed due to the coronavirus lockdown. Its new prospective release date stands towards the end of June now. This official IMD app will offer most services, and will inform users of any imminent dangers based on their location data.

What

1. Currently, the national forecaster will offer seven services on the app- current weather, forecast for the coming three hours, forecast for the coming seven days, information about rainfall, tourism forecast, warnings, and alerts about cyclones. These services will be taken from the IMD's official website and bulletins.
2. The future is digital, and we have to move ahead with the times," said M. Rajeevan, secretary, Ministry of Earth Sciences. Weather services are an important national service, along with the others already included in the app.
3. Short for Unified Mobile Application for New-Age Governance, the app was launched in November 2017 and was developed by the Ministry of Electronics and Information Technology (MeitY) with an objective to "make the government accessible on the mobile phone of our citizens."
4. Currently, about 660 services from 127 department and 25 states, including utility payments, are functional on the application.

WORLD THYROID DAY 2020

As India observes the World Thyroid Day on May 25 year after year, thyroid patients across the world need that extra care and attention in view of the Covid pandemic turning worse by the day. Let it not be forgotten that thyroid illnesses are not only on the rise **but also affect an individual's mood and body functions on a daily basis.** Therefore, on World Thyroid Day 2020, it becomes necessary to understand the issues related to thyroid and what can be done to tackle it.

What

1. In Leipzig, Germany in 2007, a decision was made to celebrate every 25th day of May as the World Thyroid Day.
2. According to a study by Indian Journal of Endocrinology and Metabolism, nearly 42 Million people in India

Types of Thyroid disease:

1. Hypothyroidism – An underactive thyroid
2. Hyperthyroidism – An overactive thyroid
3. Goitre – An enlarged thyroid
4. Thyroid Nodules – Obstructions in the thyroid gland
5. Thyroid cancer – Harmful thyroid nodules or tissue
6. Thyroiditis – Inflammation of the thyroid

suffer from thyroid related problems.

3. The study authored by Ambika Gopalakrishnan Unnikrishnan and Usha V. Menon was commissioned by the US National Library of Medicine and National Institutes of Health.

Why do we observe World Thyroid Day

1. Thyroid disease refers to any and all dysfunctions that can occur in the thyroid gland.
2. Therefore, it is important for every one to be aware of the issues related to the thyroid gland as it has a direct impact on one's health.

SEED SELECTED FOR WHO AWARD

World health organisation has conferred 'World No tobacco Day 2020 Award' on socio economic and educational development society (SEEDS) for its extensive work in controlling the use of tobacco. SEED works in the field of tobacco control in two states of India - Bihar and Jharkhand. As per the data of global adult tobacco survey-2017, Bihar in the last eight years, has reduced its number of tobacco users from 53.5% to 25.9%. Jharkhand on the hand has reduced its tobacco users from 50.1% to 38.9%.

What

1. SEED has been working to strengthen national tobacco control programme and is working as technical support partner for Bihar and Jharkhand.
2. With the support of government, non-government organisations and various stakeholders, we have managed to create an excellent tobacco control system in Bihar and Jharkhand and are working on the enforcement of Cigarettes and Other Tobacco Products Act, said SEED managing director Deepak Mishra.
3. Public health foundation of India president K Srinath Reddy appreciated the work done by SEEDS in reducing tobacco consumption in Bihar and Jharkhand.
4. Last year **WHO had selected Rajasthan government's health department for this award.**

Flashback

1. Socio Economic and Educational Development Society (SEEDS) is a non profit research organization.
2. SEEDS was established in February 2001 with the main aim of bringing sustainable development among the poor and underprivileged.
3. The organization was founded by a group of professionals including social scientists, environmentalists, health experts, technocrats, lawyers and economists, all established in their respective fields.
4. Since its inception, SEEDS has been engaged in research, evaluation, planning and implementation of various development programmes focused on the marginalized sections of the society and backward areas.
5. The members of SEEDS have undertaken several studies in different fields, and SEEDS as an organization, draws on the knowledge and expertise of its in-house and associate members to undertake innovative research and studies in the area of socio-economic development.