

My Notes....

NATIONAL

MISSION KARMAYOGI APPROVED

The **Union Cabinet** on 2 September 2020 **approved Mission Karmayogi**, a **scheme for bringing post-recruitment reforms in civil services**. Officers and government employees will get an opportunity to improve their performance under the mission. A council, headed by the prime minister and having chief ministers as members, will approve the **civil services capacity building plans under the scheme**.

What

1. This **will help end subjective evaluation**, and **ensure scientifically-devised, objective and real-time assessment** of employees.
2. **Mission Karmayogi** is an endeavour to reincarnate a government servant into an ideal karmayogi to serve the nation by enabling him to be creative, to be constructive, and to be **pro-active and technically empowered**.
3. The endeavour is also to end the culture of working in silos and **to overcome the multiplicity of training curriculum**.
4. It **will provide a mechanism for continuous capacity building**, a constant updating of the talent pool and also provide an equal opportunity of professional as well as personal growth and a stream of self training for value addition at all levels.
5. Mission Karmayogi is constituted **to build future-ready civil servants** with right attitude, skills and knowledge, aligned to the vision of a "New India".
6. It focuses on **competency-led capacity building** that it seeks to create a new architecture for civil services capacity building.
7. It looks at a new national architecture for civil services capacity building and focuses not only on individual capacity building but on institutional capacity building and also on process.
8. **There is a diverse and fragmented training landscape** and there are inconsistencies in training priorities by various training institutions in various



ministries which has prevented shared understanding of India's developmental aspirations.

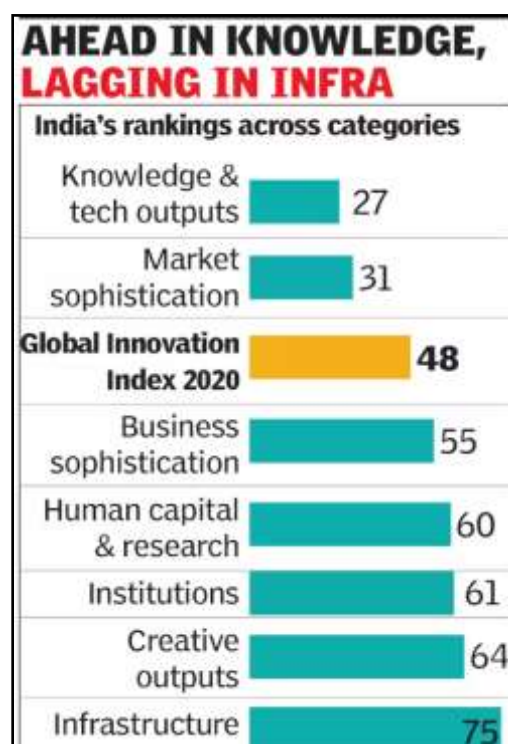
9. The mission will have a total outlay of **Rs 510 crore over a period of five years**.

INDIA IN GII 2020

The **2020 edition of the Global Innovation Index (GII)** released on 2 September 2020 shows **India jumped four places to rank at 48th position** since 2019. The index, **compiled by World Intellectual Property Organisation (WIPO) along with Cornell University and the INSEAD business school**, presents the latest global innovation trends and **annual innovation ranking of 131 economies**. **Switzerland bagged the first spot** in the GI ranking **followed by Sweden**, United States of America, United Kingdom and Netherlands.

What

1. **India became the third most innovative lower middle-income economy** in the world.
2. **India ranks in the top 15 in indicators such as ICT services exports**, government online services, graduates in science and engineering, and R&D-intensive global companies.
3. India increased the most in **three pillars: Institutions (61, from 77 in 2019), business sophistication (55, from 65 in 2019), and creative outputs (64, from 78 in 2019)**.
4. Under institutions, the country's rank on indicators, such as **political and operational stability (from 91 to 83), government effectiveness (from 65 to 55), and ease of resolving insolvency (from 95 to 47)**, improved remarkably.
5. Under **business sophistication**, indicators such as expenditure financed by business were not available last year; this time **India came in at 48**.
6. India also bettered its rank in both **intellectual property payments (27, from 29 in 2019) and research talent (38, from 46 in 2019)**.
7. **Under creative outputs**, India increased its ranking by a combination of performance improvements and model changes.
8. **It gained 18 places in cultural and creative services exports to 21** and it ranked 31 on the new indicator on global brands, thanks to its 164 brands in the top 5,000, led by Tata Group.
9. However, **India continued to lag in infrastructure**, even as it moved up four notches to come in at 75, from 79 in 2019. Also, it lost seven places to move down to 60 in



human capital and research, from 53 in 2019.

10. **India came out as an innovation achiever for the tenth consecutive year.** It was so because India was on the list of the first 10 countries, income-group wise.
11. The report **titled who Will Finance Innovation?** Said **gross domestic expenditure on research and development (GERD) in India increased to \$63.2 billion** in purchasing power parity terms in 2017–2018, from \$50.3 billion in 2014–2015, accounting for 2.9-per cent share in the world.
12. **GERD in India is mainly driven by the government sector**, of which **45.4 percent is the central government, 6.4 per cent state governments, 6.8 per cent higher education**, and 41.4 per cent industry — with 4.6 per cent from public sector industry and 36.8 per cent from the private sector during the year.
13. **China, India, the Philippines and Vietnam** have made the most progress on the index in recent years, with all four now among the top 50.
14. **China**, which is the **only middle-income economy among the top 30**, now **holds the 14th place**.

EASE OF DOING BUSINESS RANKING

Andhra Pradesh for the third time in a row has topped in the ease of doing annual business ranking of states and Union Territories (UTs) by the **Department for Promotion of Industry and Internal Trade (DPIIT)**. The ranking is based on the implementation of the **business reform action plan 2019** by States and UTs, according to a report released by Finance Minister Nirmala Sitharaman on September 5. The **exercise is aimed at promoting competition among States** with a view to improving the business climate to attract domestic as well as foreign investments.

What

1. Registering a jump of 10 places in the rankings, **Uttar Pradesh occupied the second position in 2019 as against 12th in 2018.**
2. **Telangana slipped to the third position from second in 2018.** It was followed by **Madhya Pradesh (4th), Jharkh**

Flashback

1. **In 2015 Index, Gujarat featured at the top**, with **Andhra Pradesh grabbing the second position** and **Telangana 13th.**
2. In 2016, Andhra Pradesh and Telangana jointly topped the chart. In the last ranking released in July 2018, Andhra Pradesh topped the chart, followed by Telangana and Haryana (3rd). Haryana slid to 16th position in the latest ranking.
3. **This was the fourth edition of the report**, which was **first released in 2015.**
4. The **Business Reform Action Plan 2018-19** includes **181 reform points covering 45 business regulatory areas** such as access to information, single window system, labour, and environment.
5. The **DPIIT in collaboration with the World Bank conducts an annual reform exercise** for all States/UTs under the **Business Reform Action Plan (BRAP).**
6. In the World Bank's latest 'Doing Business' report, **India has jumped 14 places to the 63rd position.**

- and (5th), Chhattisgarh (6th), Himachal Pradesh (7th), Rajasthan (8th), West Bengal (9th) and Gujarat (10th).
3. **Delhi's position improved to 12th from 23rd in the last edition**, while Gujarat slipped from 5th place in 2018.
 4. Among the **laggard States and UTs in the ranking**, Assam was at 20th, J&K at 21st, Goa at 24th, Bihar at 26th and Kerala 28th place. **Tripura was ranked at the bottom 36th.**
 5. Releasing the report, Ms. Sitharaman said that **States have taken the exercise in its true sense and it would help States and UTs** to become better places to do business.
 6. Some States have shown extraordinary energy in putting together action plans and making sure that reforms happen. States have embraced the true spirit behind the State **Business Reforms Action Plan.**
 7. **Parameters for the rankings** include areas **construction permit, labour regulation, environmental registration, access to information, land availability and single-window system.**

INDIA TEST FIRES HSTDV

DRDO has successfully **demonstrated** the **hypersonic air-breathing scramjet technology** with the flight test of **Hypersonic Technology Demonstration Vehicle (HSTDV)** on 7 September 2020 from **Dr. APJ Abdul Kalam Launch Complex** at Wheeler Island, off the coast of Odisha. It is expected to **power futuristic long-range missile systems** and aerial platforms. The **HSTDV**, based on **hypersonic propulsion technologies**, has been developed by the Defence Research and Development Organisation (DRDO).

What

1. With the **successful test flight of the HSTDV**, India has demonstrated capabilities for **highly complex technology** that will serve as the building block for next-generation hypersonic vehicles in partnership with the domestic defence industry.
2. The **HSTDV powers cruise missiles** and **operate on scramjet engines** which can attain the **speed of around Mach 6** which is **far better than ramjet engines.**
3. The **Hypersonic cruise vehicle** was launched **using a proven solid rocket motor**, which took it to an **altitude of 30 km**, where the **aerodynamic heat shields** were separated at **hypersonic Mach number.**
4. The cruise vehicle separated from the launch vehicle and the air intake opened as planned. The **hypersonic combustion sustained**, and the **cruise vehicle** continued its desired flight path at a velocity of six times the speed of sound i.e. **nearly 2 km/s for more than 20 seconds.**
5. The critical events like fuel injection and auto ignition of **scramjet demonstrated technological maturity.** The **scramjet engine performed in a text book manner.**
6. The parameters of launch and cruise vehicle, including the **scramjet engine**, were monitored by multiple tracking radars, electro-optical systems and Telemetry Stations.

7. The **scramjet engine** worked at **high dynamic pressure** and at **very high temperature**. A ship was also deployed in the **Bay of Bengal** to monitor the performance during the cruise phase of hypersonic vehicles. All the performance parameters have indicated a resounding success of the mission.

8. Many critical technologies such as **aerodynamic configuration for Hypersonic manoeuvres, use of scramjet propulsion for ignition and sustained combustion at hypersonic flow**, thermo-structural characterisation of high temperature materials, separation mechanism at hypersonic velocities were used in the successful demonstration of HSTDV.

Giant Leap Towards a Sashakt Bharat and AatmaNirbhar Bharat

DRDO Successfully Flight Tests Hypersonic Technology Demonstrator Vehicle (HSTDV)

- Indigenously developed, the HSTDV took off from Dr APJ Abdul Kalam Launch Complex at Wheeler Island
- The cruise vehicle successfully separated from the launch vehicle & continued at a velocity of six times the speed of sound
- The testing paves the way for development of more critical technologies, materials and hypersonic cruise missiles & vehicles
- With this, India enters the select club of nations that have demonstrated this technology

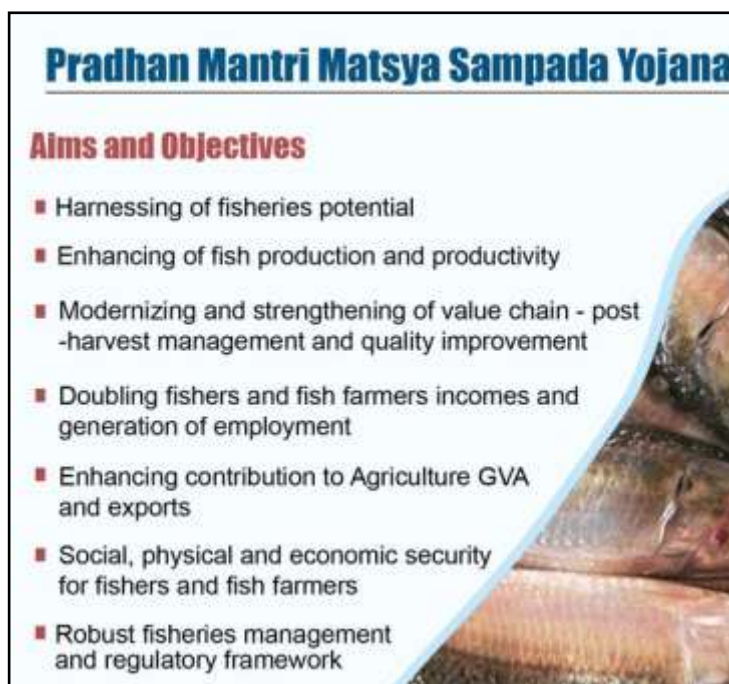
PMMSY LAUNCHED

Prime Minister Narendra Modi on 10 September 2020 launched **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** in Bihar to **boost farmers' income** and production and exports in the fisheries sector. The PM also launched several other initiatives for the **fisheries and animal husbandry sectors** in Bihar. The prime minister launched the **mobile app e-Gopala** that will provide farmers a **marketplace for livestock** and a Semen Station with state-of-the-art facilities in **Purnia** with an investment of Rs 84.27 crore on 75 acres of land made available by the Bihar government.

What

1. **PMMSY will transform the fisheries sector** and add strength to the efforts of building an Aatmanirbhar Bharat. He also interacted with farmers **focusing on the livestock and fisheries sector**.
2. The **PMMSY is a flagship scheme for focused and sustainable development of fisheries sector in the country** with an estimated investment of Rs 20,050 crore for its implementation during 2020-21 to 2024-25 as part of **Aatmanirbhar Bharat package**.
3. Out of this, an investment of about Rs 12,340 crore is proposed for beneficiary-oriented activities in marine, inland fisheries and aquaculture and about Rs 7,710 crore investments for fisheries infrastructure.
4. With Bihar in focus, the project envisages investment of Rs 1,390 crore in the state. PM Modi also announced the establishment of a **fish brood bank at Sitamarhi** and an aquatic disease referral laboratory at Kishanganj.

5. The prime minister also inaugurated **one-unit fish feed mill at Madhepura**, two units of **'Fish on Wheels' at Patna** under **'blue revolution'**, a **comprehensive fish production technology centre at Dr Rajendra Prasad Central Agricultural University** in Pusa.
6. The **e-Gopala app** will be a digital medium that helps livestock owners. It will be easy to choose advanced livestock. They will get freedom from the middlemen. This app will give all information related to productivity, health and diet to the cattle owners.
7. India is moving towards a scenario where the villages which **have industries related to food processing**, will also have research centres connected to it.
8. This in a way is what we can call- **Jai Kisan, Jai Vigyan** and **Jai Anusandhaan (Research)**.



STATUTORY STATUS TO AVIATION REGULATORS

A Bill that gives **three aviation regulators statutory powers** and **enhances the fine for violations from ₹10 lakh to ₹1 crore** in a bid to improve aircraft safety, was **passed by Parliament** on 15 September 2020. The **Aircraft (Amendment) Bill, 2020**, which was passed by the Lok Sabha on March 17, was passed by the Upper House by voice vote.

About the Aircraft (Amendment) Bill 2020

1. The **Bill gives statutory powers to the Directorate General of Civil Aviation, the Bureau of Civil Aviation Security and the Aircraft Accident Investigation Bureau.**
2. The **Aircraft (Amendment) Bill, 2020** also provides for keeping aircraft belonging to the country's armed forces outside the purview of the **Aircraft Act, 1934.**
3. The Bill **empowers the aviation watchdog DGCA** to levy penalties of upto ₹1 crore on airlines, airports and other aviation entities.
4. The amendments to the Bill also **address several regulatory shortcomings** that were highlighted by aviation watchdogs of the United Nations and the U.S., i.e the **International Civil Aviation Organisation (ICAO)** and the **Federal Aviation Authority**, during their audits on safety and security in the Indian aviation ecosystem.
5. The changes include recognising regulatory bodies such as the **Bureau of Civil**

Aviation Security and the **Aircraft Accident Investigation Bureau**- which were set up through various government notifications but didn't have a defined role under the parent Act, as well as air navigation services.

INDIA GOT ELECTED AS MEMBER OF UN CSW

India got elected as Member of the UN Commission on the Status of Women, the principal global body focussed on gender equality and women empowerment, beating China in a hotly-contested election. The Commission on the Status of Women (CSW) is a functional commission of the UN Economic and Social Council (ECOSOC). The 54-member ECOSOC, holding the first plenary meeting of its 2021 session in the General Assembly Hall on 14 September 2020, held elections for two seats in the Asia-Pacific States category with Afghanistan, India and China in the fray.

What

1. **Afghanistan**, which is led by Ambassador Adela Raz at the UN, **garnered 39 votes** and **India got 38 votes** of the 54 ballots cast.
2. **China, a permanent member of the UN Security Council, got only 27 votes** and could not even cross the half-way mark and also failed to get the required majority of 28 votes.
3. India beat China in the hotly-contested election to the prestigious UN body in the year when the **25th anniversary of the Fourth World Conference on Women**, which was held in Beijing in 1995, is being commemorated around the world.
4. **India and Afghanistan** will join Argentina, Austria, Dominican Republic, Israel, Latvia, Nigeria, Turkey and Zambia, which were elected by acclamation, to the Commission on the Status of Women **for a four-year term beginning from 2021-2025**.
5. India's election win at the CSW is highly significant as it comes on the eve of **India gearing up to sit at the UN Security Council high table as non-permanent member for a two-year term** beginning January 1, 2021.
6. The Commission on the Status of Women is instrumental in **promoting women's rights, documenting the reality of women's lives throughout the world, and shaping global standards on gender equality** and the empowerment of women.
7. **In 1996, ECOSOC expanded the Commission's mandate** and decided that it should take a leading role in monitoring and reviewing progress and problems in the implementation of the **Beijing Declaration** and Platform for Action, and in mainstreaming a **gender perspective in UN activities**.

ISA SIGNS MOUS FOR OSOWOG

The **International Solar Alliance (ISA)** has **signed an MoU with the Ministry of New and Renewable Energy (MNRE) and the World Bank** to design a plan for implementing 'One Solar One World and One Grid' (OSOWOG). The **ISA also signed an MoU with India's largest power generator, NTPC Limited**, for implementing solar energy projects in **47 member countries of ISA**.

What

1. **Currently, 121 countries have agreed to be members of ISA.** Most of these are countries with a **large participation from Africa, Southeast Asia, and Europe.**
2. Pakistan and China are not members of the ISA. The **alliance is headquartered in Gurugram.**
3. **ISA is the first inter-governmental organisation** headquartered in India. The country is providing capacity building support to ISA member countries.
4. **ISA is a part of the OSOWOG project** and this project can bring transformational benefit for the entire world.
5. According to the draft plan prepared by the MNRE, the **ambitious OSOWOG will connect 140 countries through a common grid** which will be used to transfer solar power. ISA will execute the bidding for the OSOWOG plan.
6. The vision behind the OSOWOG mantra is **“The Sun Never Sets”** and is a constant at some geographical locations, globally, at any given point of time.
7. With India at the fulcrum, the solar spectrum can easily be divided into two broad zones - the **Far East**, which would include countries like **Myanmar, Vietnam, Thailand, Lao, Cambodia etc.** and the far West which would cover the Middle East and the Africa region, MNRE said.
8. The MoU will help NTPC share its technical and project management expertise with ISA member countries.
9. The governments of **Togo and Mali** have given the opportunity to build 285 Mw and 500 Mw solar projects, respectively.

INTERNATIONAL

FIRST TRILATERAL DIALOGUE ON INDO-PACIFIC

The **Indo-Pacific** acquired another layer on 9 September 2020, with a **much anticipated trilateral dialogue between India, Australia and France**, a grouping that brings the **first European power into the Indo-Pacific**. Foreign Secretary, Harsh Vardhan Shringla attended the **first India-France-Australia trilateral dialogue** with his counterparts, Francois Delattre from France and Frances Adamson from Australia on 9 September 2020.

What

1. MEA readout said “The **outcome oriented meeting was held with the objective of building on the strong bilateral relations** that the three countries share with each other and synergising their respective strengths **to ensure a peaceful, secure, prosperous and rules-based Indo-Pacific Region.**”
2. The discussions included the **financial impact of the pandemic on the Indian Ocean region countries.**
3. The increased salience of resilient and reliable supply chains was also discussed. **India, Australia and Japan recently inked an initiative to build resilient supply chains.** France may join this initiative.

4. Maritime security is an area where all three countries have strong interests. The discussions today could yield initiatives in the areas of humanitarian assistance and disaster relief, maritime domain awareness, mutual logistics support, capacity building.
5. The **blue economy**, marine biodiversity and environmental challenges such as marine pollution – was on the agenda of the meeting.
6. The three countries also had an exchange on the priorities, challenges and trends in regional and global multilateral institutions, including the best ways to strengthen and reform multilateralism.

WB CANCELS LOAN FOR BISRI DAM PROJECT

The **World Bank (WB)** has canceled **USD 224 million loans** to the **government of Lebanon for the proposed Bisri Dam Project** because it failed to fulfil preconditions required before the funds were disbursed, the organization said. The World Bank notified the Government of Lebanon (GOL) of its decision to **cancel the undisbursed funds under the Water Supply Augmentation Project (Bisri Dam Project)** due to non-completion of the tasks that are preconditions to the commencement of construction of the Bisri Dam.

What

1. The **canceled portion of the loan is USD 244 million** and the cancellation is effective immediately.
2. Lebanon failed to meet the deadline to **finalize the Ecological Compensation Plan** and to mobilize a contractor at the dam project worksite.
3. The government also failed to finalize operation and maintenance arrangements by August 24.
4. According to reports, the **Bisri Dam project** was approved by Lebanon's government and **parliament in 2015** and it has been funded through a \$474 million loan by the World Bank.
5. The **dam is supposed to store 125 million cubic meters of water** to provide a solution for chronic water shortages to Lebanese living in Beirut and Mount Lebanon.
6. The cancellation of loan also comes after several activists reiterated their call to cancel the project, drawing a parallel between failed dam projects in Lebanon and the massive explosion on August 4.
7. The World Bank has been heavily invested in mega-dam projects in developing countries. They have already paid around \$320 million to Lebanon, including \$155 million for expropriations of **private land in the Bisri Valley**.

INDIA, ASEAN ADOPT PLAN OF ACTION

External affairs minister **S Jaishankar** on 12 September 2020 **co-chaired the Asean-India Ministerial Meeting with his Thailand counterpart** Don Pramudwinai, during which the **new Asean-India plan of action for next five years** was adopted. The meeting was **held virtually** and saw the participation of foreign ministers of the **10 Asean member states and India**, according to the Ministry of External Affairs' statement.

What is the plan of action?

1. The ministers discussed **ways to strengthen cooperation to fight Covid-19 pandemic** and **exchanged views on important regional and international developments**.
2. During the meeting the status of the **Asean-India Strategic Partnership** in several areas including maritime cooperation, connectivity was reviewed.
3. The meeting reviewed **the status of Asean-India Strategic Partnership** in several areas including maritime cooperation, connectivity, education & capacity building and people-to-people contacts.
4. It reviewed the progress in implementation of the **Asean-India Plan of Action (2016-2020)**. The new Asean-India Plan of Action (2021-2025) was adopted at the meeting.
5. The meeting also reviewed the preparations for the upcoming **17th Asean-India Summit** and also the progress in the implementation of key decisions of the Leaders of **Asean Member States (AMS)** and India arrived at the **16th Asean-India Summit held in Bangkok in November 2019** and the previous Summits.

ECONOMY**KAMATH COMMITTEE'S PARAMETERS ACCEPTED**

The **Reserve Bank of India (RBI)** on 7 September 2020 said **it has broadly accepted the recommendations** by the **KV Kamath-led committee on the financial parameters** to be considered in the **restructuring of loans impacted by the Covid 19 pandemic**. The central bank said the committee has **recommended financial parameters** that include **aspects related to leverage, liquidity and debt serviceability**.

What

1. The committee has recommended **financial ratios for 26 sectors**, which **could be factored by lending institutions** while finalizing a **resolution plan for a borrower**.
2. RBI also issued a circular specifying **five specific financial ratios** and the sector-specific thresholds for each ratio in respect of **26 sectors** to be taken into account while finalizing the resolution plans.
3. These **five ratios** are: **Total outside liabilities/adjusted tangible net worth (TOL/ATNW), total debt/EBITDA, current ratio, debt service coverage ratio (DSCR), average debt service coverage ratio (ADSCR)**.
4. In respect of other sectors where certain ratios have not been specified, the lenders

KAMATH COMMITTEE REPORT

- Lenders asked to mandatorily consider following ratios to decide on restructuring:
- Total Outside Liabilities / Adjusted Tangible Net Worth
- Total Debt / EBITDA
- Current Ratio
- Debt Service Coverage Ratio
- Average Debt Service Coverage Ratio
- Lending institutions free to consider other financial parameters as well

- shall make their own assessment keeping in view the contours of the circular dated August 6 and the follow-up circular issued today, the central bank said.
5. The **current ratio and DSCR in all cases shall be 1.0 and above**, and **ADSCR shall be 1.2 and above**, the central bank specified.
 6. While these ratios are intended as floors or ceilings, as the case may be, the **resolution plans should take into account the pre-Covid-19 operating** and financial performance of the borrower and impact of Covid-19 on its operating and financial performance at the time of finalising the resolution plan, to assess the cash flows in subsequent years, while stipulating appropriate ratios in each case.
 7. It added that **lending institutions are free to consider other financial parameters** as well while finalizing the resolution assumptions in respect of eligible borrowers apart from the prescribed mandatory key ratios and sector-specific thresholds.
 8. RBI said that given the **differential impact of the pandemic on various sectors/entities**, the lending institutions may adopt a graded approach depending on the severity of the impact on the borrowers, while preparing or implementing the resolution plan.
 9. Such graded approach may also entail classification of the impact on the borrowers into mild, moderate and severe, as recommended by the committee.
 10. On August 6, the **RBI had formed a five-member committee** under the chairmanship of former ICICI Bank CEO Kamath to make such recommendations.

INDIA IN GEF INDEX 2020

India has fallen 26 spots to the 105th position on the **Global Economic Freedom (GEF) Index 2020**, according to a report released on 10 September 2020. The country was at the **79th spot in last year's rankings**. The **Economic Freedom of the World: 2020 Annual Report** by **Canada's Fraser Institute** has been released in India in conjunction with **New Delhi-based think tank Centre For Civil Society**.

India in Global Economic Freedom Index

1. The report said prospects for **increasing economic freedom in India depend on next generation reforms** in factor markets and in greater openness to **international trade**.
2. India reported a **marginal decrease in size of government (from 8.22 to 7.16)**, **legal system and property rights (from 5.17 to 5.06)**, **freedom to trade internationally (6.08 to 5.71)** and **regulation of credit, labour and business (6.63 to 6.53)**. A score closer to **10** indicates a higher level of economic freedom.
3. A **major disappointment for India** came on the parameter of "**freedom to trade internationally**", on which **India ranked 139th, compared with 137th in 2017**, showed the '**Economic Freedom of the World**' report.
4. **Another key disappointment** was **India's ranking on "regulation"**, where it stood **122nd in 2018, against 114th a year earlier**.
5. However, the country **gained one place to 88th on "sound money"** in the latest report, against 89 in the previous one.

How the Global Economic Freedom Index measured

1. The report measures **economic freedom** (levels of personal choice, ability to enter markets, security of privately owned property, rule of law, among others) by **analysing the policies and institutions of 162 countries and territories**.

Other countries in the Global Economic Freedom Index

1. According to the report, based on 2018 data, **Hong Kong and Singapore once again topped the index**, continuing their streak as first and second ranked, respectively.
2. **India has been ranked higher than China**, which stands at the **124th position**.
3. New Zealand, Switzerland, US, Australia, Mauritius, Georgia, Canada and Ireland round out the top-10.
4. The **10 lowest-rated countries** are African Republic, Democratic Republic of Congo, Zimbabwe, Republic of Congo, Algeria, Iran, Angola, Libya, Sudan and Venezuela.
5. **Other notable rankings** include **Japan (20th)**, **Germany (21st)**, **Italy (51st)**, **France (58th)**, **Mexico (68th)**, **Russia (89th)** and **Brazil (105th)**.

NEW AATMANIRBHAR BHARAT SCHEMES TO SUPPORT MSMEs

The Centre on 9 September 2020 launched the **Aatmanirbhar Bharat ARISE-Atal New India Challenges programme** to support **MSMEs and start-ups** for making India innovative, resilient, tech-driven, and research and development (R&D)-oriented. The **Niti Aayog's Atal Innovation Mission (AIM)**, in **collaboration with ISRO** and **four ministries** will focus on challenges in **15 sectors** through the programme. This support for **MSMEs (micro, small and medium enterprises)** and start-ups in product development would make India innovative, resilient, tech-driven and R&D-oriented, Niti Aayog CEO Amitabh Kant said at the launch of the **Aatmanirbhar Bharat ARISE-Atal New India Challenges programme**.

What

1. The programme provides a great opportunity for the government to become the **first buyer of indigenous Made in India technology solutions**.
2. The **Atal Innovation Mission**, through the **ARISE-Atal New India Challenges**, will help in breaking new ground and this will be a path-breaking approach for driving India in the field of innovation.
3. The **Atal Innovation Mission's ARISE-Atal New India Challenges** brings together some of the brightest scientific minds of India to work together for the prosperity of the country's MSME sector.
4. Besides ISRO and Niti Aayog, representatives from **ministries of defence, health and family welfare, housing and urban affairs, and food processing industries** also participated at the event.
5. A grant-in-aid of up to Rs 50 lakh for 9-12 months have been earmarked for start-ups to develop a minimum usable prototype.
6. The **AIM is a flagship initiative of the Niti Aayog to promote innovation and entrepreneurship in the country**, based on detailed study and deliberations on innovation and entrepreneurial needs of India in the years ahead.

SCIENCE AND TECHNOLOGY

SIGNS OF RUSTING FOUND ON THE MOON

In a perplexing finding, **scientists have found signs of rusting on the surface of the Moon** which is understood to **have no presence of air or water in liquid form**, which are **key components in the formation of rust**. While scientists have previously found **evidence of rusting on the Mars planet** as well due to the presence of **Iron, water and air**, the recent finding related to the **presence of rust on the lunar surface has completely surprised the scientists' community**. The development came to light in the **Science Advances reviews data collected from the Indian Space Research Organisation's (ISRO) Chandrayaan 1 orbiter**. The **same orbiter in the year 2008 had found the presence of ice water and a variety of minerals on the surface of the Moon**.

What

1. Lead author of the research **Shuai Li from the University of Hawaii** who got the breakthrough has **previously led extensive studies on the ice water found by the Chandrayaan 1's Moon Mineralogy Mapper instrument** which is also **known as M3**.
2. This time **Li found that the spectra of the poles of the Moon** had a very different kind of composition than the rest of its surface.
3. **Spectra are a technique used by astronauts to record the light reflected from various surfaces** of the heavenly bodies like the Moon and Mars.
4. Undergoing deep analysis of the **spectra** from the polar region of the Moon, Li found that unlike the presence of iron-rich rocks on other parts of the Moon, the **polar surface had the presence of Hematite. Hematite is nothing but a form of Iron oxide or rust** which is formed when the Iron is exposed to oxygen and water.

12TH STARLINK MISSION

On September 3, SpaceX launched its 12th Starlink mission successfully. The **mission added 60 more satellites into Earth's lower orbit**. During the launch, SpaceX claimed that with the help of these satellites they have been able **to record a downloading speed of more than 100Mbps. With Starlink, SpaceX aims to launch close to 12,000 satellites into the lower orbits** around our planet which will offer broadband coverage.

What

1. According to Space X, **the target is to provide high-speed internet to places where it has not been accessible before** and at a reasonable price point as well.
2. **Users will be able to access high-speed internet** with the help of antennas on the ground. The CEO of SpaceX, Elon Musk described this as **"UFO on a stick"**.
3. **With the launch of 60 more satellites**, SpaceX has been able to put a **total of more than 700 satellites** which is a larger number when compared to the 400 satellites needed for **"initial operational capabilities"**.
4. Kate Tice, a senior program reliability engineer at SpaceX, claimed during the launch broadcast that the **download speeds were greater than 100 megabytes per second**

(Mbps). This claim was made after the early beta testing done by the employees using Starlink satellites.

5. **In 2020, Starlink will be targetting the Northern United States** and Canada followed by expansion in populated parts of the world next year.
6. According to SpaceX, **each satellite weighs 270 kg and boasts of a flat-panel design** which helps in minimising volume and further allows the satellite to take advantage of the carrier rocket, Falcon 9.

Why Starlink

1. Mainly to ensure that **reliable and uninterrupted Internet services**
2. Currently, **about 4 billion people**, more than half the world's population, do not have access to reliable Internet networks.
3. Traditional ways to deliver the Internet — **fibre-optic cables or wireless networks** — cannot take it everywhere on Earth
4. **Signals from satellites in space can overcome this obstacle easily.**

US SPACECRAFT NAMED AFTER KALPANA CHAWLA

An **American commercial cargo spacecraft bound for the International Space Station** has been **named after fallen NASA astronaut Kalpana Chawla**, the **first India-born woman to enter space**, for her key contributions to human spaceflight. **Northrop Grumman**, an American global aerospace and defence technology company, announced that its **next Cygnus capsule** will be named the **"S.S. Kalpana Chawla"**, in memory of the mission specialist who died with her six crewmates aboard the space **shuttle Columbia in 2003**.

What

1. **Northrop Grumman** is proud to name the **NG-14 Cygnus spacecraft** after former astronaut Kalpana Chawla. It is the company's tradition to name each Cygnus after an individual who has played a pivotal role in human spaceflight.
2. **Chawla was selected in honour of her prominent place in history** as the first woman of Indian descent to go to space.
3. The **S S Kalpana Chawla capsule** is scheduled to launch on the **NG-14 mission atop a Northrop Grumman Antares rocket** from the **Mid-Atlantic Regional Spaceport (MARS)** at NASA's Wallops Flight Facility in Virginia on 29 September 2020.
4. The spacecraft will arrive at and be attached to the space station two days later.
5. For the **NG-14 mission**, the Cygnus spacecraft will deliver approximately 3,629 kg of cargo to the space station.
6. **Chawla was born in Karnal, Haryana on March 17, 1962**. She received a Bachelor of Science degree in aeronautical engineering from Punjab Engineering College in India in 1982.
7. Chawla then moved to the United States to pursue her graduate education; in 1984 she received a Master's degree in aerospace engineering from the University of Texas, and a Ph.D. in aerospace engineering from the University of Colorado in 1988.
8. She held commercial pilot's licenses for single- and multi-engine aeroplanes, seaplanes and gliders, and was also a certified flight instructor.
9. **Chawla began her career at NASA in 1988** as a powered-lift computational fluid

dynamics researcher at the Ames Research Center in California.

10. **Chawla lost her life during the STS-107 mission** when the Space Shuttle Columbia disintegrated upon reentering the Earth's atmosphere.

INDIAN RECEIVER CHIP DHRUVA

IIT-Bombay has developed a **homegrown receiver chip - Dhruva** – that **can be used in smartphones and navigation devices** to find locations and routes within the country. **Dhruva will receive signals from India's NAVIC group of navigation satellites** as well as the **US Global Positioning System-based satellites** to determine these accurately under all weather conditions. The **radio frequency receiver chip** was designed in 18 months by students and researchers at IIT Bombay.

About the Dhruva project

1. The **Dhruva project was funded by the Ministry of Electronics and Information Technology (MeitY)**, with **SAMEER** (Society for Applied Microwave Electronics Engineering and Research) as the nodal agency.
2. The research team also interfaced with the **Space Applications Centre of the Indian Space Research Organisation**.
3. **NAVIC (Navigation with Indian Constellation) is India's geo-positioning system** designed by ISRO to provide accurate positioning within the country.
4. **NAVIC satellites were sent to orbit a few years ago**, but no commercial 'receiver' chip was available to receive signals from the satellites.
5. Dhruva will help receive and clean up the signals received from NAVIC, which are 36,000 km above from the earth's surface.
6. This **chip can clean up all the interfering signals**, sifting out the weak desired navigation signals.
7. These signals are further amplified by approximately 400,000 times before converting to digital bits using on-chip **Analog-to-Digital Converters (ADCs)**.

How it will work

1. It can **receive in multiple frequency bands** and handle weak signals. Besides, it can be **converted into digital bits** and processed by any standard **digital signal processor (DSP)** to determine one's location precisely.
2. India has had a fleet of navigational satellites for a few years, but there have been no commercial receivers so far that could receive its signals in multiple frequencies.
3. The **nine satellites under NAVIC were built as an alternative to the GPS**, as part of India's space agency's efforts to make the navigation system accessible for commercial applications.

HINTS OF LIFE IN THE CLOUDS OF VENUS

Scientists said on 14 September 2020 they have **detected in the harshly acidic clouds of Venus** a gas called **phosphine** that **indicates microbes may inhabit Earth's inhospitable neighbour**, a tantalizing **sign of potential life beyond Earth**. The researchers did not discover actual life forms, but noted that on **Earth phosphine is produced by bacteria thriving in oxygen-starved environments**. The international scientific team first spotted the **phosphine** using the **James Clerk Maxwell Telescope in**

Hawaii and confirmed it using the **Atacama Large Millimeter/submillimeter Array (ALMA) radio telescope in Chile.**

What

1. The **existence of extraterrestrial life long has been one of the paramount questions of science.** Scientists have used probes and telescopes to seek “**biosignatures**” – **indirect signs of life** – on other planets and moons in our solar system and beyond.
2. **Phosphine** – a **phosphorus atom with three hydrogen atoms attached** – is **highly toxic** to people.
3. Earth-based telescopes like those used in this research help scientists study the chemistry and other characteristics of celestial objects.
4. **Phosphine was seen at 20 parts-per-billion in the Venusian atmosphere,** a trace concentration.
5. The researchers examined **potential non-biological sources** such as **volcanism, meteorites, lightning** and **various types of chemical reactions,** but none appeared viable.
6. **Venus is Earth’s closest planetary neighbour.** Similar in structure but **slightly smaller than Earth,** it is the **second planet from the sun.** Earth is the third.
7. Venus is wrapped in a thick, toxic atmosphere that traps in heat. Surface temperatures reach a scorching 880 degrees Fahrenheit (471 degrees Celsius), hot enough to melt lead.

LIVING PLANET REPORT 2020

The **WWF’s Living Planet Report 2020**, released on 9 September 2020, and has found that there has been a reduction of **68 per cent in the global wildlife population between 1970 and 2016.** The report also found that **75 per cent of the Earth’s ice-free land surface** has already been significantly altered, most of the oceans are polluted, and more than **85% of the area of wetlands has been lost during this period.** The most important direct driver of biodiversity loss in the last several decades has been land-use change, primarily the conversion of pristine habitats into agricultural systems, while much of the oceans have been overfished.

What

1. The **highest biodiversity loss due to land use change globally** has been found in **Europe and Central Asia at 57.9 per cent,** then in **North America at 52.5 per cent,** Latin America and Caribbean at 51.2 per cent, Africa at 45.9 percent and then **Asia at 43 per cent.**
2. Other factors leading to biodiversity loss include species overexploitation (like overfishing), invasive species and diseases, as well as pollution and climate change.
3. The largest wildlife population loss, according to the **Living Planet Index,** has been in Latin America at an alarming 94 percent.
4. The report also finds that one of the most threatened biodiversity globally has been **freshwater biodiversity,** which has been declining faster than that in oceans or forests.

5. **Almost 90 per cent of global wetlands** have been lost since 1700 and global mapping has recently revealed the extent to which humans have altered millions of kilometres of rivers.
6. India, a “**megadiverse country**” with over 45,000 species of plants in **only 2.4 per cent of the world’s land area**, has already lost six plant species to extinction, according to the IUCN Red List.
7. The report further finds that India has lost nearly **one-third of its natural wetlands to urbanisation**, agricultural expansion and pollution over the last four decades and WWF India’s report on Water Stewardship for Industries revealed that 14 out of 20 river basins in India are already water stressed and will be moving to extreme water scarcity by 2050.

MISCELLANEOUS

KESAVANANDA BHARATI IS NO MORE

Kesavananda Bharati, on whose petition the Supreme Court delivered the landmark judgement on the celebrated **doctrine of basic structure of the Constitution**, died in Kerala on 6 September 2020.

What

1. The case in which **Bharati had challenged Kerala Land Reform laws** nearly four decades ago set the principle that the Supreme Court is the guardian of the **basic structure of the Constitution** and the verdict involved 13 judges, the largest bench ever to sit in the apex court.
2. The **case became significant for its landmark judgment** which clipped the widest power of Parliament to amend the Constitution and simultaneously gave the judiciary the authority to review any amendment.
3. The **29th Constitutional Amendment** was adopted by Parliament giving protection to Kerala laws, the seer moved the Supreme Court challenging it.
4. The apex court ruled that the 29th Amendment is valid and held that the two Kerala land Acts that were included in the **Ninth Schedule** are entitled to the **protection of Article 31B** of the (validation of certain acts and regulations) Constitution.
5. The verdict had held that though Parliament had **power to amend under Article 368 of the Constitution**, it did not have the power to emasculate its basic features.
6. The **case of Kesavananda Bharati vs State of Kerala** was heard for **68 days** and continues to hold the top spot for the longest proceedings ever to have taken place in the top court.
7. The hearing in the case commenced on **October 31, 1972**, and **concluded on March 23, 1973** and it's the most referred to case name in Indian Constitutional law.

NEW DRAFT GUIDELINES ON ADVERTISING RELEASED

The **government has come out with a comprehensive set of draft guidelines on advertising** under which ‘**disclaimers**’ that are not easily noticeable by or legible or easily understandable to an ordinary consumer will be treated as misleading advertisements

under the **Consumer Protection Act**. The violation of these guidelines would face action by the recently established **Central Consumer Protection Authority**. The draft guidelines, on which the Consumer Affairs Ministry has sought public comments by September 18, are **applicable to companies whose products or services are advertised** as well as to advertisement agencies and endorsers.

What

1. According to the draft guidelines, a **disclaimer should be clear, prominent enough and legible**. "It should be clearly visible to a normally-sighted person reading the marketing communication once, from a reasonable distance and at a reasonable speed."
2. The disclaimers used in advertisements should be in "**same language**" as the claim of the advertisement; the font should be in the "**same font**" as the claim and place disclaimers on packaging in a "**prominent and visible space**".
3. If the claim is presented as **voice over (VO)**, then the **disclaimer should be displayed in sync with the VO**.
4. That apart, a disclaimer should not attempt to hide material information with respect to the claim, the omission/ absence of which is likely to make the advertisement deceptive or conceal its commercial intent. A **disclaimer should not attempt to correct a misleading** claim made in an advertisement.
5. The draft guidelines also specify that **an advertisement should not describe a product or service as "free", "without charge"** or other similar terms, if the consumer has to pay anything other than the cost while purchasing a product or service for delivery of the same.
6. On those who endorse advertisements, the **guidelines propose that they should take due care to ensure that all descriptions**, claims and comparisons that they endorse or that are made in advertisements they appear in are capable of being objectively ascertained and are capable of substantiation.

ADB APPOINTED A NEW DIRECTOR FOR INDIA

The **Asian Development Bank (ADB)** on 14 September 2020 said it has appointed **Takeo Konishi** as its new Country Director for India. **Konishi succeeds Kenichi Yokoyama** who has taken over as Director General of **ADB's South Asia Department** and will be based at **ADB headquarters in Manila**. As head of the country office in New Delhi, Konishi will lead ADB operations and policy dialogue with the government and other development partners in India.

What

1. **He will oversee the implementation of ADB's India Country Partnership Strategy, 2018-2022** that focuses on **building industrial competitiveness** to create more jobs, providing inclusive infrastructure networks and services, and addressing environmental and climate change concerns.
2. **Konishi has 22 years of professional experience**, including almost two decades with ADB in many senior roles including as Country Director of Uzbekistan Resident Mission and Advisor in the Central and West Asia department.

3. In his latest role as Director of Public Management, **Financial Sector, and Trade Division (SAPF)** in ADB's South Asia Department, Konishi has proactively supported fast-tracking of ADB's COVID-19 programmes in the South Asia region.

India in ADB

1. **India is currently ADB's fourth largest shareholder** and has been **its largest borrower since 2010**.
2. Since commencing its lending operations to India in 1986, **ADB has committed 242 sovereign loans** amounting to USD 44.1 billion.
3. This year, ADB has so far committed USD 2.2 billion in sovereign lending, which includes USD 1.5 billion support to the government's immediate response to COVID-19 including disease containment and social protection measures.
4. The current India portfolio comprises **68 projects** worth about USD 13.7 billion.

YOUNG CHILD OUTCOMES INDEX

Kerala emerged on top while Bihar fared the worst **in outcomes linked to health, nutrition and cognitive growth of children in the 0-6 years age group**, based on a comparative analysis of **public data for 2005-06 and 2015-16**. Based on the outcome indicators, the overall India score on a scale of 0-1 adds up to 0.585, far from impressive, though **it reflects an improvement of 0.142 over the score of 0.443 in 2005-06**. The findings —**Young Child Outcomes Index (YCOI)**— are part of the “**State of the Young Child in India**” report, brought out by civil society organisation Mobile Creches and supported by **Bernard Van Leer Foundation**.

What

1. The report, released by Vice President Venkaiah Naidu on 4 September 2020, also presents a **Young Child Environment Index (YCEI) for 2015-16**, concluding that the indices make one thing clear that states with better circumstances tend to have better young child outcomes.
2. **YCOI** takes into account **three major components—health, nutrition and cognitive growth**— and the respective indicators selected include **infant mortality rate, stunting and net attendance at the primary school level**.
3. The YCEI is based on indices using data related to various indicators on gender, poverty, health, safe water supply and education.
4. The **India score for 2015-16 for the child environment Index is 0.672. Kerala and Goa are the top two states** in both indices while Jharkhand, Uttar Pradesh, Bihar and Madhya Pradesh are among the bottom five.
5. YCOI, Kerala leads with an impressive score of 0.858 in 2015-16. Goa comes second with a score of 0.817 in 2015-16.
6. It points out **wide differences across states in outcomes linked to health, nutrition and cognitive growth**. Pointing that while all states have registered different levels of improvement between 2005-06 and 2015-16, there are as many as eight states with scores below the national average of 2015-16.
7. These are: **Assam (0.583), Meghalaya (0.562), Rajasthan (0.556), Chhattisgarh (0.555), Madhya Pradesh (0.526), Jharkhand (0.500), Uttar Pradesh**

- (0.460) and Bihar (0.452).
8. All these eight states also fare poorly on the YCEI. The picture also varies across rural and urban areas, economic groups, caste and religion-based social groups, gender and household education levels.
 9. In YCOI, **Tripura has made significant improvement over a decade** moving from a score of 0.582 for 2005-06 to 0.761 in 2015-16. Bihar has the lowest score of 0.452 in 2015-16, though up from the abysmally low score for 0.298 in 2005-06.
 10. On the YCEI, **Kerala yet again tops the child environment index (0.855)**, followed by **Goa (0.846)** and **Sikkim (0.819)**.
 11. Arunachal Pradesh has the lowest score with 0.533 followed by Manipur at (0.537) and Jharkhand (0.578).
 12. Releasing **"The State of Young Child in India" report**, Vice President said that while the Government of India has introduced several comprehensive policies and flagship programmes like the **Integrated Child Development Scheme** and the **National Nutrition Mission (Poshan Abhiyaan)** for early childhood development in the country, the need of the hour is to implement them effectively through proper coordination among various ministries.