

My Notes....

NATIONAL

EMISAT LAUNCHED

India's Polar Satellite Launch Vehicle (PSLV-C45) on 1 April 2019 successfully launched **EMISAT and 28 international customer satellites** from Satish Dhawan Space Centre (SDSC) SHAR in Sriharikota. This flight marked the **first mission of PSLV-QL**, a new variant of PSLV with **four strap-on motors**. PSLV-C45 lifted off at 9:27 Hrs (IST) from the Second Launch Pad and injected **India's EMISAT into a 748 km sun-synchronous polar orbit**, 17 minutes and 12 seconds after liftoff. After separation, the two solar arrays of EMISAT were deployed automatically and the **ISRO Telemetry Tracking and Command Network at Bengaluru** assumed control of the satellite.

What

- Following the separation of EMISAT, the vehicle's fourth stage engines were restarted twice to place the **28 international customer satellites precisely into a sun-synchronous orbit of 504 km height**.
- The last customer satellite was placed into its designated orbit 1 hour and 55 minutes after lift-off.
- About 3 hours after lift-off, the **fourth stage (PS4)** of the vehicle was moved to a lower circular orbit of 485 km after two restarts to establish it as an orbital platform for carrying out experiments with its three payloads.
- EMISAT is a satellite built around **ISRO's Mini Satellite-2 bus** weighing about **436 kg**. The satellite is intended for electromagnetic spectrum measurement.
- The 28 international customer satellites, together weighing about **220 kg**, are from four countries, namely, **Lithuania (2), Spain (1), Switzerland (1) and USA (24)**. These foreign satellites were launched as part of commercial arrangements.
- The payloads carried by PS4 are Automatic Identification System from ISRO, Automatic Packet Repeating System from AMSAT, India and Advanced Retarding Potential Analyzer for ionospheric studies from Indian Institute of Space Science and Technology.
- Today's PSLV mission was unique in several ways. It was a four strap-on new variant, the vehicle achieved three different orbits and for the first the PS4 stage is powered by solar panels.



NIRF RANKINGS

The **Indian Institute of Management, Bangalore (IIMB)** was ranked **number one in the management category, National Law School of India University, Bengaluru (NLSIU) in the law category, and Indian Institute of Science (IISc.) in the university category.** While **IISc and NLSIU have retained the top slots from last year,** IIMB has dislodged Indian Institute of Management, Ahmadabad. However, **in the overall rankings, Indian Institute of Technology, Madras has replaced IISc.,** which stood first last year. In the overall ranking, six other institutions from Karnataka have made it to the top 99.

What

1. The **National Institutional Ranking Framework (NIRF)** was approved by the MHRD and launched by Honourable Minister of Human Resource Development on **29th September 2015.**
2. This framework outlines a methodology to rank institutions across the country. The methodology draws from the overall recommendations broad understanding arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions.
3. The parameters broadly cover **“Teaching, Learning and Resources,” “Research and Professional Practices,” “Graduation Outcomes,” “Outreach and Inclusivity,”** and **“Perception”.**
4. **India Rankings – 2016** based on this framework were released on 4th April 2016.
5. For India Rankings – 2017, the main ranking parameters remain the same. However, there are a few significant changes in a few sub-parameters. Also, this year every large institution will be given a common overall rank as well as a discipline specific rank as applicable.
6. This year as well, educational institutions across the country were ranked in **nine categories** – overall, universities, engineering, colleges, management, pharmacy, medical, architecture and law.

The Top 10 positions

1. Indian Institute of Science, Bangalore
2. Jawaharhal Nehru University, Delhi.
3. Banaras Hindu University, Varanasi
4. University of Hyderabad, Hyderabad
5. Calcutta University, Kolkata
6. Jadavpur University, Kolkata
7. Anna University, Chennai
8. Amrita Vishwa Vidyapeetham, Coimbatore
9. Manipal Academy of Higher Education, Manipal
10. Savitribai Phule Pune University

AFSPA WITHDRAWN PARTIALLY FROM ARUNACHAL PRADESH

After 32 years, the controversial **Armed Forces (Special Powers) Act,** which gives sweeping powers to security forces, was **partially removed from three of nine districts of Arunachal Pradesh,** however, would remain in force in the areas bordering Myanmar. The state, **which was formed on February 20, 1987,** had inherited the controversial AFSPA enacted by Parliament in 1958 and applied to the entire State of Assam and the Union Territory of Manipur. After **Arunachal Pradesh, Meghalaya, Mizoram and Nagaland** came into being; the Act was appropriately adapted to apply to these states as well.

What

1. The **Justice B P Jeevan Reddy committee** had recommended scrapping of the AFSPA from the state. Under the Act, the security forces can arrest anyone or carry out searches in any premises.

2. The Ministry of Home Affairs said in a notification that the **four police station areas in Arunachal Pradesh**, which were declared “disturbed areas” under the AFSPA, are no longer under the purview of the special law.
3. The police station areas from where the AFSPA has been withdrawn are Balem and Bhalukpong police stations in West Kameng district, Seijosa police station in East Kameng district and Balijan police station in Papumpare district.
4. The AFSPA will continue to be enforced in Tirap, Changlang and Longding districts and areas under the jurisdiction of Namsai and Mahadevpur police stations in Namsai district, Roing in Lower Dibang Valley district and Sunpura in Lohit district for six more months till September 30.
5. A Home Ministry official said the **“disturbed area” tag was withdrawn from the four police station areas due to the improvement of law and order situation** there and it will continue in other areas in view of continuing activities of banned insurgent groups of the Northeast.
6. The notification said the Union Home Ministry took the decision exercising its powers conferred under **section 3 of the Armed Forces (Special Powers) Act, 1958**.
7. A review of the law and order situation in Arunachal Pradesh’s six districts was undertaken before the March 31 deadline for the validity of the “disturbed area” designation under the AFSPA.
8. In March last year, the AFSPA was removed completely from Meghalaya following improvement in security situation.

Flashback

1. The **AFSPA** is imposed in areas where armed forces are required to operate in aid to civil authorities.
2. For the AFSPA to become valid, an area, however, needs to be declared disturbed either by the Central or the state government **under section 3 of the 1958 Act**.
3. Some parts of Arunachal Pradesh have the presence of banned militant outfits such as NSCN, ULFA and NDFB.

INDIAN ARMY GETS DHANUSH

The Indian Army on 8 April 2019 received its first batch of artillery guns 'desi Bofors' in Jabalpur. It will be **deployed along India's borders with Pakistan and China**. The **Dhanush, which has a calibre of 155x45mm**, is the **first ever indigenous artillery gun of this calibre**. In army parlance, it is classified as 'medium artillery'. The army's artillery arm has 'medium regiments' that consist of guns of this calibre and of 130mm calibre. **The Bofors, which had played a crucial role in targeting Pakistani military positions during the 1999 Kargil War**, and similarly has a 155mm calibre is part of such regiments.

What

1. **Dhanush gun has emerged as a reliable and robust gun system** at par with the latest in the world and will increase the fire power of the Indian artillery manifold. It is truly “Make in India” marvel.

Flashpoint

1. The **artillery gun incorporates** the latest features such as an **inertial navigation system**, an on-board ballistic computer, **direct day and night firing system**, a **modern target acquisition system** and a communication system.
2. Weighing less than 13 tonnes, with a high ground clearance of 400 mm, **"Dhanush" is the "most manoeuvrable artillery system"** and can be deployed in any terrain.
3. Significant contributions have also been made by DRDO, public sector units such as SAIL and BEL and several private sector firms in the development of the gun.

2. The **155mm x 45 Cal FH Gun 'DHANUSH'** is a new generation towed artillery gun with major upgraded features over the existing 155/39 cal. FH 77 B02 gun. Indigenisation to the extent of approx. 81 per cent, has already been achieved. By the end of 2019, the indigenisation level will go up to 91 per cent.
3. On February 18, OFB had received the bulk production clearance of manufacturing of 114 guns. GCF has handed over 6 Dhanush guns for issuance to Indian Army.
4. The artillery guns were handed over to the Army in a formal function organised at GCF, Jabalpur.

DATA USERS' CONFERENCE FOR CENSUS 2021

For the first time in the 140 year long Census exercise in India, data is proposed to be collected through a **mobile app**, officials of **Registrar General of India** said at the conference of data users in Delhi **to finalize the strategy and questionnaire for the Census 2021**. They said enumerators would be encouraged to use their own mobile phone for which they would be paid appropriate remuneration or else there is also option to collect and record the data through paper schedules which will eventually be submitted electronically by them.

What

1. **Describing the Census 2021** as the world's largest such exercise, Union Home Secretary informed the conference that 33 lakh enumerators would be mobilized for data collection for which notification has already been issued.
2. The **reference date is 1st October 2020 for Jammu & Kashmir** and snow bound areas of **Himachal Pradesh & Uttarakhand** while for **the rest of country the reference date is 1st March 2021**.
3. Census is not just an exercise of head count but also provides **invaluable socio-economic data** which forms credible basis for informed policy formulation and allocation of resources.
4. **The changing demographics and socio economic parameters** reflected by the census helps in reformulation of country's plans for the economic development and welfare schemes for its people.
5. Besides, census data caters to **the Constitutional requirement of delimitation of constituencies** and reservation of seats for SCs & STs.
6. **Census 2021 will be conducted in two phases**. In the first phase **House Listing Operations** would be conducted in any two months chosen by the States between April-September 2020.
7. In the second phase, **actual population enumeration would be done during 9th – 28th February 2021**, followed by the Revision round from 1st – 5th March 2021.
8. **Jammu and Kashmir and snow bound areas of Himachal Pradesh and Uttarakhand**, population enumeration would be conducted during 11th- 30th September 2020, followed by the Revision round from 1st – 5th October 2020.
9. The data user's conference is the first formal interaction of the census organization with various stakeholders.
10. The two day conference is expected to have intensive deliberations on the proposed Strategy and the draft Questionnaire for the 2021 Census. The results of deliberations will form the basis for finalizing the questions and the methodology for the census.
11. The conference is being attended by Academics, representatives from different Ministries, States/UTs and Directorates of Census Operations.

'NIRBHAY' SUCCESSFULLY TEST-FIRED

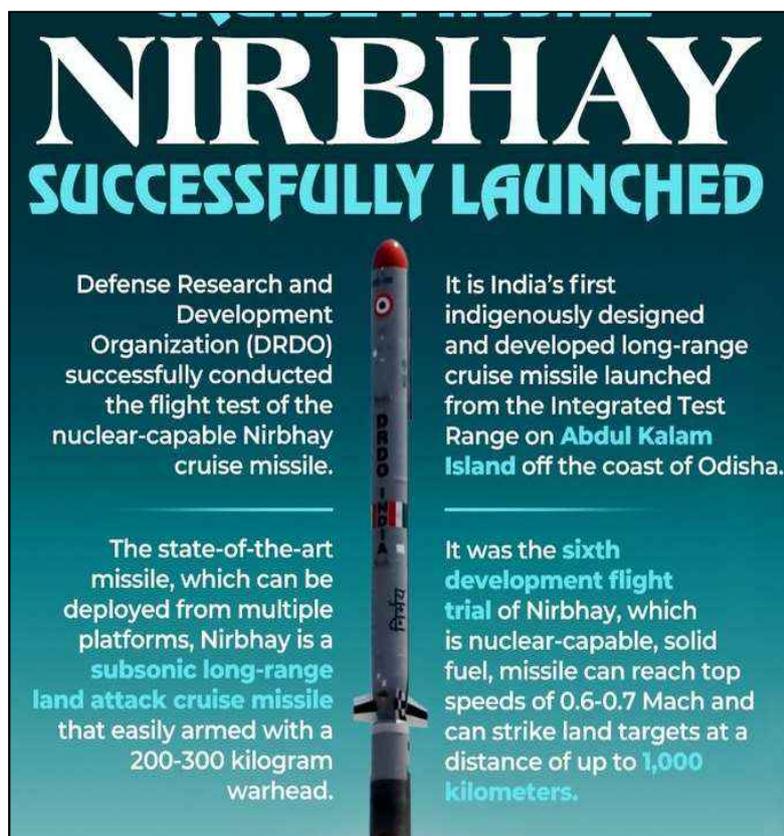
India on 15 April 2019 **successfully test-fired its first indigenously designed and developed long-range sub-sonic cruise missile 'Nirbhay'** from a test range in Odisha.

The **state-of-the-art missile**, which can be deployed from multiple platforms, was test-fired at 11.44 am from launch complex-3 of the Integrated Test Range (ITR) at Chandipur.

The missile is capable of loitering and **cruising at 0.7 Mach at altitude as low as 100 metre**, covered the designated target range in 42 minutes and 23 seconds.

What

1. The **flight test achieved all the mission objectives**, right from lift off till the final splash, boosting the confidence of all scientists associated with the trial, it has an engine with rocket booster and turbofan/jet.
2. The sophisticated missile took off in a programmed manner and all critical operations like launch phase, booster deployment, engine start, wing deployment and other parameters were demonstrated through autonomous way point navigation.
3. The last successful trial of 'Nirbhay' cruise missile was conducted on November 7, 2017.
4. The **two-stage missile is 6 metre long, 0.52 metre wide with a wingspan of 2.7 metre** and can carry a warhead of **200 kg to 300 kg at a speed of 0.6 to 0.7 Mach**.
5. Its launch weight is about 1500 kg. According to Aeronautical Development Establishment (ADE), **Nirbhay is India's first indigenously designed and developed missile which can carry warheads of up to 300 kg has been tested** at the Integrated Test Range on Abdul Kalam Island off the coast of Odisha.
6. **Out of four tests launches since 2013**, only the one in 2018 was successful. In December 2016 the missile had to be destroyed due to mid-air deviation, the agencies involved carried out another test in November last year from the east coast which was successful.
7. The first test was carried out in 2013 but midway had to be terminated for safety reasons as there was a malfunction of a component.
8. **Advanced Systems Laboratory (ASL)** has developed a solid rocket motor booster for the homemade missile which has an **operational range of 1000 km**.
9. This missile can travel with the help of a turbojet engine and with the highly advanced inertial navigation system which has been developed in house by the Research Centre Imarat (RCI), it can be guided.
10. The **air version of the indigenous Nirbhay to be used for air-to-ground will be tested in 2021** and will be fitted on **Su-30 MKI fighter planes**. For the Indian Navy, the DRDO is working on increasing the range to 1,500 km.



INTERNATIONAL

FIRST SECURE LINK BETWEEN INDIA, US NAVIES

India and the US have set up the **first ever secure communication link between the naval headquarters** in Delhi and the US Central as well as Pacific Naval Commands under the landmark **Indo-US COMCASA pact** reached last year. The US has also activated the **Selective Availability Anti-Spoofing Module GPS system** in some of C-130 and C-17 transport aircraft as a result of the implementation of the **COMCASA (Communications, Compatibility & Security Agreement)**.

What

- In a major boost to **India's defence diplomacy**, the two upgrades will allow both sides to share real-time operational intelligence.
- In the case of the **C-130s and C-17s**, the systems were purchased but not activated because the US said it could not part with the encryption codes until the enabling COMCASA pact is signed.
- The establishment of a secure active link between the two navies is being seen as a significant step forward as India will gain access to latest US naval intelligence besides conducting joint operations in the future.
- The link was set up by a US team which visited India recently. The Comcasa pact will in due course enable both sides to operate on the same communication systems, thus helping build an **"interoperable" environment for militaries**.
- Without this pact, the US could not part with highly coded communication gear with the military platforms they sell to India. As a result, India had to depend on less secure systems on, otherwise, high-end platforms like C-130Js and the P8I maritime surveillance aircraft, among others.
- While negotiating the pact, India also obtained a reliability assurance from the US that it will ensure availability of secured communication equipment covered by the pact at all time as well as keep them operational.
- India was also assured that the US will not share data from Indian platforms with another country, nor access this data without prior permission. Also, sources said, the choice to upgrade would rest with India and not wholly determined by the US.

COMCASA

What

Legal framework to allow US to transfer high-end communication security equipment to India.



Why

-  **Enable Indian and US forces to operate more closely, share information on secure networks**
-  **Improve performance of US-sourced platforms with compatible, secure communication systems**
-  **Establishes platform to share real-time operational information with US & its allies**

• The Controversy •



UPA refused because it feared getting dragged into a US military alliance



The agreement may specify US personnel to be given access to US-sourced communication equipment for periodic inspection



The coding and keying systems will be same, allowing US access to Indian tactical information



Integration with existing Russian weapon system may be a challenge

INDIA, ASEAN STEP UP TIES IN MARITIME SECTOR

India and ASEAN have resolved to strengthen ties by deepening cooperation in the maritime sector and boosting connectivity. **The two sides made the affirmations** at the **21st ASEAN-India Senior Officials' Meeting (SOM)** held here on April 11-12, the Ministry of External Affairs (MEA) said. The meeting was co-chaired by Vijay Thakur Singh, SOM Leader and Secretary (East), Ministry of External Affairs, and Busaya Mathelin, SOM Leader and Permanent Secretary, Ministry of Foreign Affairs, **Thailand**.

What

1. **The ASEAN-India SOM** reviewed the strategic partnership and its future direction. It assessed the progress of cooperation under **all three pillars — political-security, economic and socio-cultural**. The SOM leaders also exchanged views on regional and international issues of interest to ASEAN and India.
2. They agreed to deepen maritime cooperation as decided at the **ASEAN-India Commemorative Summit 2018**. In this context, they proposed to undertake a variety of measures, including enhanced cooperation in the sub-sector of **Blue Economy**. It was decided at the meeting to give an **impetus to ASEAN-India connectivity in all its forms**.
3. The two sides also discussed the ways and means to further deepen cooperation on financial matters as well as overall strengthening of the ASEAN Secretariat.
4. The two sides also vowed to step up cooperation in renewable energy and hold an **ASEAN-India Conference on Renewable Energy in 2019**. **The Energy and Resources Institute (TERI)** and the ASEAN Centre for Energy (ACE) would be the co-partners for this project.
5. The ASEAN-India partnership is being implemented through the "**Plan of Action (2016-20)** to implement the ASEAN-India Partnership for peace, progress and shared prosperity".

Flashback

1. The **Association of Southeast Asian Nations (ASEAN)** is a regional intergovernmental organization comprising **ten countries in Southeast Asia**, which promotes intergovernmental cooperation and facilitates economic, political, security, military, educational, and **sociocultural integration** among its members and other countries in Asia.
2. **It also regularly engages other countries in the Asia-Pacific region** and beyond. A major partner of **Shanghai Cooperation Organisation**, ASEAN maintains a global network of alliances and dialogue partners and is considered by many as a global powerhouse the central union for cooperation in Asia-Pacific, and a prominent and influential organisation.

MALAYSIA REJOINS CHINA'S BRI

Malaysia has reopened a closed Chinese rail construction project after **slashing 30%** from the original cost. **Under the reworked deal**, the **648-km rail link** will now cost \$10.6 billion. **China appears to have agreed to the hugely lowered price** because it is desperate to present a strong global infrastructure programme at the **Belt and Road Forum** between April 25 and 27. India has indicated it will stay away from the event.

What

1. **Malaysian President Mahathir Mohamad** shocked China when he shelved the project last July soon after returning to power.
2. Mahathir said the project, contracted by the previous government, was "unfair" and imposed a major financial burden on the country.

3. The decision to slash the price might result in a chain effect with several countries **implementing the Belt and Road Initiative (BRI)**, like Pakistan, demanding a price cut. It remains to be seen how China deals with the situation.

4. **This reduction will surely benefit Malaysia** and lighten the burden of the country's financial position, a statement from the Prime Minister's office in Kuala Lumpur said.

5. The **East Coast Rail Link** will connect **Malaysia's east**

coast on the South China Sea with the busy waterway of the Malacca Strait on the west. The decision to restructure the project showed China's willingness to modify its projects to satisfy customers.

6. **The new deal includes a reduction in the rail route by 40 km**, which works out to about 6% shorter than the original one.

Flashback

1. The **Belt and Road Initiative (BRI)**, also known as the **One Belt One Road (OBOR)** or the **Silk Road Economic Belt** and the **21st-century Maritime Silk Road** is a development strategy adopted by the Chinese government involving infrastructure development and investments in **152 countries** and international organizations in Europe, Asia, Middle East, Latin America and Africa.
2. The paramount leader of the People's Republic of China, Xi Jinping, **originally announced the strategy during official visits to Indonesia and Kazakhstan in 2013.**
3. "Belt" refers to the overland routes for road and rail transportation, called "**the Silk Road Economic Belt**"; whereas "road" refers to the sea routes, or the 21st Century Maritime Silk Road.

INDIA, BRAZIL INK TREATY

India and Brazil have sealed a **treaty for repatriation of convicted prisoners** so that they **can serve their remaining jail term in their own country**. According to a Home Ministry notification, the Instruments of Ratification by **India and Brazil were exchanged on January 24, 2019**. A sentenced person will be transferred under this agreement only on the conditions that the sentenced person is a national of the receiving state, the death penalty has not been imposed on the sentenced person, the judgment is final and there is no inquiry, trial or any other proceeding is pending against the sentenced person in the transferring State.

What

1. Besides, at the time of receipt of the request for transfer, the sentenced person still has **at least one year of the sentence to serve**, that the acts or omissions for which that person was sentenced in the transferring state are those which are punishable as a crime in the receiving state, or would constitute a criminal offence if committed on its territory, the sentenced person has not been convicted for an offence under the military law and the transfer of custody of the sentenced person to the receiving state shall not be prejudicial to the sovereignty, security or any other interest of the transferring state, the notification said.
2. As per the pact, **the two countries agree to maintain highest possible mutual cooperation in all matters** related to the transfer to sentenced persons pursuant to the terms and provisions of this agreement, a person sentenced in the territory of one contracting state may be transferred to the territory of the other contracting state in accordance with the provisions of this agreement in order to serve the sentence imposed on him and to that end, may express to the transferring state or to the receiving state his or her wish to be transferred under the terms of this agreement.
3. The full text of the agreement on transfer of sentenced persons was signed by **India and Brazil on October 15, 2013**. It was ratified by India on January 1, 2014 and by Brazil

on October 24, 2018 and the Instruments of Ratification by India and Brazil exchanged on January 24, 2019.

MILITARY BASES IDENTIFIED FOR US SPACE COMMAND

The **US Air Force** has identified the **six military bases** that could house the military's newest combatant command, Space Command, according to a defence memo.

Four of the proposed locations are located in **Colorado -- Buckley Air Force Base, Cheyenne Mountain Air Force Station, Peterson Air Force Base Schriever Air Force Base**. The other two locations are in **Alabama -- Army's Redstone Arsenal -- and California's Vandenberg Air Force Base**.

What

1. The memo, which has been approved by Secretary of the Air Force Heather Wilson, also said that "**the projected manpower**" for the US Space Command is 1,450 personnel -- 390 military officers, 183 enlisted personnel, 827 civilians and 50 contractors.
2. About 350 of those personnel will be drawn from the existing Joint Force Space Component Command, which is currently part of US Strategic Command.
3. Last month, President Donald Trump nominated Air Force Gen. John Raymond, who currently leads Air Force Space Command, to head the new Space Command.
4. **The Air Force's analysis used a set of criteria** to determine where the command was to be housed, which included cost, co-location with an existing military organisation that will become a component of the future Space Command, **access to a C-17 aircraft capable airfield**, communications connectivity, administrative buildings and available base support.

EX-MALDIVES PRESIDENT MAKES COMEBACK

The **former Maldives president** on 7 April 2019 vowed sweeping reforms and an end to government corruption after leading his party to a **record landslide victory just five months since returning from exile**. **Mohamed Nasheed, 51**, made a dramatic return to the top of the national parliament, with his **Maldivian Democratic Party (MDP)** securing more than two-thirds in the 87-member assembly.

What

1. **Nasheed** promised to use his party's mandate to usher in a **new era of stability and democracy in the Indian Ocean archipelago** as it emerges from years of strongman rule, political crises and corruption scandals miring the government and judiciary.
2. Nasheed's comprehensive victory was another rebuke for his arch-rival Yameen, who was dumped in a shock election defeat in September under a cloud of corruption and embezzlement allegations.
3. Yameen did not run, but his party -- the Progressive Party of Maldives -- finished in third. The remaining seats were collected by minor parties and independents.
4. Nasheed was barred from running in the presidential election but his former deputy, President Ibrahim Mohamed Solih, emerged triumphant over Yameen.

Flashback

1. The **Maldives is a tropical nation in the Indian Ocean** composed of **26 ring-shaped atolls**, which are made up of **more than 1,000 coral islands**.
2. It's known for its beaches, blue lagoons and extensive reefs.
3. The capital, Malé, has a busy fish market, restaurants and shops on the main road, Majeedhee Magu, and **17th-century Hukuru Miskiy** (also known as Friday Mosque) made of carved white coral.

5. The former leader declared the days of "Rolex watches and Kohinoor are over", referring to high-profile scandals in the Maldives where MPs have allegedly been bought with luxury gifts, including gems.
6. Nasheed also vowed to transform the Maldives, a popular honeymoon destination home to 340,000 Sunni Muslims, into a parliamentary democracy.

UN INAUGURATES GIANT MURAL

In an "**innovative outreach**", an **imposing mural on the premises of India's Permanent Mission** to the UN depicts a multi-pronged theme of environmentally sustainable green jobs, **Mahatma Gandhi's 150th birth anniversary**, the International Labour Organisation's centenary celebration and India leading the global greening effort as documented recently by NASA.

What

1. The mural, on the **sidewall of the Permanent Mission of India to the UN** in New York, was created by **French artist**, originally from Portugal, **Victor Ash** to commemorate the centenary celebrations of the **International Labour Organization (ILO)** as well as **Gandhi's 150th birth anniversary**.
2. The mural, an innovative collaboration with the ILO and non-profit organization '**Street Art for Mankind**', was inaugurated.
3. The imposing white, black, grey and green mural depicts a gigantic weightless astronaut, floating in space, a green India visible in the astronaut's helmet visor. Gandhi's portrait and the number '150' are on the astronaut's spacesuit's left arm while a patch with the ILO logo and the numeric '100' is on the right arm.
4. India's Permanent Representative to the UN Ambassador Syed Akbaruddin said the **ILO worked with the India's Permanent Mission** to promote a global concern - environmentally sustainable green jobs.
5. He said the **mural's theme also has other elements of India** - green jobs, the NASA report and Gandhi's 150th birth anniversary.
6. Looking down on Earth, **the astronaut in the mural sees that the world is a greener place** than it was 20 years ago.
7. India is amongst those contributing in significant measure to this increase in the greening on Earth and the same was corroborated by the recent data from the NASA satellites.
8. A recent NASA study had said **India and China are leading the global greening effort**. The NASA study, which observed that the world is a greener place than it was 20 years ago, was based on data received and analysed from its satellite.
9. **The greening in India is mostly from croplands (82 per cent)** with minor contribution from forests (4.4 per cent), the NASA study, published on February 11, said.
10. The mural also **depicts the ILO's objective of transformation to a greener and low-carbon economy** with the potential to create around **24 million new jobs globally** by 2030, contributing to the achievement of the **Sustainable Development Goals**.
11. The Green India in the mural represents the importance of green jobs to sustainable development and responds to the global challenges of environmental protection, economic development and social inclusion.
12. There is a growing acknowledgement that the **strategy of 'grow first, clean up later'** is not sustainable, economically, socially or environmentally. This has led to an awareness and willingness to act.
13. **India was one of the first countries in Asia Pacific to collaborate with the ILO on the Green Jobs Initiative**.

14. Some may consider this counter intuitive, given our large population. To us, it is no surprise. The leader of India's struggle for independence, Mahatma Gandhi, whose 150th anniversary is being celebrated, always held that 'The **earth, air, land and water are not an inheritance from our forefathers** but on **loan from our children**.

ISRAEL'S BENJAMIN NETANYAHU WINS ELECTION

Prime Minister **Benjamin Netanyahu** has won the **Israeli national election**, securing a record fifth term in office despite running neck-and-neck with his challenger Benny Gantz, the country's three main television channels said on 10 April 2019.

What

1. The **closely contested race** was widely seen in Israel as a referendum on Netanyahu's character and record in the face of corruption allegations.
2. The veteran right-wing leader's Likud party and Gantz's new centrist Blue and White party both won 35 seats, according to the Knesset website and the Israeli TV channels. That would mean a five-seat gain for Likud.
3. In power since 2009, and having led the country for a total 13 years including **his first term in the 1990s**, Netanyahu has been fighting for his political survival. He faces possible indictment in three graft cases. He has denied any wrongdoing.
4. Netanyahu highlighted his close relationship with U.S. President Donald Trump, who delighted Israelis and angered Palestinians by recognising Jerusalem as Israel's capital in 2017 and moving the American Embassy to the holy city last May.

ECONOMY

RBI'S 12 FEBRUARY CIRCULAR QUASHED

The **Supreme Court (SC) on 2 April 2019 quashed the Reserve Bank of India's (RBI) 12 February circular** which **prescribed rules for recognising one-day defaults** by large corporates and called for insolvency action as a remedy. We have declared the **RBI circular ultra vires**, Justice Rohinton F. Nariman as announcing the judgment. Since the central bank had also cancelled all its previous restructuring schemes in favour of 12 February circular, lenders will now have to individually look at resolution plans.

What

1. **In its 12 February circular**, the central bank had asked lenders to institute a **board-approved policy for resolution of stressed assets**.
2. Banks were told to start the resolution process as soon as a borrower defaults on a term loan and were given 180 days to cure it, failing which the account would have to be referred to the National Company Law Tribunal (NCLT).
3. Under previous guidelines, lenders had the freedom to initiate the **resolution process after 60 days of default**.
4. Following these norms, several petitioners, including GMR Energy Ltd; Rattan India Power Ltd, a Punjab-based textile company; Association of Power Producers (APP); Independent Power Producers Association of India; Sugar Manufacturing Association from Tamil Nadu and a shipbuilding association from Gujarat, had intervened in the matter in different courts.
5. In September last year, the Supreme Court had granted an interim relief to stressed power firms, directing lenders to maintain a status quo on the Reserve Bank of India's circular for banks to **resolve these cases within 180 days**.

6. The apex court directed that all pleas filed by the central bank related to the February circular should be transferred to it.
7. As mentioned, the one-day default norms were not received well by the industry and a section of lenders. So much so that in April last year, RBI deputy governor N.S. Vishwanathan explained in a speech that the revised framework tries to reduce the arbitrage borrowers are currently enjoying while raising funds through borrowing from banks, as against raising funds from the capital markets.

What Court Said

Feb 12, 2018 | **Govt had only authorised RBI to issue orders on specific defaults**

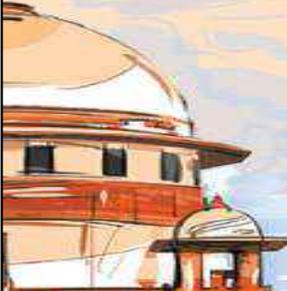
insolvency beyond RBI powers

Impact

All action taken under RBI circular becomes void. But doesn't mean cases in NCLT go away automatically

Parties in NCLT will have to prove if insolvency was under circular or not. If under circular, it will be withdrawn, else the process will continue

Huge relief for stressed assets in sectors such as power, sugar and fertiliser



Ruling restores banks' discretion to take a call on whether to invoke insolvency proceedings in IBC on case-to-case basis

Unravels many pre-IBC cases which were on way to resolution, sets clock back on resolutions in advanced stages. These will have to be reworked

Whittles down RBI powers to deal with NPA mess

2ND LARGEST START-UP ECOSYSTEM

India has the second largest start-up ecosystem in the world and the median age of founders of these enterprises is only 31 years, a youth delegate from India said at the UN. India's young population is scripting remarkable success stories, said youth delegate Seema Pujani at an interactive round-table on **'Looking to the Future: A dialogue on the High-level Political Forum (SDG) Summit'** during the ECOSOC Youth Forum in UN. **India today has the second largest start-up ecosystem in the world.**

What

1. With a **median age of about 29 years**, India is one of the youngest countries in the world. As a substantial segment of the Indian electorate, the youth stand to influence policymaking in the country.
2. The **median age of founders of these enterprises is only 31 years**. Youth in India are also behind forging new alliances and partnerships across the government, civil society, business and academia which are critical for the achievement of **Sustainable Development Goals (SDGs)**. Young Indians are overcoming challenges and shining bright in all walks of life.
3. Pujani pointed out that **youth empowerment and inclusive social development** are at the heart of flagship programmes of the Indian government that seek to target gender equality, increased access to financial services, digital connectivity, skill development and higher education, universal health coverage, sanitation and housing for all.
4. **India is also among one of the first countries to launch a comprehensive programme** for its 250 million adolescent population, focusing on reproductive and menstrual health, so far, close to 7300 Adolescent Friendly Health Clinics have been established and around six million adolescents availed services in a year in the country.
5. Our domestic efforts in **expanding solar power** have already brought down unit costs substantially to make it competitive.

6. **Young people in India** are taking leadership role in environmental conservation, especially in the area of waste management that global action based on equity is crucial to combat climate change and achieve **sustainable development envisaged in 2030 Agenda**.

WORLD BANK'S MIGRATION AND DEVELOPMENT BRIEF

India retained its position as the world's top recipient of remittances with its diaspora sending a **whopping USD 79 billion back home in 2018**, the World Bank said in a report. **India was followed by China** (USD 67 billion), Mexico (USD 36 billion), the Philippines (USD 34 billion), and Egypt (USD 29 billion), the global lender said. With this, **India has retained its top spot on remittances**, according to the latest edition of the **World Bank's Migration and Development Brief**. Over the last three years, India has registered a significant flow of remittances from USD 62.7 billion in 2016 to USD 65.3 billion in 2017.

What

1. **Remittances grew by more than 14 percent in India**, where a flooding disaster in Kerala likely boosted the financial help that migrants sent to families.
2. **In Pakistan, remittance growth was moderate (seven per cent)**, due to significant declines in inflows from Saudi Arabia, its largest remittance source. In Bangladesh, remittances showed a brisk uptick in 2018 (15 per cent).
3. According to the report, **remittances to low-and middle-income countries** reached a record high of USD 529 billion in 2018, an increase of 9.6 per cent over the previous record high of USD 483 billion in 2017.
4. Global remittances, which include flows to high-income countries, reached USD 689 billion in 2018, up from USD 633 billion in 2017. The Bank said, **remittances to South Asia grew 12 per cent to USD 131 billion in 2018**, outpacing the six per cent growth in 2017.
5. The upsurge was driven by stronger economic conditions in the United States and a pick-up in oil prices, which had a positive impact on outward remittances from some GCC countries.
6. The **Gulf Cooperation Council (GCC) is a regional inter-governmental political and economic bloc** of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE.
7. However, the Bank in its report rued that the global average cost of sending USD 200 remained high, at around seven per cent in the first quarter of 2019. Reducing remittance costs to three per cent by 2030 is a global target under **Sustainable Development Goal (SDG) 10.7**. Remittance costs across many African corridors and small islands in the Pacific remain above 10 per cent.
8. **Remittances are on track to become the largest source of external financing in developing countries**. The high costs of money transfers reduce the benefits of migration.
9. Renegotiating exclusive partnerships and letting new players operate through national post offices, banks, and telecommunications companies will increase competition and lower remittance prices.

SCIENCE AND TECHNOLOGY

B/CI CONCEPT

Our brains may someday be able to directly connect to vast cloud-computing networks in real time, allowing us to gain a Matrix-style instant access to the world's knowledge by simply by thinking about a specific topic, scientists claim. According to a research published in the journal *Frontiers in Neuroscience*, **exponential progress in**

nanotechnology, nanomedicine, artificial intelligence (AI), and computation will lead this century to the development of a “**Human Brain/Cloud Interface**” (B/CI).

What

1. **The B/CI concept was initially proposed by futurist-author-inventor Ray Kurzweil**, who suggested that neural nanorobots could be used to connect the neocortex of the human brain to a “**synthetic neocortex**” in the cloud.
2. Our wrinkled neocortex is the smartest, ‘conscious’ part of the brain, according to the researchers from the University of California, Berkeley and Institute for Molecular Manufacturing in the US.
3. Robert Freitas, senior author of the research, proposed neural nanorobots would provide direct, real-time monitoring and control of signals to and from brain cells.
4. **These devices would navigate the human vasculature**, cross the blood-brain barrier, and precisely autoposition themselves among, or even within brain cells, Freitas said in a statement.
5. They would then wirelessly transmit encoded information to and from a cloud-based supercomputer network for real-time brain-state monitoring and data extraction. **This cortex in the cloud would allow “Matrix”-style downloading of information to the brain**, the group claims.
6. **A human B/CI system mediated by neuralnanorobotics** could empower individuals with instantaneous access to all cumulative human knowledge available in the cloud, while significantly improving human learning capacities and intelligence.
7. B/CI technology might also allow us to create a future “global superbrain” that would connect networks of individual human brains and AIs to enable collective thought.
8. According to the group’s estimates, even existing supercomputers have processing speeds capable of handling the necessary volumes of neural data for B/CI. Rather, transferring neural data to and from supercomputers in the cloud is likely to be the ultimate bottleneck in B/CI development.
9. One solution proposed by the authors is the **use of ‘magnetolectric nanoparticles’ to effectively amplify communication between neurons and the cloud.**

ENZYMES TO ARREST BACTERIA CELL GROWTH DISCOVERED

Scientists at the **Centre for Cellular & Molecular Biology (CCMB)** have discovered a **new enzyme which helps in breaking cell walls of bacteria** and hence, offers a potential for a new drug delivery route to arrest the anti-bacterial resistance through existing antibiotic drugs. At a press conference in Hyderabad on 2 April 2019, CCMB director Rakesh Mishra and senior scientist Manjula Reddy explained that it is crucial to know **how cells grow in bacteria to understand the anti-bacterial resistance to currently available antibiotics.**

What

1. Scientists all over the world are trying to understand this phenomenon and the lab of Dr. Reddy has been working on **how e. coli bacteria cells function, divide and grow to understand diseases like cholera**, leprosy, tuberculosis and so on for the past decade.
2. Dr. Reddy and her research scholar Ch. Pavan Kumar have been working on how the cell governs the synthetic machinery to build the cell wall in the first place, identified the principal players behind the process and discovered the new mechanism or enzyme through which the cell regulates growth of its wall.
3. **Other bacteria, too, have the same enzyme working on cell division** as the cell wall is fundamental for bacterial growth and division. Therefore, by blocking this ‘scissors enzyme’ from functioning, new ways to target microbes could be found, leading to a new wave of antibiotic drugs.

4. In contrast, the classical antibiotic drugs target the last stage of cell synthesis to prevent cell growth like penicillin that hits the machinery that creates the cell wall — a mesh-like structure of cross-linked sugars and peptides.
5. What has been found is very novel. Now the next step is to find out the **molecule of the enzyme endo-pepcidine** and it has to be followed by the drug trials to unravel a new combination of drugs to replace existing antibiotics though it is difficult to forecast a time frame.

FIRST IMAGE OF A BLACK HOLE

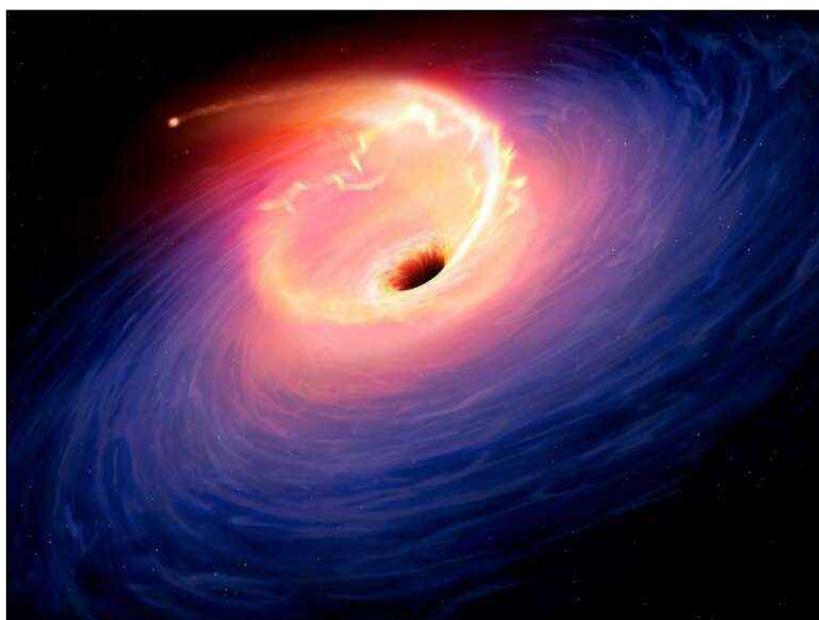
Astronomers on 10 April 2019 **unveiled the first-ever direct image of a black hole**, more than 100 years after these super-dense extreme-gravity regions of space-time were theorised as a consequence of **General Theory of Relativity**. The **spectacularly bright-orange circular image with a dark** central region was taken by the **Event Horizon Telescope (EHT)** Collaboration in April 2017, and revealed simultaneously at five press conferences in four different continents on 10 April 2019 evening.

What

1. **Black holes, those unimaginably dense regions of space-time** from where even light is unable to escape, are formed mainly by massive collapsing stars after they start extinguishing. The space-time around them gets so incredibly bent that nothing is able to escape from its gravity.

2. The black hole, whose image was captured, **is located at the centre of the Messier 87 (M87) galaxy** in the Virgo galaxy cluster.

3. The **black hole is at a distance of 55 million light-years** from earth and has a mass 6.5 billion times that of the Sun. Scientists have also captured the image of another black hole, **Sagittarius**



A*, which is very much in our own galaxy, the Milky Way, but that image is not as sharp as the one released and needs further processing.

4. It is not that black holes have been discovered for the first time. Quite the contrary. Scientists have gathered a pile of evidence from a variety of experiments over the decades that showed that black holes exist.
5. They have not only been able to locate them in the universe but also calculated their sizes, masses and the impacts they have on their surroundings and other heavenly bodies.
6. However, since these black holes are completely 'dark', and do not emit or reflect any light, nor any other electromagnetic radiation, they could not be 'observed' by any of the scientific instruments.
7. **Scientists had to build an elaborate and complex network of massive telescopes** around the world, and devise ingenious new techniques, to piece together a picture that now provides the first visual evidence of a black hole.

8. We have been studying black holes so long that it is easy to forget none of us has ever seen one before, said France Cordova, director of the National Science Foundation of the United States.
9. The **Event Horizon Telescope comprises of eight radio telescopes** — located in Hawaii and Mexico, in the mountains of Arizona, in Spanish Sierra Nevada, in the Atacama Desert of Chile and near the South Pole in Antarctica — which captured very high frequency microwave radiation that had originated from near the black hole 55 million years ago.
10. The **unveiling of the black hole image comes three years after scientists, in a similar global announcement in Feb 2016**, reported the discovery of gravitational waves, another prediction of the General Relativity.
11. The **first gravitational waves** to be detected was produced by an event in which two black holes had merged into one **1.3 billion years ago**. Several more gravitational waves have been detected after that.

BLACK HOLE NAMED ‘POWEHI’

A language professor has given a Hawaiian name — **Powehi** — to the **black hole depicted in an image produced in a landmark experiment**. The Honolulu Star-Advertiser reported on 11 April 2019 that University of Hawaii-Hilo Hawaiian Professor Larry Kimura named the cosmic object. **The world’s first image of a black hole** revealed on 10 April 2019 was created using data from eight radio telescopes around the world.

Flashback

1. **A black hole is a region of spacetime** exhibiting such **strong gravitational effects** that nothing—not even **particles and electromagnetic radiation** such as light—can escape from inside it.
2. **The theory of general relativity** predicts that a sufficiently compact mass can deform spacetime to form a black hole.
3. The boundary of the region from which no escape is possible is called the **event horizon**. Although the event horizon has an enormous effect on the fate and circumstances of an object crossing it, no locally detectable features appear to be observed.
4. In many ways a black hole acts like an ideal black body, as it reflects no light.

What

1. The newspaper reports the word meaning “**the adorned fathomless dark creation**” or “embellished dark source of unending creation” comes from the Kumulipo, an 18th Century Hawaiian creation chant.
2. Astronomers say giving it a Hawaiian name was justified because the project included two telescopes in Hawaii.
3. Jessica Dempsey, a co-discoverer of the black hole, says the word is an excellent match for the scientific description she provided to Kimura.

HOBBIT HUMANS DISCOVERED

Scientists have discovered the remains of a **tiny, previously unknown species of humans** that **roamed the Earth nearly 67,000 years ago**. Researchers from Australian National University (ANU) said that the findings represent a major breakthrough in our understanding of **human evolution across Southeast Asia**. The team uncovered the remains of at least two adults and **one juvenile within the same archaeological deposits in the Philippines**, proving the region played a key role in **hominin evolutionary history**.

What

1. The fossil remains included adult finger and toe bones, as well as teeth. We also recovered a child's femur. There are some really interesting features — for example, the teeth are really small, said Philip Piper from Australian National University (ANU).
2. The new species, **Homo luzonensis is named after Luzon Island**, where the more than 50,000 year old fossils were found during excavations at Callao Cave.
3. The size of the teeth generally, though not always, reflects the overall body-size of a mammal, so we think *Homo luzonensis* was probably relatively small.
4. It's quite incredible, the extremities, that is the hand and feet bones are remarkably **Australopithecine-like**. The Australopithecines last walked the earth in Africa about two million years ago and are considered to be the ancestors of the *Homo* group, which includes modern humans.
5. *Homo luzonensis* shares some unique skeletal features with the famous **Homo floresiensis or 'the hobbit'**, discovered on the island of Flores to the south east of the Philippine archipelago.
6. In addition, stone tools dating to around 200,000 years ago have been found on the island of Sulawesi, meaning that ancient hominins potentially inhabited many of the large islands of Southeast Asia.

STATE OF GLOBAL AIR REPORT 2019

China and India together were responsible for half of the total **global attributable deaths from air pollution in 2017**, a new global study released has revealed. **Long-term exposure to outdoor and indoor air pollution** is estimated to have contributed to nearly 5 million deaths in 2017, of which China and India reported 1.2 million deaths each. China's "major regulatory reforms appear to be driving substantial reductions in **PM2.5 exposure**". The **State Of Global Air report 2019**, produced by the **Boston-based Health Effects Institute (HEI)**, noted that air pollution collectively **reduced life expectancy by 1 year and 8 months on average worldwide**, rivaling that of smoking. This means a **child born today will die 20 months sooner**, on average, than would be expected in the absence of air pollution, the report notes.

What

1. **Ten countries** with the highest mortality burden attributable to air pollution in 2017 were **China (1.2 million), India (1.2 million), Pakistan (128,000), Indonesia (124,000), Bangladesh (123,000), Nigeria (114,000), the United States (108,000), Russia (99,000), Brazil (66,000), and the Philippines (64,000)**, the report states.
2. Across the world, **air pollution is responsible for more deaths** than many better known risk factors such as **malnutrition, alcohol use and physical inactivity**, states the report.
3. Each year, more people die from air pollution-related disease than from road traffic injuries or malaria. **Life-expectancy estimates are a new feature in this year's report**.
4. According to an analysis of **Global Burden of Disease (GBD) data from 2016**, the report notes air pollution exposure collectively reduces life expectancy by 20 months on average worldwide. When considered separately, exposure to ambient PM2.5 is responsible for just over 1 year, household air pollution is responsible for almost 9 months, and ozone is responsible for less than 1 month of life span lost.
5. In other words, **a reduction in life expectancy on average by 1 year and 8 months globally** is "a loss that ranks just below that related to smoking but above that related to unsafe drinking water and lung cancer". This loss is not borne equally across all regions and countries.
6. Further, in 2017, **exposure to PM2.5 was the third leading risk factor for type 2 diabetes deaths** and disability-adjusted life years (DALYs) after high blood sugar and

- high body mass index. While rates of diabetes have risen across all countries, the largest burdens are found in China and India, reflecting in part their large populations.
7. Regional patterns of deaths attributable to household air pollution reflect population size and proportion of each population using solid fuels. The largest numbers of deaths were in **India (482,000)** where 60% of the population cooks with solid fuels, followed by China (271,000) where 32% of the population does.
 8. Together, these two large countries accounted for about 46% of deaths and about 37% of DALYs attributable to household air pollution,” it notes.
 9. **Specific to China, the report notes that PM2.5 pollution has dropped markedly in recent years** but remains higher than WHO’s least-stringent target. While China’s air pollution is still worse than that experienced on average across the globe, the remarkable improvements seen in recent years bring significant benefits to China’s population and underscore the potential for air quality management efforts to rapidly and substantially improve air quality both in China and around the world.
 10. The **State of Global Air report is an annual report** implemented by the HEI in cooperation with the Institute of Health Metrics and Evaluation at the University of Washington, University of British Columbia and University and Texas.

WORLD HEALTH STATISTICS OVERVIEW 2019

The **World Health Organisation** recently released its **World Health Statistics Overview 2019**. Several important points related to health have been shared in the WHO report. The most discussed point relates to how men, time and again, are doing much worse than men when it comes to cardiovascular disease, road accidents, suicides and homicide. For instance, globally in 2016, the **suicide mortality rates were 1.75 times higher in men than women**. The WHO findings related to **reduced life expectancy of males is not due to any single or small number of causes**. Several conditions contribute to the differences in life expectancy between men and women, according to the observation made by the WHO report’s key author, Dr. Richard Cibulskis.

What

1. In the WHO report, **a notable example refers to how child marriage increases risks** pertaining to an early pregnancy among girls, whereas higher rates of male employment in the transport industry expose most men to a higher risk of death on the roads.
2. Interestingly, the WHO report points out how the exact contributions that biological differences and gender roles make to health status are often difficult to determine because they do not operate independently.
3. Another example in the WHO report **refers to the lifetime risk for Alzheimer’s disease**. This is greater in women than in men.
4. The rationale is attributed partly because more women survive to ages at which the disease most commonly occurs, although in some locations women also appear to be more susceptible to the Alzheimer’s disease.
5. The WHO study indicates that **life expectancy gap seems to be at its narrowest point where women lack access to health services**. For instance, maternal deaths contribute to reducing female life expectancy, more than any other cause. This is an area of serious concern for countries worldwide.
6. A stark difference pinpoints to **how the risk of maternal death varies hugely between low income countries and high income countries**.
7. The data cited in the WHO report also shows that 1 in 41 women die due to a maternal cause and belongs to a low-income country as compared with 1 in 3,300 in a high income country.
8. In conclusion, however, the WHO report also points out that at all income levels people can suffer catastrophic health expenditures, even in high income countries.

9. The urgent need of the hour, as most doctors in India have been strongly advocating is to educate men and women about the health risks they need to prepare ahead for, particularly taking into account several multiple risk factors such as hypertension and diabetes.
10. After all, no matter whether one belongs to a high income group, a middle income group or a low income group, the fact remains: Health is wealth!

FIRST SAMPLE IN 'CLAY-BEARING UNIT'

NASA's Curiosity rover has tasted its first sample from a Martian region called "**the clay-bearing unit**" on Mount Sharp, the US space agency said. **Curiosity drilled a piece of bedrock** nicknamed "**Aberlady**" on April 6 — the 2,370th Martian day, or sol, of the mission — and delivered the sample to its internal mineralogy lab, NASA said in a statement. **The rover's drill chewed easily through the rock**, unlike some of the tougher targets it faced nearby on **Vera Rubin Ridge**.

What

1. It was so soft, in fact, that **the drill did not need to use its percussive technique**, which is helpful for snagging samples from harder rock. This was the mission's first sample obtained using only rotation of the drill bit.
2. Curiosity has been on the road for nearly seven years," said Curiosity Project Manager Jim Erickson of NASA's Jet Propulsion Laboratory in California, US. Finally drilling at the clay-bearing unit is a major milestone in our journey up Mount Sharp. **Scientists are eager to analyse the sample for traces of clay minerals** because they usually form in water.
3. **NASA's Mars Reconnaissance Orbiter (MRO)** spied a strong clay "signal" here long before Curiosity landed in 2012.
4. Pinpointing the source of that signal could help the science team understand if a wetter Martian era shaped this layer of Mount Sharp, the 5-kilometer-tall mountain Curiosity has been climbing.
5. **Curiosity has discovered clay minerals in mudstones all along its journey.** These mudstones formed as river sediment settled within ancient lakes nearly 3.5 billion years ago.

Flashback

1. **Curiosity is a car-sized rover** designed to explore the **crater Gale on Mars as part of NASA's Mars Science Laboratory mission (MSL)**.
2. Curiosity was launched from Cape Canaveral on November 26, 2011 and **landed on Aeolis Palus inside Gale on Mars** on August 6, 2012.
3. The Bradbury Landing site was less than 2.4 km (1.5 mi) from the center of the rover's touchdown target after a 560 million km (350 million mi) journey.
4. The rover's goals include an investigation of the Martian climate and geology; assessment of whether the selected field site inside Gale has ever offered environmental conditions favorable for microbial life, including investigation of the role of water; and planetary habitability studies in preparation for human exploration.

MISCELLANEOUS

INDIA'S FIRST FEMALE IN FORBES UNDER 30 LIST

65 Indians made it to the **2019 edition of the prestigious Forbes list** which **recognises high achieving individuals under the age 30**. Among these 65 individuals is **Ankiti Bose, India's first female owner of unicorn**. Ankiti Bose, who got in the limelight for becoming the **first female owner** of a \$1 billion company named **Zilingo**,

featured in the list among several other notable Indians. **Bose is famed for Zilingo**, which is an **online e-commerce marketplace** launched in 2015. **Co-founded with Dhruv Kapoor**, the now unicorn was aimed to provide a platform for merchants to sell their products. The company has raised \$28 million. As of now, Zilingo has two million users, according to the Forbes report. **Ankiti Bose was formerly an analyst at Sequoia India.**

Other retail and e-commerce disruptors

1. **Tushar Khandelwal, cofounder — Voyagin** - The 29 year old's Voyagin is an online travel and activity platform **aimed to help travellers**. The company was then acquired by Japanese Rakuten.
2. **Dhruv Sharma, founder — GuestHouser** - Sharma's GuestHouser is known as **India's AirBNB**. GuestHouser portal helps one discover and book vacation homes.
3. **Nyha Shree, cofounder — Jumper.ai** - Businesses such as Unilever and Disney have taken the help of Shree's social media e-commerce tool which helps transaction on sites such as Facebook and Youtube.
4. **Sanna Vohra, founder — The Wedding Brigade** - Started in 2014, The Wedding Brigade is an online wedding platform. The startup offers wedding related services such as destination booking, wedding fashion etc.
5. **Anushka Sharma, Nishith Rastogi, Ishrat Sehgal, Jasveer Singh, Aakriti Kumar** are other Indian achievers who were recognised under various categories.

Flashpoint

1. **Currently in its fourth year**, the list spans **23 Asian countries** and acknowledges young leaders, innovators, entrepreneurs and visionaries for their phenomenal work. Forbes' 30 under 30 lists for Asia honoured 300 individuals this year.
2. **Spread in 10 categories** including the arts, enterprise technology, retail and e-commerce, consumer technology, social entrepreneurs, media and marketing and advertising, finance and venture capital, industry and manufacturing and energy, and celebrities among others, the list has a total of 300 honorees which were shifted from 2000 entries, Forbes said. **Paytm's Madhur Deora was one of the judges in the panel.**

PM AWARDED ZAYED MEDAL

The **United Arab Emirates (UAE)** on 4 April 2019 **honoured Prime Minister Narendra Modi** with the prestigious **Zayed Medal** for giving a "big boost" to bilateral strategic ties between the two countries. **UAE President Sheikh Khalifa bin Zayed Al Nahyan conferred the award**, the highest decoration awarded to kings, presidents and heads of states, on Mr. Modi.

What

1. The award comes in appreciation of Mr. Modi's role in consolidating the **long-standing friendship** and joint strategic cooperation between the two countries.
2. Before Modi, **Russian President Vladimir Putin, Chinese Premier Xi Jinping**, Great Britain's Queen Elizabeth II and former Pakistan president General Pervez Musharraf have been some of the recipients of this honour.
3. This is not the first time Modi has been conferred with a state honour. He was conferred with the **Saudi Arabia's Order of Abdulaziz al Saud award** in April 2016, **Afghanistan's State Order of Ghazi Amir Amanullah Khan Award** in June 2016, and with the **Grand Collar of State of Palestine** in February 2018.
4. In addition to this, he was awarded the **UN's highest environmental award 'Champions of the Earth'** in October 2018 for his pioneering work towards the International Solar Alliance.

- Recently, **he was awarded the Philip Kotler Presidential Award** for his “outstanding leadership” for the nation, which resulted in “extraordinary economic, social and technological advances in the country”.

FIRST EVER INDIAN IN FIFA COUNCIL

All India Football Federation President Praful Patel on 6 April 2019 was elected as a **FIFA Council member**, becoming the **first Indian to enter the prestigious panel** in a landmark development. Patel got 38 out of 46 votes. The **AIFF chief was one of the eight candidates** vying for the spot in the election which was held during the 29th AFC (Asian Football Confederations) Congress in the Malaysian capital. A total of five candidates, including Patel, were elected in addition to the AFC president, and one female member.

What

- Patel was accompanied by AIFF general secretary Kushal Das and senior vice-president Subrata Datta.
- The **AFC Electoral committee** and the **FIFA Review Committee** conducted the eligibility review of the candidates.
- Under Patel’s leadership, AIFF has been awarded with the AFC’s President Recognition award for grassroots at the **AFC Annual Awards in 2014 in Manila**, and was given an award for the AFC Best Developing Member Association at the in 2016.
- The successful hosting of the FIFA U-17 World Cup drew lavish praise from all quarters, and India have also won the bid to host the FIFA U-17 Women’s World Cup in 2020. The Indian Club Licensing system has also been dubbed as one of the best in Asia.

Flashback

- The **Fédération Internationale de Football Association (FIFA)** is an organization which describes itself as an international governing body of association football.
- FIFA is **responsible for the organization of football's major international tournaments**, notably the World Cup which commenced in 1930 and the Women's World Cup which commenced in 1991.
- FIFA was founded in 1904** to oversee international competition among the national associations of Belgium, Denmark, France, Germany, the Netherlands, Spain, Sweden, and Switzerland.
- Headquartered in Zürich**, its membership now comprises 211 national associations.

WISDEN’S LEADING CRICKETERS IN THE WORLD

Indian captain Virat Kohli was named the ‘**Leading Cricketer in the World**’ for the **third time** in a row in this year’s edition of the **Wisden Cricketers’ Almanack**, the publication said on 10 April 2019. **Smriti Mandhana** was the Leading Cricketer in the women’s game. **Kohli**, 30, was also named as one of Wisden’s five cricketers of the year along with **England’s Jos Buttler** and **Sam Curran**, County Championship-winning captain **Rory Burns** and **Tammy Beaumont** from the England women’s team.

What

- Kohli, who also won the ICC’s cricketer, test and one-day international player of the year awards** in January, scored 2,735 runs across all three international formats in 2018 at an average of 68.37, which included 11 centuries.
- India’s Smriti Mandhana, who scored 1,291 runs** in limited overs, was named the Leading Cricketer in the women’s game while Afghanistan spinner Rashid Khan was named the Leading Twenty20 Cricketer for the second consecutive year.
- India superstar Smriti Mandhana has been named by the Wisden Almanack as their Leading Woman Cricketer in the World in 2019.

4. The Five Cricketers of the Year are chosen by Lawrence Booth, the editor of the Wisden Cricketers' Almanack, with the 2019 version serving as the 156th edition.

Flashback

1. **Wisden Cricketers' Almanack** (or simply Wisden or colloquially "the Bible of Cricket") is a **cricket reference book** published annually in the **United Kingdom**.
2. The description "bible of cricket" was first used in the 1930s by Alec Waugh in a review for the London Mercury.
3. In October 2013, an all-time Test World XI was announced to mark the **150th anniversary of Wisden Cricketers' Almanack**.
4. In 1998, an Australian edition of Wisden Cricketers' Almanack was launched. It ran for eight editions.
5. In 2012, an **Indian edition of Wisden Cricketers' Almanack was launched** (dated 2013).
6. Wisden was founded in 1864 by the **English cricketer John Wisden (1826–84)** as a competitor to Fred Lillywhite's The Guide to Cricketers.

UNFPA POPULATION 2019 REPORT

India's population grew at an average of 1.2 per cent annually between 2010 and 2019, more than double the annual growth rate of China, a report by the **United Nations Population Fund (UNFPA) revealed**. In the **State of World Population 2019 report**, the UN sexual and reproductive health agency said India's population in 2019, stood at 1.36 billion, growing from 942.2 million in 1994 and 541.5 million in 1969. China's population, on the other hand, stood at 1.42 billion in 2019, growing from 1.23 billion in 1994 and 803.6 million in 1969. According to the UN report, the country's population grew at an average of **0.5 per cent annually between 2010 and 2019**.

What

1. **Twenty-seven per cent of India's population** was in the age bracket of 0-14 years and 10-24 years, while 67 per cent of the country's population was in the 15-64 age bracket. Six per cent of the country's population was of the age 65 and above.
2. In India, the report said, **the total fertility rate per woman declined from 5.6 in 1969 to 3.7 in 1994 and 2.3 in 2019**. The country registered an improvement in life expectancy at birth. The life expectancy at birth in 1969 was 47 years, growing to 60 years in 1994 and 69 years in 2019.
3. The report also noted there was a drop in the **Maternal Mortality Ratio (MMR)** – 488 deaths per 100,000 live births in 1994 to 174 deaths per 100,000 live births in 2015.
4. Terming the figures as "worrisome", Director of UNFPA Geneva Monica Ferro said it is important to raise the level of consent and access to vital health services for millions of women around the world. "Don't forget: each one of these numbers is a person," she said.
5. The findings on women aged between 15-49 years were published for **the first time as part of United Nations Population Fund's (UNFP) State of World Population 2019 report**.
6. The report includes, for the first time, data on women's ability to make decisions over three key areas: sexual intercourse with their partner, contraception use and health care.
7. According to the analysis, the absence of reproductive and sexual rights has major and negative repercussions on women's education, income and safety, leaving them "unable to shape their own futures".

8. Early marriage continues to remain an obstacle to female empowerment and better reproductive rights, the UNFPA report observed.
9. The next **11 countries** that are the **most populous in the world each have populations exceeding 100 million**.
10. These include the United States, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Mexico, Japan, Ethiopia, and the Philippines.
11. Of these nations, all are expected to continue to grow except Russia and Japan, which will see their populations drop by 2030 before falling again significantly by 2050.

Flashback

1. In 2018, **the world's population grew at a rate of 1.12%**. Every five years **since the 1970s**, the growth rate has continued to fall.
2. The world's population is expected to continue to grow larger but at a much slower pace.
3. **By 2030, the population will exceed 8 billion**. In 2040, this number will grow to more than 9 billion.
4. In 2055, the number will rise to over 10 billion, and another billion people won't be added until near the end of the century.
5. The current annual population growth estimates from the United Nations are in the millions - estimating that over 80 million new lives are added each year.

About UNFPA

1. **United Nations Population Fund (UNFPA)** is the **United Nations sexual and reproductive health agency**.
2. Its mission is to deliver a world where every pregnancy is wanted to every childbirth is safe and every young person's potential is fulfilled.
3. **UNFPA is formally named the United Nations Population Fund**. The organization was **created in 1969**, the same year the United Nations General Assembly declared "parents have the exclusive right to determine freely and responsibly the number and spacing of their children."
4. UNFPA calls for the realization of reproductive rights for all and supports access to a wide range of sexual and reproductive health services – including **voluntary family planning, maternal health care and comprehensive sexuality education**.

HIGHEST STATE HONOUR OF RUSSIA

Russia on 12 April 2019 awarded its highest state honour 'Order of St Andrew the Apostle' to PM Narendra Modi for promoting bilateral special and privileged strategic partnership. On April 12, 2019, Prime Minister of India Narendra Modi was decorated with the Order of St Andrew the Apostle - the highest state decoration of Russia - for exceptional services in promoting special and privileged strategic partnership between the Russian Federation and the Republic of India and friendly relations between the Russian and Indian peoples.

What

1. The award was extended on behalf of Russian President Vladimir Putin with whom Modi shares a strong chemistry.

Flashback

1. **The most recent person who was decorated is Valentina Matvienko**, Chairperson of the Federation Council of the Federal Assembly of the Russian Federation. She was awarded the order on March 28, 2019
2. **The Order was established in 1698 by Tsar Peter the Great**, in honour of Saint Andrew, the first apostle of Jesus and patron saint of Russia.
3. It was bestowed in a single class and was only awarded for the most outstanding civilian or military merit.

2. The two leaders met on numerous occasions including an informal summit over past five years promoting defence and economic partnership. Putin was the only P-5 leader who telephoned Modi after the Pulwama terror attack as he defended India's right to self-defence.
3. **The Order of St Andrew the Apostle** is awarded to prominent statesmen and public figures and representatives of **science, culture, the arts** and various industries for their exceptional services in promoting the prosperity, greatness and glory of Russia. The order can also be awarded to foreign heads of state for outstanding services to Russia.
4. Among the foreign awardees are the President of China Xi Jinping, the President of the Republic of Kazakhstan Nursultan Nazarbayev, the President of the Republic of Azerbaijan Geydar Aliev. The ceremony for the award is usually held at the St Andrew Hall of the Grand Kremlin Palace.

VIRTUAL REALITY CENTRE

Admiral Sunil Lanba, PVSM, AVSM, ADC the Chief of the Naval Staff, inaugurated **the maiden 'state-of-the-art' Virtual Reality Centre (VRC)** at the Directorate of Naval Design (Surface Ship Group). This centre would provide **major boost to the Indigenous warship design capabilities** of Indian Navy, providing impetus to self-reliance and greater fillip to warship construction under **"Make in India"** initiative of the Indian government.

What

1. During his address at inauguration ceremony, **Admiral Lanba complimented the Directorate for their untiring efforts, foresight and initiatives to conceptualise design and execute the project.**
2. This project will facilitate collaborative design reviews for continuous interaction between the designers and the end users to improve design and ergonomics onboard warships.
3. Directorate of Naval Design (Surface Ship Group) had a **humble beginning in 1960s** and since then has made major contributions towards indigenous warship design capabilities of the Indian Navy improving self-reliance for warship design and construction.
4. The multi-disciplinary team has successfully developed 19 warship designs on which more than 90 platforms have been constructed to date.

Flashback

1. **Virtual reality is an artificial environment** that is created with software and presented to the user in such a way that the user suspends **belief and accepts it as a real environment**. On a computer, virtual reality is primarily experienced through two of the five senses: sight and sound.
2. **The simplest form of virtual reality is a 3-D image** that can be explored interactively at a personal computer, usually by manipulating keys or the mouse so that the content of the image moves in some direction or zooms in or out.

WORLD'S FIRST ARMED AMPHIBIOUS DRONE BOAT

China has successfully tested the world's first armed amphibious drone boat which the Chinese military analysts claimed **could be used in land assault operations** and is capable of forming a combat triad with aerial drones and other drone ships. **Built by Wuchang Shipbuilding Industry Group** under China Shipbuilding Industry Corporation (CSIC), the drone ship, named **Marine Lizard**, successfully passed delivery checks and left

factory on April 8 in Wuhan, capital of Central China's Hubei Province, state-run Global Times reported on 15 April 2019.

What

1. **Having a maximum operation range of 1,200 kms**, the **Marine Lizard** can be remotely controlled via satellites.
2. In ship form, the **12-meter-long Marine Lizard is a trimaran propelled by a diesel-powered hydrojet** and can reach a maximum speed of 50 knots while maintaining stealth.
3. When approaching land, the amphibious drone ship can release four continuous track units hidden under its belly, and travel at 20 kms an hour on land, the daily report quoted an unnamed official as saying. The official said the maximum land speed can be increased if larger track units are installed.
4. With about **USD 178 billion defence budget**, the two million strong Chinese military, the world's largest, has been focussing on developing a range of new weapons in recent years.
5. The **Marine Lizard's payloads include an electro-optical system and a radar system**. In the weapon department, it is equipped with two machine guns and a vertical launching system for anti-ship and anti-aircraft missiles.
6. This amphibious drone boat is suitable for island assault operations as a swarm of such drone ships could lead an attack following a first wave of artillery and air strikes.
7. Approaching land from the sea is a dangerous task, and the Marine Lizard can take advantage of its unmanned nature to discover enemy positions and provide suppressive fire as troops follow.
8. **The drone boat is also a great choice for coastal defence**. The company manager said it can remain dormant on an uninhabited island for up to eight months before engaging in combat once it receives orders.
9. Guided by **China's BeiDou Navigation Satellite System**, the Marine Lizard can cooperate with other battle units in an integrated command system.
10. **Amphibious Marine Lizard** can possibly form an unmanned sea-land-air integrated combat system with aerial armed reconnaissance drones and other drone ships, which can engage in combat with great efficiency and low risk of casualties.

INDIAN WIN AWARDS AT NASA ANNUAL ROVER CHALLENGE

NASA has awarded three teams from India as part of the **US space agency's annual Human Exploration Rover Challenge** which invites high school and college students to build and test roving vehicles for future missions to the Moon, Mars and beyond. The team from KIET Group of Institutions in Ghaziabad, Uttar Pradesh, won the "**AIAA Neil Armstrong Best Design Award**", which recognises systems best designed to meet the Rover Challenge performance requirements.

What

1. **The Mukesh Patel** School of Technology Management and Engineering from Mumbai, Maharashtra, won the "**Frank Joe Sexton Memorial Pit Crew Award**" — for ingenuity and persistence in overcoming problems during the race — as well as the "**System Safety Challenge Award**".
2. A team from Lovely Professional University in Phagwara, Punjab, won the "STEM Engagement Award", presented to the team that best informed others about rocketry and other space-related topics.
3. **Nearly 100 teams took part in the competition**, hailing from a record number of countries, including the US, Bangladesh, Bolivia, Brazil, the Dominican Republic, Egypt, Ethiopia, Germany, Mexico, Morocco and Peru.

4. Indian-American NASA astronaut and two-time spaceflight veteran Sunita Williams attended the second day of the event, interacting with teams and participating in the day's activities.
5. **The International Space Education Institute of Leipzig, Germany, won first place in the high school division** with 91 points; and a team from University of Puerto Rico Mayaguez won the college/university division with 101 points.
6. Teams were awarded points based on the successful navigation of obstacles and completion of tasks. The competition hosted by NASA's Marshall Space Flight Center and held at the US Space & Rocket Center, this year marked 25 years since the inaugural event.