

GURMARG'S PHILOSOPHY

The objective of education is to relate it to life, needs and aspirations of the people and thereby make it a powerful instrument of social, economic and cultural transformation.

Education is cardinal in inculcating values, to provide skills and competencies to the citizens, and in enabling them to contribute to the nation's well-being and world at large; strengthens democracy by empowering citizens; becomes an adhesive for the society, and instrumental in entrenching cosmopolitan values among all.

Education should be a tool for inculcating values like compassion, knowledge, objectivity, skills and thereby aids in leading a quality and wholesome life which contributes in the country's development. Education could prove as a potent weapon in waning a chasm between the society which is as of now divided on the lines of social, economic and political agenda.

A harmony needed to be maintained between nature and human beings and should not be treated as mutually exclusive entities. It is necessary to strike coherence between an individual and nature. And this synergy of man and nature will also be helpful in minimizing the ecological footprint of man due to consumerism. Education should make pupils trailblazers with independent thought only then in true sense we can achieve the goal of liberty.

Human being is a whole one, we cannot think of the mind and body separately. Therefore, an all-round development of the mind can take place only when it proceeds pari passu with the education of the physical and spiritual faculties of a child. According to Gurmarg the fulcrum of education must be based on the values such as – Equity, Quality and Accessibility. The aim and objective of Gurmarg Educare is to create a society with citizens who live joyfully and consciously and can see things objectively without prejudices.

Gurmarg Educare with its UNICUS program tends to make education SUSTAINABLE, we want to empower the students to help create a sustainable society through education. With our vast experience in the education sector, our insights of the parent-teacher- student relationship and the impact it can make if it is moulded in the right manner. UNICUS aims to work at the grass root level of society and make its way up for a better and sustainable tomorrow. UNICUS intricately understands the problem and works towards innovative solutions to create a harmony and revolutionize the way we look at education as a whole.

GURMARG EDUCARE

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Article:1 What is Article 370 and why is it politically significant?

Article 370 of the Constitution is a 'temporary provision' which promises to grant autonomous status to Jammu and Kashmir and limits Parliament's powers to make laws for the state. Under Part XXI of the Constitution titled "Temporary, transitional and special provisions", Article 370 is categorised as a "temporary provision with respect to the State of Jammu and Kashmir".

Notwithstanding anything in the Constitution, the Article limits Parliament's powers to make laws to those matters in the Union and Concurrent Lists, in consultation with the state government, as declared by the President, which should correspond with matters specified under of Instrument of Accession, the statute says. The Jammu and Kashmir Assembly currently stands dissolved.

In effect, Article 370 says that Parliament will need the state government's concurrence for applying any law, except those that fall in the domains of defence, foreign affairs, finance and communications. Issues like ownership of property, fundamental rights and citizenship are covered under a separate law for Jammu and Kashmir.

It also lays down that only two Articles of the Constitution will apply to Jammu and Kashmir – Article 1 which defines India and Article 370 itself. The provision was included in the Constitution on 17 October, 1949.

ARTICLE 370 embodies six special provisions for Jammu and Kashmir.

First, it exempted the State from the provisions of the Constitution providing for the governance of the States. Jammu and Kashmir was allowed to have its own Constitution within the Indian Union.

Second, Parliament's legislative power over the State was restricted to three subjects - defence, external affairs and communications. The President could extend to it other provisions of the Constitution to provide a constitutional framework if they related to the matters specified in the Instrument of Accession. For this, only "consultation" with the State government was required since the State had already accepted them by the Instrument.

But, third, if other "constitutional" provisions or other Union powers were to be extended to Kashmir, the prior "concurrence" of the State government was required.

The fourth feature is that that concurrence was provisional. It had to be ratified by the State's Constituent Assembly. Article 370(2) says clearly: "If the concurrence of the Government of the State... be given before the Constituent Assembly for the purpose of framing the Constitution of the State is convened, it shall be placed before such Assembly for such decision as it may take thereon."

The fifth feature is that the State government's authority to give the "concurrence" lasts only till the State's Constituent Assembly is "convened". It is an "interim" power. Once the Constituent Assembly met, the State government could not give its own "concurrence". Still less, after the Assembly met and dispersed. Moreover, the President cannot exercise his power to extend the Indian Constitution to Kashmir indefinitely. The power has to stop at the point the State's Constituent Assembly drafted the State's Constitution and decided finally what additional subjects to confer on the Union, and what other provisions of the Constitution of India it should get extended to the State, rather than having their counterparts embodied in the State Constitution itself. Once the State's Constituent Assembly had finalised the scheme and dispersed, the President's extending powers ended completely.

The sixth special feature, the last step in the process, is that Article 370(3) empowers the President to make an Order abrogating or amending it. But for this also "the recommendation" of the State's Constituent Assembly "shall be necessary *before* the President issues such a notification".

Why is the Article so important to keep Jammu and Kashmir as a part of India?

- According to the Constitution of India, Article 370 provides temporary provisions to the state of Jammu and Kashmir, granting it special autonomy.
- The article says that the provisions of Article 238, which was omitted from the Constitution in 1956 when Indian states were reorganised, shall not apply to the state of Jammu and Kashmir.
- Dr BR Ambedkar, the principal drafter of the Indian Constitution, had refused to draft Article 370.
- In 1949, the then Prime Minister Jawaharlal Nehru had directed Kashmiri leader Sheikh Abdullah to consult Ambedkar (then law minister) to prepare the draft of a suitable article to be included in the Constitution.
- Article 370 was eventually drafted by Gopaldaswami Ayyangar.
- Ayyangar was a minister without portfolio in the first Union Cabinet of India. He was also a former Diwan to Maharajah Hari Singh of Jammu and Kashmir.
- Article 370 is drafted in Amendment of the Constitution section, in Part XXI, under Temporary and Transitional Provisions.
- The original draft explained "the Government of the State means the person for the time being recognised by the President as the Maharaja of Jammu and Kashmir acting on the advice of the Council of Ministers for the time being in office under the Maharaja's Proclamation dated the fifth day of March, 1948."
- On November 15, 1952, it was changed to "the Government of the State means the person for the time being recognised by the President on the recommendation of the Legislative Assembly of the

State as the Sadr-i-Riyasat (now Governor) of Jammu and Kashmir, acting on the advice of the Council of Ministers of the State for the time being in office."

- Under Article 370 the Indian Parliament cannot increase or reduce the borders of the state.

Abrogation of article 370

Article 370 cannot be abrogated or amended by recourse to the amending provisions of the Constitution which apply to all the other States; namely, Article 368. For, in relation to Kashmir, Article 368 has a proviso which says that no constitutional amendment "shall have effect in relation to the State of Jammu and Kashmir" unless applied by Order of the President under Article 370. That requires the concurrence of the State's government *and ratification by its Constituent Assembly*.

Jammu and Kashmir is mentioned among the States of the Union in the First Schedule as Article 1 (2) requires. But Article 370 (1) (c) says: "The provisions of Article 1 and of this Article shall apply in relation to that State". Article 1 is thus applied to the State through Article 370.

Key changes after amendment :

- The President had used his powers under Article 370 to fundamentally alter the provision, extending all Central laws, instruments and treaties to Kashmir. However, the drastically altered Article 370 will remain on the statute books.
- While the Union Territory of Jammu and Kashmir will have a legislature, the one in Ladakh will not.
- The notification by the president has effectively allowed the entire provisions of the Constitution, with all its amendments, exceptions and modifications, to apply to the area of Jammu and Kashmir.
- The Bill proposes wide powers to the Lieutenant Governor of the proposed Union Territory of Jammu and Kashmir and makes it the "duty" of the Chief Minister of the Union Territory to "communicate" all administrative decisions and proposals of legislation with the LG.
- All Central laws and State laws of J&K would apply to the new Union Territories of J&K and Ladakh.
- Assets and liabilities of J&K and Ladakh would be apportioned on the recommendation of a Central Committee within a year.
- Employees of State public sector undertakings and autonomous bodies would continue in their posts for another year until their allocations are determined.
- The police and public order is to be with the Centre.
- The notification amends the expression "Constituent Assembly", contained in the proviso to clause (3) of Article 370, to mean "Legislative Assembly".

Impact:

1. The tabling of the proposed Reorganisation Bill is also proof that the long reign of the 1954 Order has ended. The 1954 Order had introduced a proviso to Article 3, namely that "no Bill

providing for increasing or diminishing the area of the State of Jammu and Kashmir or altering the name or boundary of that State shall be introduced in Parliament without the consent of the Legislature of that State“. That power of the State Legislature to give prior consent does not exist anymore. This has provided a free hand to the Centre to table the Reorganisation Bill.

2. With the removal of the 1954 Order, the power of the State Legislature ceases to exist and Parliamentary laws, including that of reservation, would apply to Jammu and Kashmir as it does in other parts of the country.
3. The government called this the end of “positive discrimination” and the closing of the “chasm” between residents of J&K and citizens of other parts of the country.
4. The removal of the 1954 Order further also negates a clause which was added to Article 352. The Order had mandated that no proclamation of Emergency on grounds “only of internal disturbance or imminent danger shall have effect” in the State unless with the concurrence of the State government.

Role and powers of the Lieutenant Governor after amendment

The Bill specifies that the Union Territory of Jammu and Kashmir and the Union Territory of Ladakh will have a common Lieutenant Governor.

- Appointment of L-G in Ladakh: The President shall appoint the L-G under article 239. The L-G will be assisted by advisors appointed by the Centre since the Union Territory will not have a Legislative Assembly.
- In the case of Union Territory of Jammu and Kashmir, the L-G shall “act in his discretion” on issues which fall outside the purview of powers conferred on the Legislative Assembly, in which he is required to exercise any judicial functions, and/or matters related to All India services and the Anti-Corruption Bureau
- The Chief Minister shall be appointed by the L-G who will also appoint other ministers with the aid of the CM. The L-G shall also administer the oath of office and of secrecy to ministers and the CM.
- The L-G will have the power to promulgate ordinances which shall have the same force and effect as an act of the Legislative Assembly assented by the L-G.

Is this all legal?

According to the constitution, Article 370 could only be modified with the agreement of the "state government". But there hasn't been much of a state government in Jammu and Kashmir for over a year now. This meant the federal government only had to seek the consent of the governor who imposes its rule.

The government says it is well within its rights to bring in the changes and that similar decisions have been taken by federal governments in the past.

Article 35 A

Article 35A gives the Jammu & Kashmir Legislature full discretionary power to decide who the 'permanent residents' of the state are. It gives them special rights and privileges regarding employment with the state government, acquisition of property in the state, settling in the state, and the right to scholarships and other forms of aid that the state government provides. It also allows the state legislature to impose any restrictions upon persons other than the permanent residents regarding the above.

It was inserted through the Constitution (Application to Jammu and Kashmir) Order, 1954, which was issued by President Rajendra Prasad under Article 370, on the the advice of the Nehru-led Union Government.

When the J&K Constitution was adopted in 1956, it defined a permanent resident as someone who was a state subject on May 14, 1954, or who has been a resident of the state for 10 years, and has lawfully acquired immovable property.

To guarantee these special rights and privileges, the Article says no act of the state legislature that comes under it can be challenged for violating the Constitution or any other laws.

Historical Background

- Article 35A was incorporated into the Constitution in 1954 by order of the then President Rajendra Prasad as advised by the Jawaharlal Nehru Cabinet. This controversial order of 1954 followed the 1952 Delhi Agreement entered into between Nehru and the then Prime Minister of Jammu and Kashmir Sheikh Abdullah, which led to the extension of Indian citizenship to the State subjects of Jammu and Kashmir.
- It was under Article 370 (1) (d) of the constitution that this unique Presidential order was issued. This provision allows the President to make certain exceptions and modifications to the Constitution for the benefit of State subjects of Jammu and Kashmir. In this way, Article 35A was added to the Constitution as a proof of the special consideration the Indian government bestowed upon the permanent residents of Jammu and Kashmir.

Who is a Permanent Resident of J&K?

The issue of the definition of the permanent resident of J&K is at the heart of the controversy surrounding Article 35A. The 1956 Jammu and Kashmir Constitution actually defines a Permanent Resident as one who must be a citizen of India and a state subject on May 14, 1954, or a resident of the state for ten years, and owns immovable property in the state .

Negative Aspects of Article 35A

- It forbids Indian citizens from settling in the state, acquiring immovable properties, seeking employment in the state.
- The critique of this article from the angle of women's rights is equally strong. If a native woman marries a man not holding a permanent resident certificate of Jammu & Kashmir, then she would lose her property right and their children also become ineligible to claim the property of their mother.
- It conflicts with (rather violates) fundamental rights under Articles 14, 19 and 21 of the Constitution
- Critics also allege that Article 35A has catalysed in radicalization and aids separatist ideology.
- Not granting permanent resident status to the West Pakistan refugees is very inhuman and grossly undermines their well-being. It also undermines their faith in the goodness of India as well as its impartial judicial system.
- Article 35A also adversely affects the economic development of the state.

Why scrapping Article 35A would be a bad idea?

- The removal of Article 35A would change the demography of Kashmir. The separatist might fan anti-India feelings in the valley by politically misusing the issue. The hardening of the posture by the separatists will consequently disturb normalcy in the state.
- The removal of Article 35A would also indirectly impact the special provision bestowed upon Mizoram, Nagaland etc. under Article 371.
- It is also alleged that it will lead to erosion of Jammu and Kashmir's autonomy.

How Article 35A is against the “very spirit of oneness of India” as it creates a “class within a class of Indian citizens”?

- It treats non-permanent residents of J&K as ‘second-class’ citizens.
- Non-permanent residents of J&K are not eligible for employment under the State government and are also debarred from contesting elections.
- Meritorious students are denied scholarships and they cannot even seek redress in any court of law.
- Further, the issues of refugees who migrated to J&K during Partition are not treated as ‘State subjects’ under the J&K Constitution.
- It was inserted unconstitutionally, bypassing Article 368 which empowers only Parliament to amend the Constitution.
- The laws enacted in pursuance of Article 35A are ultra vires of the fundamental rights conferred by Part III of the Constitution, especially, and not limited to, Articles 14 (right to equality) and 21 (protection of life).

Challenges ahead for article 370 and 35A:

1. The move will be legally challenged on grounds of procedural infirmities and, more substantively, that it undermines the basic feature of the compact between Delhi and Srinagar that was agreed upon in 1947.
2. Law and order maintenance challenge.
3. The President's power under Article 370 has been used both to create an enabling provision and to exercise it immediately to modify the Order, thereby dispensing with the role envisaged for the State Assembly.
4. While it is true that in 1961 the Supreme Court upheld the President's power to 'modify' the constitutional provisions in applying them to J&K, it is a moot question whether this can be invoked to make such a radical change: a functioning State has now been downgraded and bifurcated into two Union Territories.
5. But beyond the legality, the real test will be on the streets of Srinagar, Jammu and Delhi once the security cordon is lifted from the State.
6. What was unbecoming is the unwillingness to enter into consultation with the mainstream political leaders; in no other State would former Chief Ministers have been dealt with so cavalierly.

International reaction

On the international front, the UN, U.S. and China have rebuffed Pakistan on all fronts in its effort to seek international mediation and intervention in its campaign against New Delhi's recent move. Even Russia is backing India and said that "India's J & K move was carried out within framework of the Indian Constitution."

The biggest blow came from the influential United Arab Emirates, which stated that Kashmir was an internal matter for India, withdrawing any support to raise the issue internationally.

Way forward

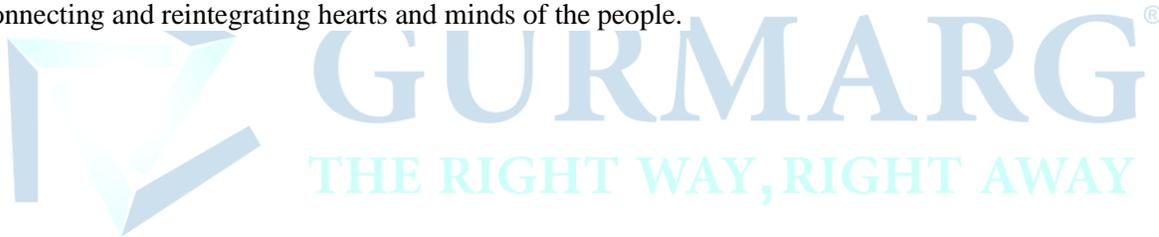
The battle for doing away with 370 was easy. The battle for the hearts and minds (of people) is the larger war to be won. It's not a real estate issue, it's about the welfare of the people that was being compromised by a false sense of autonomy.

India is the only landmass with an unbroken democracy. It is the world's largest, with more voters than people in the EU and US combined. The world now recognizes India's worth as a democratic nation in a dangerous neighbourhood and wants it as an ally. India wants global engagement in its self-interest.

This matter requires the active participation of all stakeholders. It is necessary to give confidence to the residents of J&K that any alteration in status quo will not take away their rights but will boost J&K's prosperity as it will open doors for more investment, resulting in new opportunities.

We must be able to make Kashmiri Muslims understand that all manner of cultural markers over 2500 years of Kashmiri history (right from 500 BCE onwards) display unequivocally a Kashmir that was intensively integrated with the rest of India. In the face of this historical reality of Kashmir, Article 370 as an exclusionary means artificially separating Kashmir from the rest of the country was an anomaly that has now been removed.

We must promote pluralism in the state so that all communities can live together as they did before Pakistani trained militants forced Kashmiri Pandits to leave Kashmir valley. Intra-Kashmiri dialogue, exchanging programs of students, writers, artists to offer their strengths in all the regions will definitely help in reconnecting and reintegrating hearts and minds of the people.



Article: 2 Indian Economic Slowdown:

With an aim to acquire USD five trillion economy status, India has to consistently achieve a minimum of 9% growth rate for next five years. On the other hand economic indicators reflect that the GDP growth of India has gone down to almost 5% in the first quarter of financial year 2019-20. Many sectors that contribute to the Indian Economy's growth path, like Automobile, Real estate, FMCG, Manufacturing, Agriculture are lagging behind in achieving desired growth rate and jobs in these sectors are not only going down but are also trimmed.

Path to become 5 trillion economy

To become a USD five trillion economy in 2025, India must achieve

- USD 3.3 trillion economy status by 2021
- USD 3.6 trillion economy status by 2022
- USD 4.1 trillion economy status by 2023
- USD 4.5 trillion economy status by 2024
- USD 5 trillion economy status in 2025.

However, the current trends and prospects do not favour this dream.

Present Slow Down of Indian Economy:

The GDP growth of Indian Economy has touched the six year low in the first financial quarter of April-June 2020. It touched 5.8% growth in January-March, although in nominal terms India's GDP grew by 7.99% which is also lowest since December 2002.

Key sectors bearing the brunt of Indian Economy slow down are Agriculture, Automobile, Real Estate, FMCG among others.

The \$100 billion **automobile industry** that employs 370 lakh people and contributes 12% to the national GDP, is suffering from huge slow down. Around 3 lakhs jobs are lost, Sales have gone down and the automobile industry appears to be going in reverse gear. The official data released by the **National Statistics Office (NSO)** confirms that. Weaker consumer demand and slowing private investments are the two key factors behind the Indian Economy Slow Down.

Eight core sectors have registered negative growth of just 2.1% in July, compared to 7.3% in the corresponding month last year. According to the **Centre for Monitoring Indian Economy (CMIE)**, the overall unemployment in India has now touched 8.2%, with a high urban figure of 9.4%.

FPIs have pulled out their investments even after the government announced a rollback of enhanced surcharge on FPIs. All the sectors need huge investments and remedial measures to increase the demand to improve and take India out of the state of economic slow down.

Indian Economy, undoubtedly is passing through a sluggish economic growth since 2016 post **demonetization** as compared to earlier years, although efforts are being made to improve the Indian Economy's growth to achieve the rate which may not be considered as very slow.

Government however, is of the opinion that India's economy has a better growth rate amidst global economic slowdown, if we go by the global economic growth standards.

Indian Economy Slow Down: The facts and background

India's Economic growth has slowed for 5 consecutive quarters beginning from late 2015-16 onwards. Now growth is slower than it was in the quarter in which the new government assumed office. It could be serious blow for a government that had promised to turn around the economy through decisive governance.

The economic growth rate is probably the slowest in last many years. However, Indian Economy as per global standard is not in recessionary stage. The UK and the European Union consider an economy in **recession** only when real GDP growth actually turns negative over two consecutive quarters and by this criterion, with a positive growth rate of 5.7%, Indian economy is far off from being in a recession.

All four contributors to economic growth – domestic consumption, foreign consumption or exports, private investment and government spending – are hit by the slowdown.

Causes of Economic slow down

The cause of the problem consists of supply-side shocks. Besides, three important contributors to this problem include

- Demonetisation
- Stressed banking sector,
- GST Implementation
- Problems in Agriculture sector.

The public goods are provided by government and the government needs tax revenues to supply them, and these depend upon national income. Then there is employment. A demand for labour exists only when there is a demand for goods. So growth is necessary if employment is to be assured.

There is not only a pool of unemployed persons in India to absorb but the country also needs to provide employment to youth continuously entering the labour force. The slowing of the economy is a source of

concern as an economy that has been slowing for five quarters is unlikely to turn around quickly. Besides, it may not be able to revive on its own.

No demand - No Investment: A Vicious Circle

Since it is capital formation, or investment, that drives growth in the economy, investment is an immediate source of demand as firms that invest buy goods and services to do so. It also expands the economy's capacity to produce.

The two sources of investment are private and public. The **Private investment** source is depressed as of now due to the factors cited above and is difficult to revive unless some external force is applied for example – tax sops, incentives for investment, creating demand for certain products through public funded projects among others.

When there is no demand, supply has to be stopped due to piling up of stocks and production units go idle, leading to cut in **labour force**. It further reduces the income leading to less demand and further reduction in supply and stopping of production.

Since, investment involves committing funds for a long period under uncertainty, the stepping-up of public investment when private firms are unwilling to invest more is required. Increased public investment increases demand and quicken growth and also encourages private investors, as the market for their goods expands, also public investment means spending by the government which already is facing cash crunch thus worsening the position of the government.

Cyclical or structural slowdown?

A slowdown in consumption demand, decline in manufacturing, inability of the **Insolvency and Bankruptcy Code** to resolve cases in a time-bound manner and rising global trade tension is impacting India

India's real or inflation-adjusted gross domestic product (GDP) grew at 5 per cent in the June 2019 quarter of financial year 2019-20 (Q1FY20), the slowest growth in six years (25 quarters). In nominal terms, the growth stood at 7.99 per cent, lowest since December 2002.

With this, fears of the slowdown being a more structural one than a cyclical one have surfaced.

What is a cyclical slowdown?

A cyclical slowdown is a period of lean economic activity that occurs at regular intervals. Such slowdowns last over the short-to-medium term, and are based on the changes in the business cycle.

What is a structural slowdown?

A structural slowdown, on the other hand, is a more deep-rooted phenomenon that occurs due to a one-off shift from an existing paradigm. The changes, which last over a long-term, are driven by disruptive technologies, changing demographics, and/or change in consumer behaviour.

Is it a temporary phenomenon?

A few of the experts see it as a temporary or technical issue and think that its effects would soon fade out while others view this as a more serious crisis created by a barrage of supply-side shocks to the economy.

However, the crisis is seen as a deep structural issue rather than merely a short-run one. Now the government has to play a key role and understand the economic realities and avoid adventurism in policymaking and implementation.

How can India come out of slow down?

The current macro environment, monetary policy seems to be less effective than fiscal policy as ‘improper transmission mechanism’ fails to pass on benefits to the real economy.

Further rate cuts, increase in fiscal spending, deviation from **fiscal deficit** target, and boost in consumption sentiment are some of the suggestions by analysts to arrest the downtrend. On its part, the RBI has cut the repo rate by 110 basis points so far to 5.4 per cent – its lowest level since 2010.

Other reforms suggested:

More Government Expenditure

Government needs to spend more now to overcome the situation. Although the government has already spent much of its budgeted expenditure, it needs to spend more to spur investment and demand in the economy. An immediate boost without worrying much for consequences is needed by way of spending.

Let Indian Rupee be weaker

Even a weaker Indian rupee should not be a problem. Stronger rupee is hurting both the exports and the business. Imports are surging and they are eating into the domestic market share. India needs growth now, so there is no need for ratings as of now.

Lower Lending rates

The recently announced monetary policy of RBI has not given any relief to boost Indian economy. The economists now advocate a steep rate cut in the benchmark lending rates to allow for monetary policy

expansion. The Reserve Bank needs to cut interest rates for banks, thereby making borrowing cheaper for the industry and spurring investment.

Certainty in Business required

More certainty in the business environment is required. Businesses should be without shocks like demonetisation. In fact, after demonetisation shock, there is an environment of uncertainty in the economy. This stops the Private sector short of announcing the new projects. There should be an environment of certainty that no such disruptive moves would rock the economy in the near term.

No need for excuses: Acknowledge and spend in rural areas

The government needs to spend more on rural areas. Increasing rural people's incomes can drive up the consumption demand, which in turn will boost the industry. To create more demand the Government needs to spend more in rural areas, construction sector and the unorganised sector

World Bank hopeful: Slow down to wane soon

The recent slowdown in India's economic growth is temporary and is an "aberration" mainly due to the temporary disruptions in preparation for the GST. It will get corrected in the coming months. The World Bank President Jim Yong Kim said that the Goods and Services Tax (GST) is going to have a hugely positive impact on the Indian economy.

Accordingly, if the due corrective steps are taken, Indian Economy could come back on rails with a high growth achievement of 9-10%.

Article: 3 National Register of Citizens (NRC)

The National Register of Citizens contains the names of all Indian citizens. Only once before has an NRC been prepared, in 1951. It was first prepared in 1951 following the census of 1951.

Now, it is not linked to the census but one has to link oneself to a family member whose name had appeared either in the NRC of 1951 or to any of the state's electoral rolls prepared till midnight of 24th March 1971.

The National Register of Citizens (NRC) is a register containing names of all genuine Indian citizens. The 1951 NRC list has been updated for Assam, which has had a longstanding foreigner problem, to remove out illegal migrants and save further inflow. Manipur and Tripura were also granted permission to create their own NRCs, but it never materialised. At present, only Assam has such a register.

The exercise may be extended to other states as well. Nagaland is already creating a similar database known as the Register of Indigenous Inhabitants. The Centre is planning to create a National Population Register (NPR), which will contain demographic and biometric details of citizens.

What is the issue?

Assam has a history of being a recipient of large scale immigration from outside. The issue of Bengali speaking outsiders, both Hindus and Muslims, first from East Pakistan and then Bangladesh, has been a long standing problem for the indigenous people of the state.

The indigenous people were alarmed at the large scale of this immigration as it causes huge loss of opportunities and these changes in demographic dimensions will eventually affect state politics. Hence the National Register of Citizens is seen as a tool for the indigenous people to get back the opportunities and for the immigrants to get a citizenship tag and live freely in the state.

Assam Accord

The Assam Accord (1985) was a Memorandum of Settlement (MoS) signed between representatives of the Government of India and the leaders of the Assam Movement in New Delhi on 15 August 1985.

The accord brought an end to the Assam Agitation and paved the way for the leaders of the agitation to form a political party and form a government in the state of Assam soon after.

Some of the key demands were – All those foreigners who had entered Assam between 1951 and 1961 were to be given full citizenship, including the right to vote.

- Those who had done so after 1971 were to be deported; the entrants between 1961 and 1971 were to be denied voting rights for ten years but would enjoy all other rights of citizenship.

- A parallel package for the economic development of Assam, including a second oil refinery, a paper mill and an institute of technology, was also worked out.

The central government also promised to provide 'legislative and administrative safeguards to protect the cultural, social, and linguistic identity and heritage' of the Assamese people.

Though the accord brought an end to the agitation, some of the key clauses are yet to be implemented, which has kept some of the issues festering.

Who is a citizen in Assam?

The Citizenship Act of 1955 was amended after the Assam Accord for all Indian-origin people who came from Bangladesh before January 1, 1966 to be deemed as citizens. Those who came between January 1, 1966 and March 25, 1971 were eligible for citizenship after registering and living in the State for 10 years while those entering after March 25, 1971, were to be deported

NRC timeline through the years

1951: First-ever National Register of Citizens (NRC) of India published .

1979: Anti-foreigners' movement started in Assam .

1980 : All Assam Students Union (AASU) submitted the first memorandum demanding updating of NRC.

August 14, 1985 : Historic Assam Accord was signed .

1990 : AASU submitted modalities to update NRC to Centre as well state government .

1999 : Centre took the first formal decision to update the NRC as per the Assam Accord

2005: The then Prime Minister Manmohan Singh chaired a tripartite meeting between the Centre, Assam government and the AASU where an understanding was reached that steps must be taken towards updating the NRC to fulfil the promises made in the Assam Accord. The modalities for this were approved by the Centre in consultation with the Assam government.

2009: An NGO called Assam Public Works moved the Supreme Court pleading that the names of those migrants who have not been documented should be removed from the voters' list. The NGO requested the court that the process to update the NRC should be started. This is the first instance how the NRC matter reached the Supreme Court.

2013: The Supreme Court directed that the exercise to update NRC should start.

February 2015: Though the Supreme Court had ordered updating the NRC in 2013 to identify bonafide citizens and weed out illegal immigrants, the actual exercise began in February 2015.

December, 2015: Deadline set by the Supreme Court to publish the NRC was missed and since then the apex court has been constantly monitoring the update

December, 2017: The government published the first draft of the NRC.

July, 2018: Assam government releases second NRC draft. Of the 3.29 crore who applied, 2.89 crore were declared genuine citizens. The draft NRC excluded over 40 lakh people.

August, 2018 : The Supreme Court ruled that the Assam NRC was only a draft, and hence it cannot be the basis of any action by any authority against anyone.

December, 2018: This was the deadline for the government to release the final version of NRC. However, the deadline could not be met.

July, 2019: The government was supposed to release the final version of the NRC. It could not and the deadline was extended by a month.

August, 2019: The government released the final version of the NRC, with over 9 lakh people in Assam left out from the list.

Why recent NRC update?

1980's witnessed a range of law and order problems and political uncertainties caused by the anti foreigners movement. There was huge flow of migrants from neighbouring countries. Hence in 1985 , the Central Government and All Assam Students Union (AASU) signed the Assam Accord..

Accordingly , those foreigners who had entered Assam between 1951 and 1961 shall be given full citizenship including right to vote.

The migrants who entered between 1961 and 1971 shall be denied voting rights for 10 years but would enjoy citizenship rights.

People who entered the state without documents after March 24 1971 , will be declared foreigners and were to be deported. However successive governments in the Assam failed to detect and deport illegal migrants.

In 2005 another agreement was signed between the Centre , the Assam government and The All Assam Students Union (AASU) in order to update the NRC that was first published after the 1951 census data. NRC update though stated as a pilot project in some districts was halted after violence in some parts of the state.

In 2009, Assam Public Works (APW), an NGO filed a petition in the supreme court calling for the identification of Bangladeshi foreigners in the state and removal of their names from the voters list.

Thus the recent publication of the updated NRC comes as a result of the Supreme Court order to complete the NRC exercise.

Does exclusion from the list mean declaration of foreigner?

No; those excluded from the list can apply to the foreigners tribunals which are quasi judicial bodies exists under the 1964 law. These people can appeal to these tribunals within 120 days from the release of the list.

If anybody is declared foreigner at foreigners tribunals then he/she can approach to the higher courts. If somebody is declared foreigner by the courts then he/she can be arrested in the detention centre.

Arguments Against NRC

- There are immense humanitarian dimensions involved in making lakhs of people stateless
- The verification requires people rather than officials to extract documents, prove they have strong roots in the state and prove one's nationality . This is not an easy task. So the government is accused of putting the official burden on people.
- It has been tragic for those who may have been genuine citizens who have been left out. It has been most tragic for Muslims of the state who had to live with the fear of being perceived as the outsiders.
- Political players has seen this as an opportunity to expand its own base.
- It remains unknown about what happens to those who are deemed as non citizens. Political campaigns favor deportation.
- Bangladesh has never accepted that they are its citizens or that there is a problem of illegal immigration.
- NRC is in violation of India's neighbourhood first policy because there is a growing fear in Bangladesh that those excluded from NRC will be deported to Bangladesh. It is to be noted that Bangladesh is already at its limits with respect to the use of resources and manpower to host Rohingya refugees.

Arguments favouring NRC

- Most of the pre 1971 immigrants of East Pakistan / Bangladesh origin who have been living all these years with the tag of a foreigner have now found a place in the citizen's register.
- Lakhs of immigrants of various communities have got citizenship tag and they can live freely without fear of stigma and suspicions.
- The people of the state would be able to enjoy their rights in an efficient manner. Also it will help the government in providing efficient governance model and delivering services to the legitimate citizens in a more effective and efficient manner.
- Central government has assured that those left out of the NRC would be able to file claims thus providing adequate opportunities to the people to prove their citizenship.
- The Central and the state government , as well as the Supreme Court have said that this list cannot and will not be the basis of coercive action against anyone who is excluded. Election Commission has also said that their names will not be removed from voter rolls.

Way Forward

It is certain that after all the claims and objections are dealt with , actual number of deletions will be reduced drastically but even then there would be massive number of stateless people.

Therefore , a well coordinated , nationwide move to work out a solution within humanitarian parameters is the need of the hour. But it should never deviate from the ground reality in Assam where immigration and demographic change continue to be a major concern for the indigenous people.

Article:4 Rural Health: Evolution and Way forward

Introduction

Healthcare system in India has a long history with man reference points starting with Ayurveda, around 2500-3000 BC, to the Sir Joseph Bhore Committee Report of 1946 AD.

Since independence in 1947, India has made major strides on many fronts in health sector. A major emphasis on strengthening rural health infrastructure started with setting up the first few Primary Health Centres in Najafgarh (Delhi), Poonamallee (Tamil Nadu) and Singur (West Bengal), under Community Development programme (CDP) in mid 1950s.

India achieved remarkable success on many fronts. While these initiatives need to be commended and celebrated, India needs to be equally aware of existing challenges and explore solutions to make the country a healthy nation.

Key health sector related developments and achievements in India (2002-17)

- **2002 : National Health Policy (NHP-2002)** 2002-03 Universal Health Insurance Scheme (UHS).
- **2005 : National Rural Health Mission (NRHM).**
- **2008 : Rashtriya Swasthya Bima Yojana (RSBY)**
- **2008 : Jan Aushadhi Yojana** (relaunched as Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) in 2016.
- **2008-17 :** State specific social health insurance schemes for specific target populations.
- **2010 :** Report of High Level Expert Group (HLEG) on Universal Health Coverage (UHC).
- **2011 :** India reported last case of Wild Polio Virus.
- **2012 :** Intensive discourses on operationalisation of **Universal Health Coverage (UHC)** in India started.

- **2013** : India is declared polio non-endemic country; **National Urban Health Mission (NUHM)**, with this **NRHM renamed as National Health Mission (NHM)**.
- **2014** : South East Asia region of WHO is declared polio free; **Mission Indradhanush** to increase routine immunisation coverage launched; **National Mental Health Policy (NMHP)** released; High Priority districts (HPDs) for interventions under NRHM in India started.
- **2015** : India validated maternal and neonatal tetanus elimination; Country becomes Yaws free as well 2015-16 Task force on comprehensive primary health care (PHC) in India.
- **2017** : **National Health Policy (NHP-2017)**; **National Mental Healthcare Act**; Report on state specific burden of disease in India.

Key health sector related developments and proposals in India (2017-19)

National level initiatives

- National Health Policy 2017
- Mental Healthcare Act 2017
- HIV/AIDS Act 2017.
- National Nutrition Strategy
- Sustainable Actions for Transforming Human capital (SATH) initiative for Health and Education sector by NITI Aayog.
- 2018- Ayushman Bharat programme (ABP) with components of :
 - (a) Health and Wellness Centres (HWC)
 - (b) Pradhan Mantri Jan Arogya Yojana (PMJAY)
 - (c) Mid-Level Healthcare Providers under HWCs
 - (d) Aspirational District programme for prioritisation of social sector interventions
 - (e) POSHAN Abhiyaan /National Nutrition Mission
 - (f) First State Health Index for India released.
- 2019- NITI Aayog Strategic plan for New India
- 2018-22 Report of Task force on Tribal health in India
- National Medical Commission (NMC) Act
- Community Health providers (CHP) with prescription rights under NMC Act
- Second State Health Index of India released.

Key State specific initiatives:

- Universal Health Coverage (UHC) pilot in Tamil Nadu
- Family Health Centres (FHC) in Kerala
- Karnataka Public Health Policy.
- Uttar Pradesh State Health policy (Draft)

- Launch of Basti Dawakhana, Community Clinics in Telangana
- Kerala State Health policy
- Discourse on the Right to health in Indian states i.e. Rajasthan, Chhattisgarh and Madhya Pradesh
- Formulation of health systems reform/transition committee in Andhra Pradesh.

Key features in recent policy and strategy documents

National Health Policy 2017

- Proposed : Government to be the sole provider of Primary health care services.
- Attention on special populations such as Tribal health.
- Increasing government spending on health to 2.5 percent of Gross Domestic Product (up from 1.15 per cent in 2014-15) by 2025.
- Two-thirds or more government spending on health for primary health care
- State governments to increase spending from 5 percent to 8 percent of state budget.

NITI Aayog strategic plan for new India (2018-22)

Four key thematic areas for health sector:

- Universal health coverage,
- Comprehensive primary health care,
- Human resources for health and Public health care and management.
- Specific initiatives for nutrition, Gender, social determinants of health.

Way Forward

A lot of progress in rural health in India has been achieved, yet there is a long way to go. There is a felt need for building on the ongoing initiatives, starting a few new and bringing convergence.

India clearly needs 'more, better, faster and sustained initiatives for improving health. This should, inter alia, be supplemented by innovation for health sector. There are a few recent **examples such as in Andhra Pradesh**, the provision of kidney services at PHC level resulted in three-fold increase in utilisation of services for renal diseases at district hospital.

In **Family Health Centres (FHC) of Kerala**, elected bodies and representatives in rural settings are taking larger responsibility for health services. These are a few examples of innovation emerging from across the country, which need to be scaled up.

There is immense potential of **digital health technology** in ensuring access to health services in rural areas. Here are a few suggestions for accelerated transformational changes in rural health in India.

Conclusion:

Rural health in India has made progress in terms of services and infrastructure in the last seven decades. The situation has rapidly improved in the last two decades, with period of 2002-2017, arguably being the period of first major health systems reforms since India's Independence.

The period of 2017-19 has many similarities with the period of 2002-05 and has potential to become the second wave of health reforms in India. This is only possible with more, better, faster and sustained approach to rural health, which means more initiatives are implemented, activities and policies are executed in better ways than earlier, initiatives are added and accelerated, with innovations and all these efforts are sustained over time.

A lot more is needed for rural health agenda in India. It is proposed

- To rapidly recruit and post Community Health Providers (CHPs)
- Establish toll-free call number for both curative and diagnostic services
- Make rural health facilities ready for disaster and emergency situations
- Start many small non-health initiatives for big health impact
- Grand convergence of public service delivery in rural India.

This is what would make rural health outcomes better and contribute in achieving commitments of Universal Health Coverage and Sustainable Development Goals in India.

Article: 5 Addressing Rural Poverty: Livelihood Development and Diversification

Introduction

As the Sustainable Development Goals (SDGs) bring out clearly, poverty is multi-dimensional and therefore requires a range of interventions. The challenges of creating poverty-free Rural Clusters.

Non-farm livelihoods and multiple livelihoods are required to make a difference. Recent data points out, half of manufacturing and one-third of the services sector is already part of the Rural Economy. Income and employment through Livelihood Development and diversification is clearly the way forward.

Last 4 years has seen a considerable stepping up of financial resources for improving rural infrastructure and thereby improving the well being of poor households in terms of allocation for programmes of Department of Rural Development. The actual expenditure of Department of Rural Development has more than doubled from 2012-13 to 2017-18.

Additional sources of funds for addressing Rural Poverty during this period:

- The sharing pattern under Programmes for non Himalayan States became 60:40, and 90:10 in Himalayan States, Under Pradhan Mantri Awas Yojana Gramin (PMAY-G), instead of a 75:25 sharing earlier, it became 60:40.
- States started contributing 40% of Pradhan Mantri Gram Sadak Yojana. (PMGSY) funds. This leveraged an additional Rs. 8000 to Rs. 9000 crore of State share each year which were not available earlier with PMGSY. A similar increase happened in Programmes that were brought on 60:40 share from the earlier 75:25, like NSAP, DAY-NRLM, etc.
- From 2017-18, under the Housing Programme, additional resources were mobilized through Extra Budgetary Resources (EBRs) as well.
- The transfer of funds under the 14th Finance Commission awards has also registered a significant increase compared to the allocations earlier under the 13th Finance Commission.

- Another important factor to note is the leveraging of Bank Loans by Women Self Help Groups (SHGs) during this period. A total of Rs. 1.64 lakh crore have been mobilized as Bank Loan by Women Self Help Groups in the last 5 years.

Some of the salient livelihood generating and Income and Employment supporting initiatives over the last 3 years are as follows:

- 143 lakh hectares of land provided benefit of Water Conservation works.
- Nearly 15 lakh farm ponds and 4 lakh wells for irrigation besides a very large number of Water Conservation Community Structures came up during this period.
- Over 6222 Custom Hiring Centres managed by Women Self Help Groups fully functional during this period.
- 11000 Bank Sakhis and 773 Bank Mitras trained as Banking Correspondents (BCs) from among SHG Women.
- 33 lakh women farmers supported under non-chemical based agro ecological interventions.
- 86000 Producer Groups and 126 Agri Producer Companies established.
- 449 vehicles under Aajeevika Gramcen Express Yojana (AGEY) for Rural Transport plying on roads with women drivers.
- Over 9 lakh Solar Lamps assembled by nearly 4000 Women Self Help Group Members in remote regions of Bihar, Uttar Pradesh, Jharkhand, Rajasthan, etc.
- Over 6000 Barefoot Technicians trained and certified.
- 3.54 lakh candidates successfully placed for wage employment under Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) and 12.65 lakh candidates settled for self employment under Rural Self Employment Training Institutes (RSETIs) in the last 4 years.
- 10949 Rural Masons trained and certified under the Housing Programme.

National Institute of Public Finance and Policy (NIPFP) assessed the impact of PMAY Grameen and found that the scheme could have generated about 52.47 crore person days. Of these nearly 20.85 crore are for skilled labour and remaining for unskilled labour.

Role of MGNREGS

The Central Government's commitment to ensure effective implementation of MGNREGS is reflected by the continuous increase in Budget allocation. Total Budget Allocation in FY 2017- 18 was Rs. 55,167 crore which was highest since inception.

The fund utilization (including Central and State share) has also seen a significant increase in comparison to previous financial years. The total expenditure in FY 2017-18 is about Rs. 64,288 crore (Provisional) which is the highest ever since inception.

The person-days generated under MGNREGS in the last 3 years has been in the range of 235 crore every year. This is higher than most years before, indicating how the thrust on durable assets and Individual Beneficiary Schemes (IBSs) has generated a steady demand for MGNREGS.

RURAL Poverty

It is a multi dimensional and there's a need to address it. Efforts over the last few years have been towards convergence of rural initiatives to make a real difference to the well being of rural poor. This have targeted both the povrty of households and poverty of geographies.

Factors related to Poverty of Households

- Lack of education and skills
- Under-nutrition and ill-health
- Lack of employment opportunities
- Assetlessness
- Lack of safe housing
- Limited access to public services
- Clutches of middlemen/corruption/moneylender
- Absence of Social Capital collectives of women/youth/poor households.

Poverty of Geographies

- Low price for produce distress
- Violence/crime
- Unirrigated agri/vagaries of monsoon
- Lack of basic infra-roads, electricity, internet
- Lack of access to markets and jobs
- Lack of non-farm opportunities

Way forward

It is evident from the data and interventions listed above that higher financial resources have been made available for addressing rural poverty over the last few years along with a much higher scale of leverage of bank loans for women Self-Help Groups. These have been contributing to both rise in incomes and employment through diversification and development of livelihoods.

Overall the challenges to rural poverty are being effectively addressed through the range of interventions. Evaluation studies by the Institute of Rural Management Anand (IRMA) have also confirmed increase in incomes, productive assets, and enterprises in villages where Women Self-Help Groups are active under DAY-NRLM.

Studies of Water Conservation works under MGNREGA by the Institute of Economic Growth confirmed increase in income, productivity, acreage, and the water table. Such increases are bound to generate employment on a large scale.

Article: 6 Water is Life

Water is an essential part of our everyday life. Though nearly 70% of the world is covered by water, only about 2.5% of it is freshwater. Even then, just less than 1% of the freshwater is easily accessible in lakes and rivers. Of the remaining freshwater, one-third is underground water supplies or wellsprings, while the other two-thirds are locked away in ice caps or glaciers.

Water is a foundation of life and livelihoods, and is key to sustainable development. Successful water management will serve as a foundation for the achievement of many of the 17 Sustainable Development Goals (SDGs), as well as for SDG 6 – which is to ‘Ensure availability and sustainable management of water and sanitation for all’.

When more people are competing for the same amount of resources, it naturally intensifies the competition. With the world population hitting 7.6 billion and keeps rising, even our water continues to be recycled through the atmosphere and back into our cups, the number of people facing different degrees of water shortage will also increase. Over the last century, the rate of increase in global water use is faster than the rate of world population growth.

The power of water

Access to safe water can protect and save lives, just because it's there. Access to safe water has the power to turn time spent into time saved, when it's close and not hours away. Access to safe water can turn problems into potential: unlocking education, economic prosperity, and improved health.

Despite this, water is becoming a pressing societal and geopolitical issue – in some regions, it is already of critical national concern. ‘Business as usual’ will mean the world will miss water-related SDGs by a wide margin; up to 40% of the world’s population will be living in seriously water-stressed areas by 2035; and the ability of ecosystems to provide fresh water supplies will become increasingly compromised.

What is the world water crisis?

Water scarcity, both natural and of human origin, is the lack of sufficient available water resources to meet the demands within a region. It is a situation where the available potable, unpolluted water within a region is less

than that region's demand. Water scarcity is being driven by two converging phenomena: growing freshwater use and depletion of usable freshwater resources.

Water is essential to life, yet 844 million people in the world - 1 in 9 - lack access to it. According to a report by the **World Economic Forum**, the water crisis is the 4th global risk in terms of impact to society.

"There is a water crisis today. But the crisis is not about having too little water to satisfy our needs. It is a crisis of managing water so badly that billions of people - and the environment - suffer badly."

World Water Vision Report.

There's nothing more essential to life on Earth than water. Yet in different parts of the world people are struggling to access the quantity and quality of water they need.

Without clean, easily accessible water, families and communities are locked in [poverty](#) for generations. Children drop out of school and parents struggle to make a living.

Women and children are worst affected — children because they are more vulnerable to diseases of dirty water and women and girls because they often bear the burden of carrying water for their families for an estimated [200 million hours](#) each day.

With the current state of affairs, correcting measures still can be taken to avoid the crisis to be worsening. There is a increasing awareness that our freshwater resources are limited and need to be protected both in terms of quantity and quality. This water challenge affects not only the water community, but also decision-makers and every human being.

"Water is everybody's business" was one the key messages of the 2nd World Water Forum.

Access to clean water changes everything; it's a stepping-stone to development. When people gain access to clean water, they are better able to practice good hygiene and sanitation. Amazing [progress has been made](#) in making clean drinking water accessible to 2.6 billion people in developing countries from 1990 to 2015. Yet there are still many opportunities to multiply the benefits of clean water through improved sanitation and hygiene education.

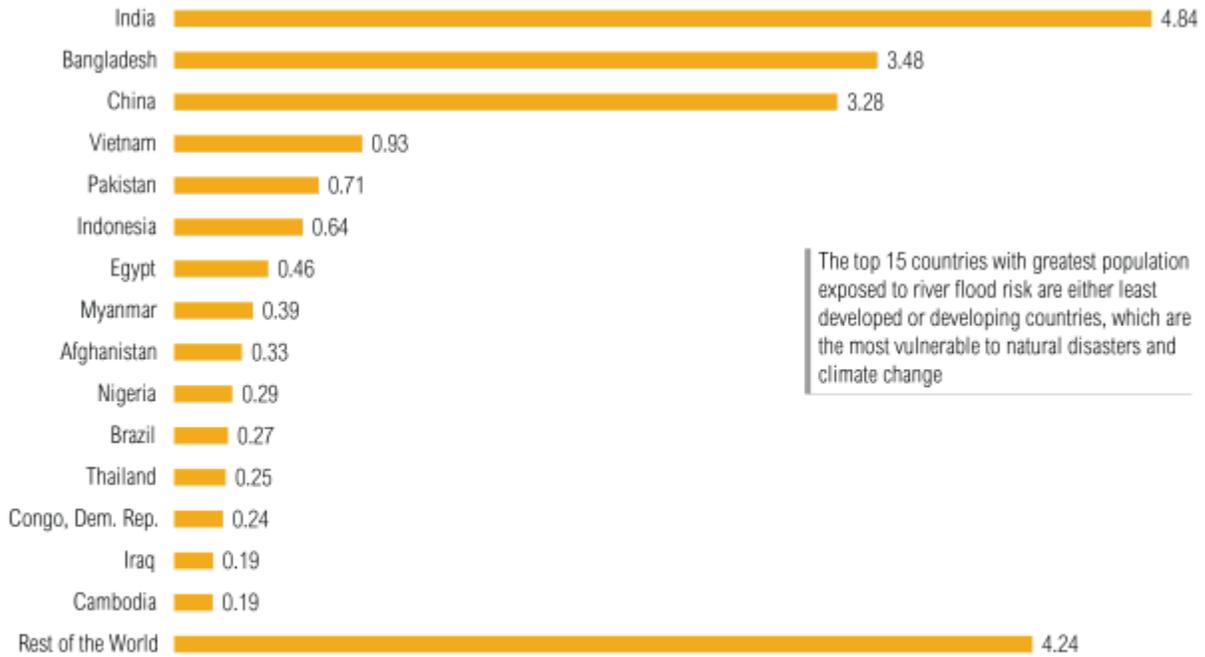
The United Nations recognizes the importance of addressing the global water crisis each year on **World Water Day, March 22**.

Reasons We're Facing a Global Water Crisis

- **We're Changing the Climate, Making Dry Areas Drier and Precipitation More Variable and Extreme.**

Climate change is warming the planet, making the world's hottest geographies even more scorching. At the same time, clouds are moving away from the equator toward the poles, due to a climate-change driven phenomenon called **Hadley Cell expansion**. This deprives equatorial regions like sub-Saharan Africa, the Middle East and Central America of life-giving rainwater.

15 Countries Account for 80% of Population Exposed to River Flood Risk Worldwide



The top 15 countries with greatest population exposed to river flood risk are either least developed or developing countries, which are the most vulnerable to natural disasters and climate change

Annual Expected Population Affected by River Floods (millions)

NOTE An average country-wide flood protection level was assigned for each country based on the country's income level. 2010 population data was used in the analysis.

wri.org/floods

Sources: World Resources Institute 2015; Winsemius, H.C., et al., 2013; Ward, P.J., et al., 2013.

 WORLD RESOURCES INSTITUTE

Paradoxically, climate change is also increasing precipitation in other areas, and people who live near rivers and streams have the most to lose. Currently, at least 21 million people worldwide are at risk of river flooding each year. That number could increase to 54 million by 2030. All countries with the greatest exposure to river floods are least developed or developing countries – which makes them even more vulnerable to climate change and natural disasters.

- **Groundwater is being depleted.**

About 30 percent of Earth's fresh water lies deep underground in aquifers. And it's extracted daily for farming, drinking and industrial processes – often at dangerously unsustainable rates. Nowhere is this more evident than India, which [extracts more groundwater than any other country](#). [54 percent](#) of India's groundwater wells are decreasing, meaning that water is used faster than it's replenished. Unless patterns shift, in 20 years, [60 percent](#) of India's aquifers will be in critical condition.

- **Water Infrastructure Is in a Dismal State of Disrepair.**

Having enough water to go around is only the beginning. That water also needs to be transported, treated, and discharged. Around the world, water infrastructure—treatment plants, pipes, and sewer systems—is in a state of disrepair. Built infrastructure is notoriously expensive to install and repair, meaning that many localities ignore growing infrastructure issues until disaster strikes.

- **Natural Infrastructure Is Being Ignored.**

Healthy ecosystems are "[natural infrastructure](#)" and vital to clean, plentiful water. They filter pollutants, buffer against floods and storms, and regulate water supply. Plants and trees are essential for replenishing groundwater; without them, rainfall will slide across dry land, instead of seeping into the soil. Loss of vegetation from deforestation, overgrazing and urbanization is limiting our natural infrastructure and the benefits that it provides. Forested watersheds around the world are under threat: [watersheds have lost up to 22 percent of their forests in the past 14 years](#).

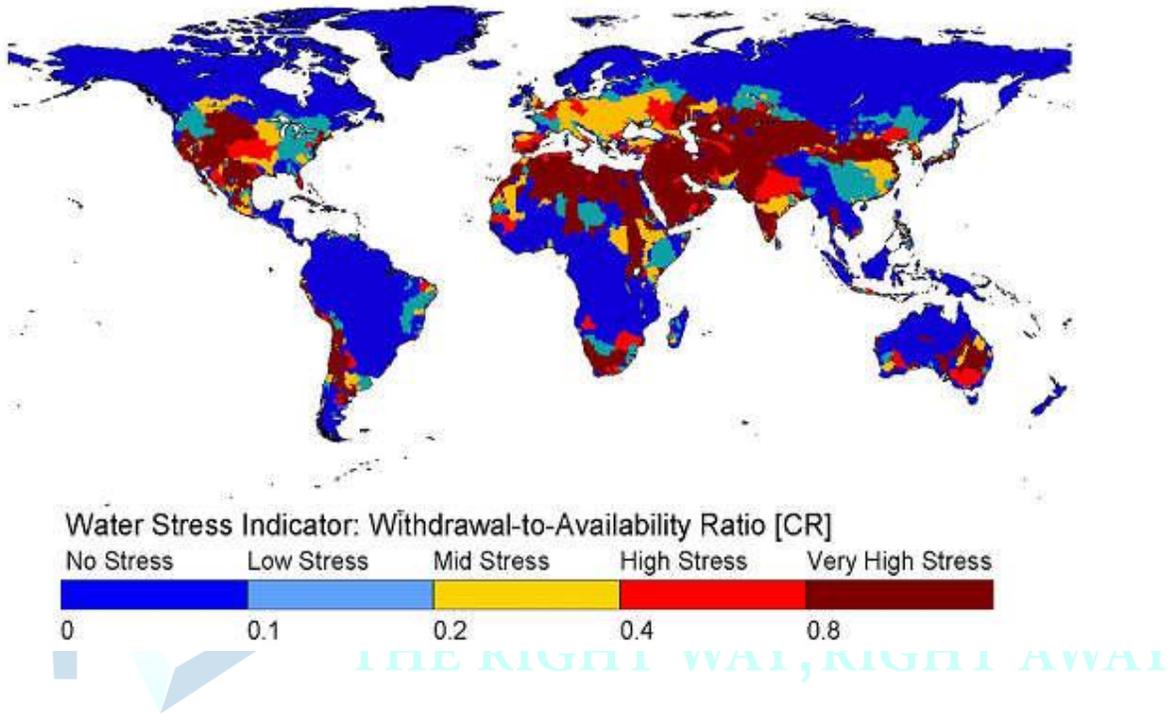
- **Water Is Wasted.**

Although it's true that water is a renewable resource, it's often wasted. Inefficient practices like flood irrigation and [water-intensive wet cooling at thermal power plants](#) use more water than necessary. What's more, as we pollute our available water at an alarming rate, we also fail to treat it. About [80 percent](#) of the world's wastewater is discharged back into nature without further treatment or reuse. In [many countries](#), it's cheaper to receive clean drinking water than to treat and dispose of wastewater, which encourages water waste.

- **The Price Is Wrong.**

Globally, water is seriously undervalued. Its price does not reflect the true, total cost of service, from its transport via infrastructure to its treatment and disposal. This has led to misallocation of water, and a lack of investments in infrastructure and new water technologies that use water more efficiently. When the price of receiving clean water is closer to its actual service cost, [efficient water use will be incentivized](#). It is the poor who often end up paying [disproportionately high prices](#) for water, stunting development.

Water Stress



Water stress results from an imbalance between water use and water resources. The water stress indicator in this map measures the proportion of water withdrawal with respect to total renewable resources. It is a criticality ratio, which implies that water stress depends on the variability of resources. Water stress causes deterioration of fresh water resources in terms of quantity (aquifer over-exploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.) .

Impact of Water Crisis

- **We Are Definitely Facing an Unprecedented Water Crisis :**

Worldwide water use has been steadily increasing since the 1980s, but the actual amount of water we have on Earth stays the same. That's a problem

- **Nearly a Billion People Lack Access to Safe Water**

Globally, 844 million people lack access to safe water, and 2.3 billion live without access to proper sanitation. Without action, the problem will only get worse. According to the United Nations, two-thirds of the world's population is projected to face water scarcity by 2025.

- **Water Scarcity Hits Developing Countries Hardest**

Water scarcity is a worldwide issue but hits developing nations hardest. In some countries in Africa, Asia, and Oceania, less than half the population has access to clean water. **UNICEF** estimates that \$260 is lost every year due to unsafe water and inadequate sanitation in developing countries.

- **The Water Crisis Affects Women and Girls the Most**

In most developing countries, women and children bear the primary responsibility for collecting water. To get enough for their families to survive, many women and girls spend six to eight hours collecting water a day. Globally, 200 million work hours are consumed every day collecting water. In Sub-Saharan Africa alone, fetching water costs women 40 billion hours a year. That time could be used more productively. It's time that women could spend caring for family members or working to earn an income and break out of poverty. It's time that young girls could spend on school or play — luxuries they must often give up to spend time just collecting the water necessary to survive.

- **The Water Crisis Is also a Health Crisis, Especially for Children**

Water, sanitation, and hygiene-related diseases kill nearly 1 million people each year.[3] Parasitic illnesses, such as guinea worm and trachoma, thrive in environments with unsafe water and inadequate sanitation. By some estimates, 80% of all illness in the developing world is related to unsafe water.

Children, with their still-developing immune systems, get hit the hardest by waterborne and sanitation-related illnesses — including diarrhoeal diseases and malaria.

According to **Water.org**, a child dies from a water-related disease every 2 minutes.

These tragedies are preventable. By providing those in need with access to safe water and improved sanitation we can cut the global burden of disease significantly.

- **The Water Crisis Is Solvable**

All of these facts may sound pretty bad, but here is the most important one — the water crisis is solvable. Lack of access to safe water isn't a law of nature; it's simply a matter of logistics, funding, and efficiency. Around the world, numerous individuals and organizations are working to set things right and provide equitable access to safe water and sanitation to all people.

The Return on Investment for Safe Water Is Incredible

The water crisis isn't only solvable — it's one of the most efficient and effective ways to combat poverty. It is estimated that for every \$1 spent on improving access to safe water, it has created \$57 worth of impact.

Some of the world water facts

- At least 1.8 billion people worldwide are estimated to drink water that is faecally contaminated. An even greater number drink water which is delivered through a system without adequate protection against sanitary hazards.
- Almost 900 million people in the world do not have access to clean, safe drinking water, while 2.6 billion live without basic sanitation. Across the globe, more than 6,000 people die each day from diseases caused by dirty water. Most disturbingly, two thirds are children.
- Over 8 out of 10 people who do not use an improved source of drinking water live in rural areas.
- Water is a primary medium through which impacts human activity and the climate impact with the earth's surface. It influences ecosystems, people and society. It is through water and its quality that people will feel the impact of change most strongly.
- The number of people in urban areas without improved sanitation increased by 196 million people between 1990 and 2011 because of urban population growth
- Only 47% of the rural population use improved sanitation. Rural areas lag far behind urban areas where the rate is 80%. Seven out of ten people without improved sanitation live in rural areas.
- Water use has been growing at more than twice the rate of population increase in the last century.
- Globally, diarrhoea is the leading cause of illness and death. It is reported that 88 per cent of diarrhoeal deaths are due to a lack of access to sanitation facilities, together with inadequate availability of water for hygiene and unsafe drinking water
- Reducing the distance to water source from 30 to 15 min increased girl's school attendance by 12%.
- Involving the participation of women can increase the effectiveness of water projects by 6-7 times.
- Nitrate from agriculture is the most common nutrient contaminant in the world's groundwater aquifers
- It is estimated that 80% of sewage in developing countries is discharged untreated directly to water bodies.
- Approximately 3.5 million people die each year due to inadequate water supply, sanitation and hygiene.

Water scarcity prevention

However, the situation isn't as grim as it may seem. There are many ways that we can begin to address global water scarcity and ensure that we have plenty of fresh water now and in the future. The situation is complex, but it isn't hopeless. Water is critical to social and economic development, and directly affects the behaviour of society. With close links between society and water management, the importance of social and economic approaches to management of water scarcity is increasingly being recognized.

The focus is here on the adaptive capacity of societies both for policy making and for conflict resolution to address water scarcity, recognizing the limitations in these adaptive capacities. Social resource scarcity could limit not only capacity to address water scarcity but also have wider social security implications for adaptive processes. There is therefore a need to develop policy options to stimulate adaptive processes and strengthen social resource capacity.

Lessons can be learnt from Israel

In about 10 years, beginning shortly after the new century, Israel went from scarcity of water and fear of drought to abundance and independence from climate conditions. This dramatic change was made possible by the 70 years that preceded it in which a cadre of often brilliant engineers, scientists and policy-makers developed Israel's water-related expertise, technology and infrastructure. A pragmatic water philosophy also evolved from these leaders and visionaries to guide the way for those who would follow

Way forward and solutions for Water Scarcity

Education: There are plenty of opportunities out there that people can use in order to learn more about the world around them. By educating those who are not dealing with water scarcity, they can be in a position to help. Those who are dealing with it can get educated on how they can prevent the problem from becoming even worse in the future.

Recycle Water: There are plenty of technologies out there that allow you to recycle rainwater and other water that you may be using in your home. Consider learning about how you can recycle water. Not only does it help to prevent scarcity, but it can save you some money as well.

Advance Technology Related to Water Conservation: There has been a lot of work in the world of water conservation, but there is also a lot that needs to be done in order to ensure that the rest of the world is able to conserve water. Putting money and effort into conservation could be life saving.

Improve Practices Related to Farming: Farming and irrigation are often a huge culprit when it comes to water scarcity. Because of that, we need to improve practices so that we don't use as much water and those who are using water are using it to its fullest potential. Technology also needs to advance in this manner

Improve Sewage Systems: Clean drinking water starts with a good sewage system. Without proper sanitation, the water in an area becomes ridden with disease and any number of other problems. By improving the sewage systems in these areas, we can prevent water scarcity from becoming any worse.

Support Clean Water Initiatives: There are organizations located all over the world that are looking to bring clean water to areas that don't have it.

Economics

1. Participatory Notes

Investments through participatory notes (P-notes) in the Indian capital registered the third consecutive month-on-month decline.

What are Participatory Notes ?

P-notes are issued by registered foreign portfolio investors (FPIs) to overseas investors who wish to be a part of the Indian stock market without registering themselves directly after going through a due diligence process.

Advantages of participatory notes

- Anonymity: Any entity investing in participatory notes is not required to register with SEBI, whereas all FIIs have to compulsorily get registered. It enables large hedge funds to carry out their operations without disclosing their identity.
- Ease of trading: Trading through participatory notes is easy because they are like contract notes transferable by endorsement and delivery.
- Tax saving: Some of the entities route their investment through participatory notes to take advantage of the tax laws of certain preferred countries.
- P-Notes also aid in saving time and costs associated with direct registrations.

Disadvantages of P-notes

- Because of the anonymous nature of the instrument, the investors could be beyond the reach of Indian regulators.
- P- Notes are being used in money laundering with wealthy Indians, like the promoters of companies, using it to bring back unaccounted funds and to manipulate their stock prices.

2. Marginal Cost of Funds based Lending Rates (MCLR)

All commercial banks announced cuts in MCLR after Reserve Bank of India cut the repo rate by 35 basis points (bps) to 5.40 from 5.75

About MCLR.

- The marginal cost of funds-based lending rate (MCLR) is the minimum interest rate that a bank can lend at.

- MCLR is determined internally by the bank depending on the period left for the repayment of a loan.
- The RBI introduced the MCLR methodology for fixing interest rates from 1 April 2016. It replaced the base rate structure, which had been in place since July 2010.
- Under the MCLR regime, banks are free to offer all categories of loans on fixed or floating interest rates.

How is MCLR different from Base Rate?

MCLR is an improved version of the base rate. It is a risk-based approach to determine the final lending rate for borrowers. It considers unique factors like the marginal cost of funds instead of the overall cost of funds. The marginal cost takes into account the repo rate, which did not form part of the base rate.

3. MGNREGA wages linked with Inflation

The central government plans to link Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme by linking wages under the Act to an updated inflation index.

About MGNREGA

- It is believed that MGNREGA wages have increased the cash flow in rural economy and has led to rural inflation.
- The national average wage of an MGNREGA worker is 178.44 per day, less than half of the 375 per day minimum wage recommended by a Labour Ministry panel in 2018.
- The Ministry of Statistics and Programme Implementation and the Labour Bureau are updating the consumer price indices for rural areas (CPI-R) and agricultural labourers (CPI-AL) and MGNREGA wages will be added to it.

MGNREGA provisions

- It gives legal guarantee of wage employment to the adult members of rural households who are willing to do unskilled manual labour subject to a maximum of 100 days per household
- Every rural household has the right to register under MGNREGA
- Job cards issued to every household registered under MGNREGA
- The registered job card holders can seek employment by giving a group / individual application
- The village community has the right to choose works under 8 permissible categories of works
- The works proposed by the village community cannot be altered by anyone unless they are not in conformity with the guidelines of MGNREGA

- Equal payment Of wages for men and women and wages are to be paid within a fortnight
- 1/3 beneficiaries should be women
- Social Audit is a must for all the works implemented under NREGA.
- Provisions of RTI Act are applicable to ensure transparency and accountability in MGNREGA scheme
- The office of the Ombudsman is vested with powers to redress grievances under MGNREGA

Issues with MGNREGA

- This populist scheme helped raise wages without raising productivity.
- MGNREGA has contributed more to inflation than to rural wealth..
- Lack of adequate financial allocation, pending liabilities and low wages have dogged the programme over years.
- About 20% of the Budget allocation in each of the last five years is of pending wage liabilities from previous years. This is a possible challenge for reviving the rural economy in real sense.

Advantages of MGNREGA

- MGNREGA has helped dent poverty, reduced distress migration and raised the bargaining power of rural labourers, especially among lower castes and women, the biggest beneficiaries of the programme.
- A study by the National Council of Applied Economic Research (NCAER) found that the MGNREGS has reduced poverty overall by up to 32% and has prevented 14 million people from falling into poverty.
- MGNREGS is effectively a conditional cash-transfer programme. The condition is that the beneficiary has to work manually which immediately rules out the rich and the middle class. Therefore it is an important scheme that achieves inclusive development.

4. CHALLENGES FOR INDIAN TEXTILE INDUSTRY

India's textile and apparel exports have declined from \$38.60 billion in 2014 to \$37.12 billion in 2018.

Facts about the textile sector : India is

- The largest producer of cotton and jute in the world.
- Second largest exporter of cotton in the world.
- Second largest exporter of textile and apparels.
- Textile Industry is the second largest employment provider in India.

Factors affecting Indian textile industry

- **Impact of MSP on cost of raw materials:** Once the cheapest in the world, cotton yarn produced in India is now among the most expensive in the world due to a 28 per cent rise per year in the minimum support price.
- **Changing cropping pattern:** Because of climate change and uncertainty of Indian monsoon, the farmers in cotton growing areas of Maharashtra and Gujarat are now looking towards alternative crops which are resulting into decrease in cotton production area
- **Declining share of exports:** The time taken by the industry to align to the new goods and services tax (GST) regime, downward revision of export incentives, and the credit squeeze particularly faced by small and medium enterprises adversely impacted exports.
- **Global competition:** India faces competition from countries like Bangladesh which have competitive manufacturing costs and enjoy duty-free access to major textiles and apparel markets like Europe. According to an analysis, India is projected to lose market share to Bangladesh and Vietnam for ready-made garment exports to the European Union (EU).
- **Recent economic slowdown:** The recent slowdown in global demand has increased competition in the markets, which also coincided with taxation changes in India resulted in 6-7% impact on costs, which hurted profitability of garment makers.

Major government initiatives:

- **Technology Upgradation Fund Scheme:** A one-time capital subsidy for eligible benchmarked machinery.
- **Integrated Skill Development Scheme:** To enable the textile processing sector in meeting environmental standards through appropriate technology.
- Infrastructure Development Schemes for Integrated Textile Parks, (SITP), Integrated Processing Development and Mega Textile Clusters.
- **Silk Samagra Scheme:** To promote R&D and enhance brand image of Indian silk globally.
- 10% to 20% increase in basic customs duty for 501 textile products, to boost indigenous production.
- **Amended Technology Upgradation Fund Scheme (ATUFS):** to promote ease of doing business in the country and achieve the vision of generating employment and promoting exports by way of technology upgradation in textile sector through “Make in India” with "Zero effect and Zero defect"
- National Handloom Development Programme and National Handicrafts Development Programme: These programmes aim at holistic development of handloom and handicrafts clusters through integrated approach.

What need to be done?

- **Diversification of exports** : Therefore India needs to diversify its fibre base as global consumption is diversified. India should focus on diversifying exports into countries such as Japan, Israel, South Africa and Hong Kong.
- **Skill development and adoption of technology** : Textile industry needs to give major thrust to skill development, and should adopt Industry 4.0. The industry also needs to adopt lean manufacturing systems and technological upgradations to remain globally competitive.
- Focusing on technical textiles: India should focus more on technical textiles which are textiles for
 - Automotive applications
 - Medical textiles
 - Geotextiles
 - Agro textiles
 - Protective clothing (e.g., heat and radiation protection for fire fighter clothing)
- **Consolidation with MSME sector** : Textile industry should consolidate MSME sector by establishing Hubs and Spoke model of cluster development facilities.
- **Robust database** : As data collection remains an issue since the majority of the sector remains concentrated in small and micro units there is need to create a database of total jobs in the sector.
- **Reengineering of Existing Schemes and Policies** : For the scale and growth momentum of the textile industry, all the schemes related need to be scaled up substantially. They also need re-engineering and re-calibration to suit the ambitious goals being adopted.
- **Attract Investment into the Sector** : To attract more investment in this sector, Investments need to be adequately incentivised through maintenance of a competitive exchange rate. Lowering the cost of production and the cost of logistics should be given highest priority.

The future for the Indian textile industry looks promising, driven by both strong domestic consumption as well as export demand. Therefore with robust government policy interventions India can enlarge its presence in the global competitive market.

5. Bank merger

The government announced four mergers among public sector banks (PSBs). It involves 10 banks and reduces the total number of state-owned banks to 12.

About the merger

- There are four new sets of mergers — Punjab National Bank, Oriental Bank of Commerce and United Bank of India to merge to form the country's second-largest lender.
- Canara Bank and Syndicate Bank to amalgamate; Union Bank of India to acquire Andhra Bank and Corporation Bank; and Indian Bank to merge with Allahabad Bank.
- The biggest merger out of the four was Oriental Bank of Commerce and United Bank merging into Punjab National Bank to create a second largest state-owned bank with Rs 17.95 lakh crore business and 11,437 branches.

Why merge PSBs?

- According to the government, banks have been merged on the basis of likely operating efficiencies, better usage of equity and their technological platform.
- But the move marks a departure from the plan to privatize some of the banks or bringing in a strategic investors to usher in reform in the sector.
- The government, after consultations, decided that amalgamation is the “best route” to achieve banking sector scale and to support the target of achieving a \$5 trillion economic size for India in five years.
- The amalgamations will help banks to meaningfully scale up operations but will not lead to any immediate improvement in their credit metrics.

Importance of Mergers

- M Narasimham Committee have recommended that India should have fewer but bigger and better-managed banks to ensure optimal use of capital, efficiency, wider reach and greater profitability.
- Rather than having several of its own banks competing for the same customer it would make sense to have large-sized banks.
- Such an entity will then be able to respond better to emerging market trends .
- Big banks in terms of market share and assets would be able to compete globally and improve their operational efficiency.

How does it help the government?

- By reducing the number of banks, the government hopes that the demands for capital infusion will be lower progressively with increased efficiencies and with more well capitalised banks.
- It will also help that the government can focus now on fewer banks than in the past.

Wil it improve efficiencies

- It is credit positive as it enables the entities to meaningfully improve scale of operations and help to improve their competitive position.
- Also there will not be any immediate improvement in their credit efficiencies as all of them have relatively weak solvency profiles.
- Also the merged banks are on similar technology platform, the integration should be smoother..

6. Automatic Exchange of Information Regime (AEOI)

Automatic exchange of information is to be carried out under the Common Reporting Standard (CRS), the global reporting standard for such exchange of information. It takes care of aspects such as confidentiality rules and data safeguards.

The Common Reporting System has been developed by the Organisation for Economic Cooperation and Development (OECD).

Under the agreement, India will not receive information on bank accounts prior to 2018. Also both jurisdictions will inform each other of any relevant developments in respect to the implementation of the OECD Common Reporting Standard in their respective domestic laws.

Each jurisdiction confirms that it has informed the other jurisdiction about the modalities made available to persons making a voluntary disclosure of their financial assets.

Benefits of the regime

- It is likely to shed more light on the wealth Indians have stashed away in Swiss bank accounts, for so long governed by strict local rules of secrecy.
- It is a significant step in the government's fight against black money and the era of "Swiss bank secrecy" will finally be over.

7. India's longest electrified railway tunnel

Country's longest electrified rail tunnel between Cherlopalli and Rapuru and the electrified railway line between Venkatachalam and Obulavaripalli.

About the tunnel

- The 6.7-km-long tunnel is an "engineering marvel" and said it would provide viable rail connectivity between the Krishnapatnam Port and the hinterland for the seamless movement of freight.

- It also reduces the distance for trains coming from Guntakal Division to Krishnapatnam by 72 km.

8. Global Economic Slowdown

Background

The economic situation around the world is rather grim. From synchronized global growth in the first half of 2017, we are now in the midst of a synchronized slowdown exacerbated by the US-China trade war.

What is the issue

- Large parts of the world are starting from negative interest rates.
- This means that monetary policy stimulus as a method to combat the slowdown is rendered largely ineffective
- The choice is to use fiscal expansion to counter the slowdown.
- Also the economies cantake the impact of the slowdown without too much of a cushion, but democracies are ill-equipped to deal with the negative political reaction to prolonged recessions.

Way ahead

- India can use the opportunity to undertake structural reforms.
- Reforms must focus on factor markets and on the ease of conducting business
- The stimulus should take the form of government infrastructure investment and incentivization of the private sector to invest funds.
- Low oil prices, good global growth, and moderate inflation are such oppurtunities.
- India's medium-term economic growth be supported by favorable demographics.
- In the short-term government may not undertake deep structural reforms that may impact growth and employment.

9. Facebook announced Cryptocurrency Libra

Facebook announced launching a cryptocurrency called Libra, designed to appeal to its global user base of over 2 billion.

Libra

- It will be backed by a basket of fiat currencies.
- It is supported by a consortium of large-scale corporate houses, financial services firms, and venture capitalists.

10. “Reducing Food Loss and Waste” Report

A new report published by the World Resources Institute (WRI) with the support of the Rockefeller Foundation. It has quantified global food wastage. It put forward a Global Action Agenda that calls on governments, companies, farmers and consumers to collectively overcome “the world’s food loss and waste problem.”

Globally uneaten food

- Nearly one-third of the food that is produced each year goes uneaten, costing the global economy over \$940 billion.
- The uneaten food is responsible for emitting about 8 per cent of planet-warming greenhouse gases into the atmosphere, said the report.

11. Travel and Tourism Competitive Index

A report released by the **World Economic Forum (WEF)** ranking the travel & tourism competitiveness of 140 economies.

About the Index

- Published biennially by WEF, Travel & Tourism Competitiveness Report and Index benchmarks the Travel & Tourism (T&T) competitiveness of 140 economies.
- The study scored countries on four indicators —
 - Enabling environment;
 - Travel and tourism policy
 - Enabling conditions;
 - Infrastructure; natural and cultural rankings.

India’s progress

- India has made the greatest improvement since 2017 among the top 25 per cent of the countries that were previously ranked.
- Overall, India is ranked 34, up six places from 2017.
- India’s highest improvement was in enabling environment, by 10 places to 98.
- The least improvement is in infrastructure as well as in natural and cultural rankings

Global

- Spain, France, Germany, Japan and the United States are the world’s most travel-ready nations.

- Japan remains Asia's most competitive travel and tourism economy, ranking 4th globally.
- China is the largest travel and tourism economy in Asia-Pacific and 13th most competitive globally.

12. External benchmark based lending

The RBI has made it mandatory for all banks to link floating rate loans — to retail customers and loans to micro, small and medium enterprises (MSME) — to an external benchmark.

Some banks have already started to link home and auto loan rates to the repo rate, which is an external benchmark. Banks can choose from one of the four external benchmarks — repo rate, three-month treasury bill yield, six-month treasury bill yield or any other benchmark interest rate.

The interest rate under external benchmark shall be reset at least once in three months.

13. Market Intervention Price scheme

MIP is a price support mechanism implemented on the request of State Governments for procurement of perishable and horticultural commodities in the event of a fall in market prices.

About the scheme

- The Scheme is implemented when there is at least 10% increase in production or 10% decrease in the ruling rates over the previous normal year.
- MIP works in a similar fashion to Minimum Support Price based procurement mechanism for food grains, but is an adhoc mechanism.
- The objective is to protect the growers of these horticultural/agricultural commodities from making distress sale in the event of bumper crop during the peak arrival period when prices fall to very low level.
- Thus it provides remunerative prices to the farmers in case of glut in production and fall in prices.

Implementation of MIS

- The Department of Agriculture & Cooperation is implementing the scheme.
- Under MIP, funds are not allocated to the States. Instead, central share of losses as per the guidelines of MIP is released to the State Governments/UTs, for which MIP has been approved, based on specific proposals received from them.

14. RBI report on Loan Waivers Impact

Highlights of the report

- Report shows how farm loan waivers affected state finances and urged governments — both central and state — to avoid resorting to farm loan waivers.
- This was done for a variety of reasons including relieving distressed farmers struggling with lower incomes in the wake of repeated droughts and demonetization.
- Also crucial in this regard was the timing of elections and several observers of the economy including the RBI warned against the use of farm loan waivers.

Impact on economic growth

- A farm loan waiver implies that the government settles the private debt that a farmer owes to a bank.
- This affects the government's resources, which leads to one of following two things
 - The government's fiscal deficit goes up
 - It has to cut down its expenditure.
- A higher fiscal deficit implies that the amount of money available for lending to private businesses will be lower.
- Also the cost at which this money would be lent (or the interest rate) would be higher. If the credit is costly, there will be fewer new companies, and less job creation.

Overall impact

Farm loan waivers are not considered prudent because they hurt overall economic growth and also ruins the credit culture in the economy.

They incentivise defaulters and penalise those who pay back their loans.

15. Disinvestment challenges and Way ahead

The government is drawing up plans to sell its stake in several state-run companies as part of its disinvestment programme for this financial year.

Disinvestment

- Several companies have been identified for the sale of minority stakes.
- Some companies for strategic disinvestment—where the government reduces its ownership to a minority holding.

Need for disinvestment

- Of the ₹1.05 trillion disinvestment target set for 2019-20, only 12%, has been raised so far.

- The government could anyways engineer one state-run company to buy the stake of another—like the ONGC-HPCL deal last year. But such a strategy could erode the agenda’s credibility.
- It’s best if disinvestment is done to achieve efficiency aims.
- Firms that would perform better in private hands than the public should be allowed to change owners.

Making Disinvestments work

- For better price realizations on shares, the government may be tempted to wait for market conditions to improve.
- The government should resist imposing conditions that make stake sales unattractive. A strategic buyer of a firm would need a free hand to reorganize operations as it deems fit.
- Disinvestment process demands clarity on its main goal. It needs to be made investor-friendly.
- Some state-owned companies need to be privatized outright, with no strings attached.
- The assurance that the government would cease to exert control may be necessary for prospective buyers to see value in taking over. .
- The successful sale of a high-profile profit maker could even generate enthusiasm for the entire programme.

Way ahead

- “The government has no business being in business”. The state should focus on governance and not on activities that private parties are better equipped to handle.
- Companies that are vital to the state’s strategic interests cannot be sold off. But most businesses owned by the government surely can.

16. Bharat Bill Payment System (BBPS)

The RBI has expanded the scope of the Bharat Bill Payment System (BBPS) by adding other categories of recurring payments through the portal.

About BBPS

- Launched by the National Payment Corporation of India on 31 August 2016 under the recommendation of RBI executive director G. Padmanabhan committee.
- The platform allows customers across the country to use one single website or outlet to pay all their bills with reliability and safety of transactions.
- BBPS payments can be made using cash, cheques as well as through digital methods such as internet banking, debit, credit card, among others.

17. Foreign Contribution (Regulation) Act (FCRA)

Government of India enacted the Foreign Contribution (Regulation) Act (FCRA) in the year 1976. It aims to prohibit funding for any activities detrimental to the national interest and for matters connected therewith.

Objective of regulating the acceptance and utilization of foreign contribution.

The act was majorly modified in 2010 with several amendments because many NGOs were found using illegal use of foreign funding.

Scope is to regulate the acceptance and utilisation of foreign contribution or foreign hospitality by certain individuals or associations or companies.

New FCRA Rules

In a notification, the ministry announced the changes in the Foreign Contribution (Regulation) Rules, 2011, which include that individuals need not declare personal gifts to the tune of ₹1 lakh anymore.

18. World Digital Competitiveness Ranking (WDCR) 2019

India has advanced four places to 44th position in terms of digital competitiveness in the world.

By : IMD World Competitiveness Center, It measures the capacity and readiness of 63 nations to adopt and explore digital technologies as a key driver for economic transformation in business, government and wider society.

To evaluate an economy, WDCR examines three factors:

- Knowledge: the capacity to understand and learn the new technologies;
- Technology: the competence to develop new digital innovations; and
- Future readiness: the preparedness for the coming developments.

Global scenario

- The US was ranked as the world's most digitally competitive economy, followed by Singapore in the second place.
- The largest jump in the overall ranking was registered by China, moving from 30th to 22nd, and Indonesia, from 62nd to 56th.

19. The Disinvestment Program in India To bring down its equity shares in all non-strategic Public sector enterprises to 26 percent or lower. The government has adopted route of disinvestment which involves the sale of the public sector equity to the private sector.

Types of Disinvestment Methods in India

Minority Disinvestment

A minority disinvestment is one such that, at the end of it, the government retains a majority stake in the company, typically greater than 51%, thus ensuring management control.

Majority Disinvestment

A majority disinvestment is one in which the government, post disinvestment, retains a minority stake in the company i.e. it sells off a majority stake. It is also called Strategic Disinvestment.

Complete Privatisation

Complete privatisation is a form of majority disinvestment wherein 100% control of the company is passed on to a buyer.

20. Gig Economy

It is a type of economy where temporary, flexible jobs are common and companies tend toward hiring independent contractors and freelancers instead of full-time employees. It undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career.

Benefits

- It can benefit workers, businesses, and consumers by making work more adaptable to the needs of the moment and demand for flexible lifestyles.

Negatives

- It can have downsides due to the erosion of traditional economic relationships between workers, businesses, and clients

21. Corporate tax rate.

The government has issued an ordinance to reduce the corporate tax rate for domestic firms and new manufacturing units by 10 to 12 percentage points, effectively bringing India's tax rates on par with its competing Asian peers.

Tax rate changes

- The government has slashed the corporate income tax rate from 30 percent to 22 percent for all companies. Inclusive of cess and surcharges the effective corporate tax rate in India now comes down to corporate tax to 25.17 per cent.
- Newer companies, set up after October 1, 2019, will be subjected to an even lower effective tax rate of 17 percent.
- The new rates bring India closer, in some cases lower, to the rates prevalent in many of the emerging and industrialised countries.
- The new corporate income tax rates in India will be lower than USA (27 percent), Japan (30.62 percent), Brazil (34 percent), and Germany (30 percent) and is similar to China (25 percent) and Korea (25 percent).

Benefits of corporate tax rate cut

- The companies will have more with itself to invest or pass on to consumers through price cuts.
- It will benefit new firms as they now will be taxed at 15 per cent.
- The present tax cut can help revive economy, boost tax collections and compensate for the loss of revenue.
- The big boost to shareholder value
- Increased competitiveness of India at the global stage by making Indian corporate tax rates comparable to that of rates in East Asia. This will help attract investors from across the globe as lower tax will help to increase the share of profit.
- More investors and expansion opportunities will generate more employment and will help increase the purchasing power of the people thereby boosting sales.
- Beneficial for government initiatives like Make in India, Startup India etc. which had taken a hit in the past couple of years.

Issues surrounding the corporate tax rate cut

- The government cannot rely on a tax cut alone, and needs a monetary boost through further policy rate cuts and greater government spending to boost the economy
- Yearly revenue loss of 1.45 lakh crores to the government. The negative effects of this widening fiscal deficit on borrowing costs and bond market cannot be ignored
- Much of the tax cut may go into savings rather than investments.

Environment

Environment

1. A polar region we must keep on the radar in a multipolar world

US president offers to buy Greenland is indicative of the emerging geopolitics of the Arctic region. Climate change and China are fast destabilizing the status quo and throwing up political, security, legal, and environmental challenges.

The next few decades could see the Arctic emerge as a hotspot of great power competition.

Background

- Rising global temperatures are causing the frozen Arctic ocean to melt, opening up new sea routes and opportunities to extract hydrocarbons and minerals from the seabed and the newly exposed land surfaces.
- China declared itself a “near Arctic” country and is making determined efforts to extend its footprint in the polar region.

Arctic politics

- Eight Arctic countries – Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the US. There are overlapping territorial claims among them.
- They have formed the Arctic Council to institutionalize their self-assigned rights, but many in China, the European Union, India are against conceding sovereignty to the Arctic countries.
- Russia, Canada and Denmark are all claimants to the ownership of the Arctic pole.
- Russia is both building up its military capabilities in the region and promoting the Northern Sea Route (NSR) as a new artery of global shipping.
- Russia announced that it will impose rules on commercial and naval vessels using the route.
- China has declared that it wants to be a polar great power.
- Russia is keen for India to get involved in the Russian Far East and the Arctic.

Indian position

- Till now, India’s involvement in the Arctic has centred around scientific and environmental studies, mostly in partnership with Norway.
- Indian and Russian energy companies have signed agreements worth billions of dollars on exploration and joint production.

2. Project REPLAN (Reducing Plastic in Nature)

Khadi and Village Industries Commission as part of its commitment to Swachh Bharat Abhiyaan, had started manufacturing of plastic-mixed handmade paper under its project REPLAN.

3. e-Vehicle batteries

NITI Aayog, proposed to ban the sale of all internal combustion engine (ICE) powered three-wheelers post March 2023. It also suggested that all new two-wheelers below 150cc sold after March 2025 should be electric.

The automobile industry had objected to the proposal and called for a practical approach in framing EV-related policies.

Where does India stand on EV adoption?

- EV adoption in India will be driven by two-wheelers because India's mobility market is driven more by two wheelers.
- As per data, 79% of vehicles on Indian roads are two-wheelers.
- India needs to manufacture Li-ion cells in-house. As of now cells are imported and "assembled" into batteries.

4. ANDREX PROJECT (Antarctic Deep water Rates of Export)

Scientists made a new discovery challenging the previous understanding of the link between the Southern Ocean next to Antarctica and the atmospheric carbon dioxide levels.

ANDREX Project

- Researchers studied the ocean circulation and carbon concentration of the Weddell Gyre, a region lying east of the Antarctic Peninsula.
- The team studied data collected as part of the **ANDREX** which measured the physical, biological, and chemical properties of the waters in the gyre between 2008 and 2010.

Southern Ocean in CO2 absorption

- The Southern Ocean plays a critical role in how the carbon dioxide is taken out of the atmosphere.
- It helps scientists understand its role during dramatic climate transitions in the past, such as the ice ages, and better predict the current and future climate change.

5. Ethanol Blended Petrol (EBP) Programme

The Union Cabinet has approved a higher procurement price for ethanol purchased by oil marketing companies for the ethanol blended petrol programme.

About the Programme

- Launched in January, 2003 for supply of 5% ethanol blended Petrol.
- It sought to promote the use of alternative and environment friendly fuels to reduce import dependency for energy requirements.

OMCs are advised to continue according priority of ethanol from

- Sugarcane juice/sugar/sugar syrup
- B-heavy molasses
- C-heavy molasses
- Damaged food grains/other sources.

This programme has been extended to whole of India except UTs of Andaman Nicobar and Lakshadweep islands and Oil Marketing Companies sell petrol blended with ethanol up to 10%.

6. India' Climate Score : High on vulnerability , low on resilience

By: HSBC's 2018 assessment of India ranks it as the country most vulnerable to climate change.

India – vulnerability

- A number of Indian States have experienced extreme heatwaves in the past three years, and Delhi recently recorded a temperature of 48°C, its hottest day in 21 years.
- India's exposure to climate hazards is heightened by the location of its coastline in the Indian Ocean, Bay of Bengal and the Arabian Sea.
- India also has a high population density located in the danger zone
- Increasing temperatures and changing seasonal rainfall patterns are aggravating droughts and hurting agriculture across the country.

Importance of resilience

- India must boost its coastal and inland defences.
- It needs to do more to build resilience in the sectors of agriculture, fisheries, manufacturing, energy, transport, health, and education.

- The spending at the national and State levels for disaster management needs to rise.
- Adequate resources must also be allocated for implementing climate action plans that most States have now prepared.
- India should replace fossil fuels with renewable energy.

7. India's Plastic Waste

PM called for a movement to eliminate single-use plastic in India, beginning on Gandhi Jayanti. The move is part of drive against Single-Use Plastic, under the term “Shramdaan”.

Single-use plastic

- Single-use plastics (SUPs) are those that are discarded after one-time use..

Plastic Waste in India

- Per capita consumption of plastic is projected to go up.
- Even after the Plastic Waste Management (PWM) Rules, 2016, most cities and towns are not prepared to implement its provisions.
- There has been under-reporting of the true extent of plastic waste.

Plastic waste management

- The Plastic Waste Management Rules, 2016 notified by the Centre called for a ban on “non-recyclable and multi-layered” packaging, and a ban on carry bags of thickness less than 50 microns.
- On World Environment Day in 2018, India pledged to phase out Single use plastic by 2022.

8. Global Liveability Index

New Delhi has dropped by six places to rank 118th and also Mumbai also fell two places to 119th on a list of the world's most liveable cities due to increase in cases of petty crimes and poor air quality. The list topped by Vienna (Austria) for the second consecutive year.

About the ranking

- The Economist Intelligence Unit (EIU) publishes an annual Global Liveability Ranking.
- The EIU ranking of 140 cities is based on their scores in five broad categories stability, healthcare, culture and environment, education, and infrastructure.

9. A master plan for tigers at high altitude

By : Union Environment Ministry released a report on Status of Tiger Habitats in high altitude ecosystems.

Study

- By : The Global Tiger Forum (GTF), with range country governments of Bhutan, India and Nepal, along with WWF.
- Supported by the Integrated Tiger Habitat Conservation Programme of the IUCN.
- This provides the action strategy for a high altitude tiger master plan, with gainful portfolio for local communities.

Global Tiger Forum

- Formed in 1993 on recommendations from an international symposium on Tiger Conservation at New Delhi, India.
- It is the only intergovernmental international body established with members from willing countries to embark on a global campaign to protect the Tiger.

10. Mapping Lightning

For the first time, a report mapped lightning strikes across the country, and the lives it claimed.

About the report

- By: Climate Resilient Observing Systems Promotion Council (CROPC), a non-profit organisation that works closely with India Meteorological Department (IMD).

- **Findings of the report**

Lightning strikes have caused at least 1,311 deaths in the four-month period between April and July this year, according to a first-of-its-kind report on lightning incidents in India.

UP accounted for highest number of deaths, followed by Bihar.

11. Nilgiri Tahr

The Nilgiri tahr, its sightings in the Mukurthi National Park have risen from 568 in 2018 to 612 this year.

Nilgiri tahr

- IUCN Conservation Status: **Endangered**

12. Basel Ban amendment becomes law

A global waste dumping prohibition, has become an international law after Croatia ratified it on September 6, 2019.

Basel Convention against global waste dumping

- Basel Convention in 1995, to protect human health and the environment against the adverse effects of hazardous wastes, according to Basel Action Network (BAN).
- BAN, a Unites States-based charity organization, is one among the organisations and countries, which created the Basel Ban Amendment.
- The Ban Amendment prohibits all export of hazardous wastes, including electronic wastes and obsolete ships from 29 wealthiest countries of the OECD to non-OECD countries.

Giants are yet to ratify

- The US produces the most waste per-capita but has failed to ratify the Basel Convention and has actively opposed the Ban Amendment.
- Most countries like the US, Canada, Japan, Australia, New Zealand, South Korea, Russia, India, Brazil, and Mexico are yet to ratify the ban.

13. Air Pollution in Delhi drops 25% in four years

Pollution levels in Delhi, primarily the concentration of particulate matter has reduced by 25% over a period of four years.

Five years ago, Delhi was declared as the most polluted city in the world.

What has worked in Delhi

- Between 2014 and 2017, the Delhi government has implemented orders passed by NGT to curb air pollution, also implemented the odd-even road rationing scheme.
- The Graded Response Action Plan in 2017, which provided state governments in Delhi and the NCR with a roadmap for action.
- Closure of the two thermal power plants in Delhi and completion of the eastern and western peripheral expressways for vehicles not destined for Delhi
- A ban on PET Coke as industrial fuel, and the introduction of BS VI fuel.

14. Delhi Declaration to restore degraded land by 2030

Delhi Declaration

- The Delhi Declaration, a consensus document, agreed upon by more than 100 countries “welcomed” the proposed adoption of a “voluntary” land degradation neutrality target by India.

India’s action

- India has committed to restoring at least 26 million hectares of degraded land by 2030.
- India to restore 20 million hectares by 2020.

15. Vulture Conservation and Breeding Centre’s

The VCBC were started in 2004 when the vulture population had already crashed significantly, almost by 99 %. At present there are nine (VCBC) in India, of which three are directly administered by Bombay Natural History Society (BNHS).

The three species of vultures bred in the VCBC are

- White-backed vulture
- Long-billed vulture
- Slender-billed vulture.

Objective

- Its not only to look after the vultures and breed them in captivity, but also to release them into the wild.
- To produce a few hundred pairs of each of the three species of the endangered vultures.

16. India Cooling Action Plan

India’s Cooling Action Plan (ICAP) has been appreciated internationally by the UN on World Ozone Day.

The India Cooling Action seeks to

- Reduce cooling demand across sectors by 20% to 25% by 2037-38,
- Reduce refrigerant demand by 25% to 30% by 2037-38,
- Reduce cooling energy requirements by 25% to 40% by 2037-38,
- Recognize “cooling and related areas” as a thrust area of research under national S&T Programme,
- Training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission.

17. Paraquat Herbicide

The use of herbicide Paraquat killed around 170 people in the last two years in Odisha's Burla district leading to demands for its ban.

Paraquat

- It is a toxic chemical that is widely used as an herbicide, primarily for weed and grass control.
- It has been banned in 32 countries
- It also figures on the list of 99 pesticides and herbicides

So far in India, only Kerala has banned the herbicide.

18. Rotterdam Convention

Formally known as the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

- It is a multilateral treaty to promote shared responsibilities in relation to importation of hazardous chemicals.
- The convention promotes open exchange of information and calls on exporters of hazardous chemicals to use proper labeling, include directions on safe handling, and inform purchasers of any known restrictions or bans.
- Signatory nations can decide whether to allow or ban the importation of chemicals listed in the treaty
- Exporting countries are obliged to make sure that producers within their jurisdiction comply.

India is a party to the convention, with 161 other parties.

19. Biofencing

To prevent wild animals from entering residential areas and to protect agricultural crops and livestock in areas adjoining to forests, the Uttarakhand government has decided to opt for bio-fencing.

Bio-fencing

- Bio-fencings are lines of trees or shrubs planted on farm or field boundaries that provide protection against cattle and wildlife
- They are less expensive and more useful than fences made of wood, barbed wire, or stone masonry.

20. Atlantic Meridional Overturning Circulation (AMOC)

AMOC is sometimes referred to as the “Atlantic conveyor belt”. It is one of the Earth’s largest water circulation systems where ocean currents move warm, salty water from the tropics to regions further north, such as western Europe and sends colder water south.

It aids in distributing heat and energy around the earth, as the warm water it carries releases heat into the atmosphere, and in absorbing and storing atmospheric carbon.

Why in news?

For thousands of years, AMOC has remained stable, but since the past 15 years, it has been weakening.

Impact of AMOC slowdown

- AMOC last witnessed a slow down 15,000 to 17,000 years ago.
- It caused harsh winters in Europe, with more storms or a drier Sahel in Africa due to the downward shift of the tropical rain belt.
- The mere possibility that the AMOC could collapse should be a strong reason for concern in an era when human activity is forcing significant changes to the Earth’s systems.

21. Global Climate Strike movement

Students in more than 2,000 cities across the world are holding demonstrations under the **Fridays for Future movement**, protesting inaction towards climate change.

The Global Climate Strike movement

- The FridaysforFuture movement, also known as the Youth Strike for Climate Movement was started in August 2018 by **Greta Thunberg**.

- She sat outside the Swedish parliament every school day for three weeks to protest against inaction towards climate change and called for concrete government action.
- Then in September 2018, Thunberg called for a strike every Friday until the Swedish parliament revised its policies towards climate change.
- Gradually, students and adults from across the world started mobilizing and demonstrating in front of parliaments and local city halls in their respective countries, making global, a local movement.

Why such strike?

- Students are demanding “urgent” and “decisive” action in order to keep global average temperatures from rising above 1.5 degree Celsius.
- The global strikes will commence just as the United Nations Climate Action Summit 2019 is set to take place in New York on September 23.

22. Ganga Data Collector

Wildlife Institute of India (WII) based in Dehradun has launched a mobile application “Ganga Data Collector”. This is under the “Biodiversity and Ganga Conservation” project initiated by the National Mission for Clean Ganga (NMCG) of Union Ministry of Jal Shakti.

The app will provide field researchers with a complete data entry solution to monitor the aquatic population in the river.

WII

- Established in 1982, it is an autonomous institution under the MOEFCC.
- It is based in Dehradun
- An internationally acclaimed institution , it offers training program, academic courses and advisory in wildlife research and management.

23. Emissions Trading Scheme (ETS) of Gujarat

Gujarat government launched the world’s first market for trading in particulate matter emissions.

The **Emissions Trading Scheme (ETS)** is a regulatory tool that is aimed at reducing the pollution load in an area and at the same time minimising the cost of compliance for the industry. ETS is a market in which the traded commodity is particulate matter emissions.

Various industries can buy and sell the ability to emit particulate matter, by trading permits (in kilograms) under this.

ETS is also called a cap-and-trade market.

24. Clean Air Coalition and Clean Air Fund

By : WHO, “Clean Air Coalition” led by the Governments of Spain and Peru, while a group of philanthropic organizations and foundations were poised to launch a new “Clean Air Fund”.

Clean Air Coalition

- The Clean Air Coalition is being supported by the UN Secretary General’s Office and the Climate and Clean Air Coalition of UN Environment.
- The fund brings together “a group of like-minded philanthropic foundations” which have recognized that tackling air pollution will have “huge benefits for health as well as for climate.”

Clean Air Fund

- The new Clean Air Fund aims to support projects that “democratize” air quality data, making knowledge about air quality more widely accessible to large numbers of people in cities.
- It works with a coalition of philanthropic foundation partners who have interests in health, children, mobility, climate change, and equity, bringing them together to strengthen their collective investment, voice and impact.

25. Coal Gasification

Odisha’s Talcher fertilizer plant was awarded a contract for starting a coal gasification unit for the production of urea and Ammonia. It is a move towards reducing India’s reliance on imports and helping the country meet its CoP-21 Paris Agreement commitments.

What is Coal Gasification?

- A process of converting coal into synthesis gas (also called syngas), which is a mixture of hydrogen (H₂), carbon monoxide (CO) and carbon dioxide (CO₂).
- The syngas can be used in a variety of applications such as in the production of electricity and making chemical products, such as fertilizers.

Future prospects

- The coal gasification process holds good potential in the future, with coal being the most abundantly available fossil fuel across the world, and that even low-grade coal can be used in the process.

26. Intergovernmental Panel on Climate Change (IPCC) report on the Ocean and Cryosphere in a changing climate

About the report

- The ‘Special Report on the Ocean and Cryosphere in a Changing Climate’ was prepared following an IPCC Panel decision in 2016 to prepare three Special Reports.
- It follows the Special Reports on Global Warming of 1.5°C (SR1.5), and on Climate Change and Land (SRCCL).

Unprecedented conditions ahead

- Ocean is projected to transition to unprecedented conditions with increased temperatures, further ocean acidification, marine heat waves and more frequent extreme El Nino and La Nina events.
- Global ocean has warmed unabated since 1970 and has taken up more than 90% of the excess heat in the climate system.
- The rate of ocean warming has more than doubled since 1993.
- Marine heat waves are increasing in intensity, the report notes.
- The Southern Ocean accounted for 35%–43% of the total heat gain in the upper 2,000 m global ocean between 1970 and 2017. This increased to 45%–62% between 2005 and 2017.

Sea level rise

- Globally sea levels are estimated to rise 1.1 metre by 2100, if countries are not able to restrict emissions “well below” 2 degrees Celsius above pre-industrial levels.
- This is likely to have a direct impact on the lives of people living in low-lying coastal zones.

Intergovernmental Panel on Climate Change (IPCC)

- An intergovernmental body of the UN dedicated to providing the world with an objective, scientific view of climate change, its natural, political and economic impacts and risks, and possible response options.
- Established in 1988 by the World Meteorological Organization, the United Nations Environment Programme and was later endorsed by the UNGA.

- Membership is open to all members of the WMO and UN.
- The IPCC produces reports that contribute to the work of the United Nations Framework Convention on Climate Change (UNFCCC), the main international treaty on climate change.

27. Sustainable food production

Feeding a planet of 7.7 billion people is not easy.

Challenges to food security

- Over 820 million people are **chronically hungry**.
- Another two billion or so suffer from **micronutrient deficiencies**, such as a lack of vitamins or proteins.
- Around 650 million adults are **obese**.

Agri industry – what can be done

- The agri industry to change its ways in order to solve the problem.
- Unregulated practices leads to deforestation, freshwater depletion and pollution, soil erosion, and the collapse of biodiversity.
- Human-induced climate change is affecting crop production.
- In 2015, all 193 members of the United Nations agreed unanimously to two vital agreements.
 - Agenda 2030 – adopts 17 Sustainable Development Goals (SDGs) as a roadmap to human well-being and planetary safety.
 - Paris climate agreement – commits the world’s governments to take decisive action to keep global warming to less than 1.5° Celsius.
- Companies in the food sector needs to adopt clear guidelines and reporting standards to align with the global goals.

28. Forest PLUS 2.0

Launched by : US Agency for International Development (USAID) and India’s MoEF&CC

Forest-PLUS 2.0

- A five-year programme initiated in December 2018, it focuses on developing tools and techniques to bolster ecosystem management and harnessing ecosystem services in forest landscape management.
- Forest-PLUS 2.0, is meant to enhance sustainable forest landscape management after Forest-PLUS (1st) completed its five years in 2017.
- Forest Plus 1 focused on capacity building to help India participate in Reducing Emissions from Deforestation and forest Degradation (REDD+).
- It included four pilot projects in Sikkim, Rampur, Shivamogga and Hoshangabad.

Target

- 1,20,000 hectares of land under improved management
- New, inclusive economic activity worth \$12 million
- Measurable benefits to 800,000 households

29. Climate Vulnerability Map of India

Climate Vulnerability map of India

Developed by : Under a joint project of the Department of Science and Technology (DST) under the Union Ministry of Science and Technology and Swiss Agency for Development and Cooperation (SDC).

Implemented by : Implemented as part of the National Mission for Sustaining the Himalayan Ecosystem (NMSHE) and National Mission on Strategic Knowledge for Climate Change (NMSKCC).

More about the Map

- Such climate vulnerability atlas has already been developed for 12 states in the Indian Himalayan Region, using a common framework.
- Now it will be extended to non-Himalayan states so to have a national level climate vulnerability profile for India.
- The atlas is expected to be ready by the middle of 2020.

30. 14th COP to the UNCCD and Report on soil organic carbon (SOC)

The United Nations Convention to Combat Desertification (UNCCD)'s Committee on Science and Technology (CST) on September 3, 2019, released its report on Soil Organic Carbon (SOC) in New Delhi.

About the report

- The report titled as “Realising the Carbon Benefits of Sustainable Land Management Practices: Guidelines for Estimation of Soil Organic Carbon in the Context of Land Degradation Neutrality Planning and Monitoring”, emphasises the importance of SOC in preventing land degradation and desertification.

What is Soil Organic carbon (SOC)?

- Soil organic carbon (SOC) comes from plants, animals, microbes, leaves and wood. It is mostly found in the first metre layer of the soil.
- Conditions such as temperature, rainfall, vegetation, soil management and land-use change and processes that determine the changes in SOC content.

Benefits of Soil Organic carbon (SOC)

- It improves soil health, agricultural yield and reduces the need for chemicals.
- Small increases of SOC over very large areas significantly reduce net carbon dioxide emissions from agriculture. So SOC tries to mitigate climate change by reducing atmospheric carbon dioxide.

About UNCCD:

- Established in 1994, UNCCD is the **sole legally binding international agreement linking environment and development to sustainable land management.**
- It addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.
- Committed to a bottom-up approach, encouraging the participation of local people in combating desertification and land degradation.
- The new **UNCCD 2018-2030 Strategic Framework** is the most comprehensive global commitment to achieve **Land Degradation Neutrality (LDN)** in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations to build.
- It collaborates closely with the other two Rio Conventions
 - the Convention on Biological Diversity (CBD)
 - the United Nations Framework Convention on Climate Change (UNFCCC)

Conference of Parties (COP)

- Established by the Convention as the supreme decision-making body.
- It comprises ratifying governments and regional economic integration organizations, such as the European Union.
- Till now COP had held thirteen sessions and 14th session will be held in India.
- It has been meeting biennially since 2001.

Land Degradation Neutrality (LDN)

A state where the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems

31. Montreal Protocol

Year 2019 celebrates over three decades of remarkable international cooperation to protect the ozone layer and the climate under the Montreal Protocol.

What is Montreal Protocol?

- An international environmental agreement with universal ratification which was adopted in 1987 to protect the earth's ozone layer by eliminating use of ozone depleting substances (ODS).

Positive outcomes of Montreal protocol

- The Protocol has led to the **phase-out of 99 per cent of ozone-depleting chemicals** in refrigerators, air-conditioners and many other products.
- The latest assessment of Ozone Depletion completed shows that parts of the ozone layer have recovered at a rate of 1-3% per decade since 2000.
- At projected rates, Northern Hemisphere and mid-latitude ozone will heal completely by the 2030s. The Southern Hemisphere will follow in the 2050s and Polar Regions by 2060.
- Ozone layer protection efforts have also contributed to the fight against climate change by averting an estimated 135 billion tonnes of carbon dioxide equivalent emissions, from 1990 to 2010.

Kigali amendment

- Given their zero impact on the depletion of the ozone layer, HFCs are currently used as replacements of hydro chlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs), however they are powerful greenhouse gases.
- Kigali Amendment aimed for the phase-down of hydro fluorocarbons (HFCs) by cutting their production and consumption.
- The goal is to achieve over 80% reduction in HFC consumption by 2047.
- The impact of the amendment will avoid up to 0.5 °C increase in global temperature by the end of the century.

Global cooling coalition

The ‘Cool Coalition’ links actions across

- the Kigali Amendment to the Montreal Protocol,
- the Paris Agreement on climate change
- the SDGs

It aims to accelerate progress in advance of the UN Secretary-General’s 2019 Climate Action Summit.

32. Climate and Clean Air Coalition (CCAC)

What?

A voluntary partnership of governments, intergovernmental organizations, businesses, scientific institutions and civil society organizations committed to improving air quality and protecting the climate through actions **to reduce short-lived climate pollutants.**

Its global network currently includes over 120 state and non-state partners, and hundreds of local actors carrying out activities across economic sectors.

What are short-lived climate pollutants?

- Short-lived climate pollutants are those pollutants which are short lived in atmosphere.
- They are also known as Super Pollutants.
- Methane, black carbon and hydrofluorocarbons (HFCs) are some examples of short lived pollutants.

Funding of CCAC:

- The Coalition’s activities are financed through a multi-donor **The Climate and Clean Air Trust Fund**, established in 2012, which is administered through UN Environment

Goal of CCAC:

The Coalition’s goal is to reduce short-lived climate pollutants beyond the recommendations made by the Intergovernmental Panel on Climate Change (IPCC) in its special report Global Warming of 1.5°C

India and CCAC

India plans to work with Climate Clean and Coalition countries on best practices and experiences for the effective implementation of India’s National Clean Air Programme (NCAP).

National Clean Air Programme (NCAP):

Launched: In 2019, it is a comprehensive strategy with actions to prevent, control and reduce air pollution and improve air quality monitoring across the country. It aims to reduce fine particulate (PM₅) and particulate (PM₁₀) air pollution by 20 per cent–30 per cent by 2024.

33. MOSAIC Mission

THE RIGHT WAY, RIGHT AWAY

The **Multidisciplinary drifting Observatory for the Study of Arctic Climate** expedition is a one-year-long expedition into the Central Arctic, planned to take place from 2019 to 2020.

For the first time a modern research icebreaker will operate in the direct vicinity of the North Pole, including the nearly half year long polar night during winter.

Benefits

- The results of MOSAiC mission will contribute to enhance understanding of the regional and global consequences of Arctic climate change.
- It will be helpful in understanding the reasons behind the sea-ice loss and improve weather and climate predictions.

International Relations

International CA

1. Interpol Red Notice

Union Home Minister has conveyed to Interpol Secretary-General that India would like the international police agency to expedite its process of publishing Red Notices (RNs).

As many as 18 requests for RNs from India are pending with Interpol, including against famous fugitives hiding abroad.

Red Notices (RNs)

- An RN alerts police forces across the world about fugitives who are wanted internationally.
- Interpol describes an RN as “a request to law enforcement worldwide to locate and provisionally arrest a person pending extradition, surrender, or similar legal action”.
- RNs contain information that helps identify wanted persons, such as their names, dates of birth, nationality, and physical attributes such as the colour of their hair and eyes.
- It also includes pictures and biometric data such as fingerprints, if they are available.

Not a warrant of arrest

- The Interpol itself does not want individuals; they are wanted by a country or an international tribunal.
- Also, an RN is an international wanted persons’ notice; it is not an international arrest warrant.
- Which means that the Interpol cannot compel the law enforcement authorities in any country to arrest the subject of an RN.

INTERPOL

- The International Criminal Police Organization (INTERPOL) is an international organization that facilitates worldwide police cooperation and crime control became Interpol in 1956.
- Headquarters - Lyon, France, it was founded in 1923 as the International Criminal Police Commission (ICPC).
- INTERPOL provides investigative support, expertise, and training to law enforcement worldwide in battling three major areas of transnational crime: terrorism, cybercrime, and organized crime.

India accepted Interpol membership in June 1956.

2. Reaching out to Europe

The growing importance of Eurasia for India's changing geopolitics is evident. **Various ideas about Eurasia**

- India does not believe that there is tension between the concepts of Eurasia and the Indo-Pacific.
- Russia and China see the “Indo-Pacific” as an effort to contain China.
- The US believes that the promotion of “Eurasia” is an idea of China and Russia to marginalise the US in the continent.

How a partnership with Indo-Pacific helps

Tensions between Russia and the West have reduced chances for India to maneuver. France is leading a new effort to ease the conflict between Russia and the West.

Russia was suspended from the G8 forum after its intervention in Ukraine in 2014. France and Germany are planning to make a fresh bid to resolve the European stand-off with Russia on Ukraine.

Japan has consistently sought to resolve the long-standing territorial dispute with Russia and make Russia a partner in the Japanese strategy for the Indo-Pacific.

France is ready to work with India in developing new coalitions to stabilise the Indo-Pacific.

India should support the initiative by France, Japan and others to save the global trading system through much-needed reforms. Working with Europe and Japan might lend greater weight and credence to India's trade diplomacy.

India has a strong interest in joining the “Alliance for Multilateralism” that calls for modernising international institutions, strengthening the rules-based order and promoting global, rather than national, solutions to global challenges.

Way ahead

There is room for expanding cooperation between India and the Central European states. Political engagements may result in possibilities for mutual enrichment with other European states as well as the European Union.

3. Interpol General Assembly

India has proposed to Interpol that the General Assembly of the organization be held in New Delhi in 2022 as part of the nation's 75th Independence Day celebrations.

General Assembly

The General Assembly is Interpol's supreme governing body, and comprises representatives from all its member countries. The General Assembly meets annually for a session lasting approximately four days, to vote on activities and policy.

Each country is represented by one or more delegates at the Assembly, who are typically chiefs of law enforcement agencies.

4. Eastern Economic Forum

The 5th Eastern Economic Forum (EEF) was recently held in Vladivostok, Russia.

Eastern Economic Forum (EEF)

- The EEF was established by a decree of the President of the Russian Federation, Vladimir Putin, in 2015.
- It aimed for supporting the economic development of Russia's Far East, and to expand international cooperation in the Asia-Pacific region.
- The ongoing EEF Summit at the Far Eastern Federal University is the fifth in its history.
- Among the participants in the Summit are India, Malaysia, Japan, Australia, and South Korea.

India's interest in the EEF

India has described the EEF as a "historic opportunity" to give new impetus to the cooperation between India and Russia.

5. United Nations Human Rights Council (UNHRC)

The UN High Commissioner for Human Rights has expressed concern over the National Register of Citizens (NRC) in Assam, and the communications blackout and detention of political leaders in Jammu and Kashmir.

The UNHRC

- An inter-governmental body within the UN system responsible for strengthening the promotion and protection of human rights around the globe.
- It addresses situations of human rights violations and make recommendations on them.
- The first session took place from June 19-30, 2006, three months after the Council was created by UN General Assembly Resolution 60/251 on March 15 that year.
- The UNHRC has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year.
- The HRC replaced the former United Nations Commission on Human Rights (UNCHR).

Membership

- The Council is made up of 47 UN Member States, which are elected by the UNGA through a direct and secret ballot.
- The General Assembly takes into account the contribution of the candidate states to the promotion and protection of human rights, as well as their voluntary pledges and commitments in this regard.
- Members of the Council serve for a period of three years, and are not eligible for immediate re-election after serving two consecutive terms.

6. Akademik Lomonosov: Worlds first floating Nuclear Plant

Russian-built floating nuclear power plant completed its 5,000-km journey along the Northern Sea Route.

Issue : It has sparked fears among environmentalists over the safety of the Arctic region.

Akademik Lomonosov

- It is a first-of-its-kind floating nuclear power station built in St Petersburg, the Russian port city on the Gulf of Finland.
- It is a small plant compared to conventional land-based nuclear projects.

- It is expected to have a working life of 40 years.

7. Peace in the Middle East

Drone attacks on major Saudi hydrocarbon facilities have led to a spike in world oil prices.

Facts of the issue

- The attacks are claimed by Yemen's Houthi rebels.
- It has knocked out more than half of Saudi crude output and 5% of the global oil supplies.
- According to Oil industry experts the damage is serious and Saudi Arabia will not be able to quickly make up for the shortfall in production close to 5.7 million barrels a day.

Global impact

- Global oil production expanded in recent years and there is the emergence of new major exporters like the US.
- The world could possibly absorb the new oil shock without too much pain.

Challenges

- Drone attacks have exposed the massive vulnerability of Saudi oil production
- Houthis have promised to attack again if Saudi Arabia continues its four-year-old war against them
- Other danger is of escalation in the tension between Saudi Arabia and Iran
- Iran has backed the Houthi's right to self-defense against Saudi Arabia.
- The US decision to blame Iran after the attack appeared to push the region to the brink of a new war.
- Though Iran can hurt Saudi oil production, a military confrontation with the US could set Tehran back by decades.

Way ahead

- The recent developments offer an opportunity for all sides to step back.
- The US and Saudi Arabia have miscalculated that Iran would cave under the current campaign to put “maximum pressure”.
- The current situation should open the door for sensible compromises all around.
- India, having good relations in the Middle East, can easily do more than being a passive observer.
- India must step in to nudge the region towards military restraint and political engagement.

8. Afghanistan - latest situation and way ahead

The U.S.-Taliban talks collapsed last week. Taliban threatened to step up attacks in Afghanistan.

Taliban

- Rising attacks against Afghan civilians make the Taliban’s claim of fighting on behalf of them hollow.
- The Taliban did not suspend its terror campaign even while holding talks with the U.S. in Qatar.
- Now that the talks have collapsed threat from the Taliban is so grave

Afghanistan situation

- The Afghan government is determined to go ahead with the election. .
- The fundamental problem with the U.S.-Taliban peace process was that it excluded the Kabul government at the insistence of the insurgents.
- An unstable Afghanistan and Taliban growing in strength is not good for Afghanistan and its neighbours.

Solution

- Regional and international players should support the new government. The Taliban can’t be allowed to have a free terror run.
- A comprehensive peace push in which all stakeholders, including the government, the U.S., the Taliban, and regional players will have a say.
- The U.S. should continue to back the Kabul government. It should put pressure on Pakistan to crack down on the Afghan Taliban, double down its counter-insurgency operations in Afghanistan.
- The US should also involve regional players such as Pakistan, Iran, Russia, India, and China to take part in the diplomatic efforts and Taliban should be forced to return to talks.

- The U.S.-Taliban peace talks may have collapsed. But it need not be the end of the road for finding a settlement for the Afghan crisis.

9. International Migrant Stock 2019

India has emerged as the leading country of origin for immigrants across the world, with 17.5 million international migrants in 2019 coming from India, up from 15.9 million in 2015.

International Migrant Stock 2019

- Released by the UN DESA's Population Division.
- Data shows that the number of international migrants in the world has increased..
- The percentage of international migrants of the total global population has increased.

Global scene

- One-third of all international migrants originated from 10 countries.
- After India, Mexico ranked second as the country of origin, followed by China.
- The European region hosted the highest number of the immigrants, followed by North America and Northern Africa.
- U.S. hosts the highest number of international migrants, about 19% of the global population.
- Forced displacements continue to rise and asylum seekers increased.

10. RCEP and its benefits to India

RCEP

- The Regional Comprehensive Economic Partnership (RCEP) aims to bring the 10 countries of ASEAN with Australia, New Zealand, South Korea, India, China and Japan to create the world's largest trading block.

- If it comes into being, RCEP will constitute more than 40 per cent of the global population and almost half of world's economy.
- It consists of three of the six largest economies of the world i.e India and China.
- Out of the top 16 countries with the largest GDP, six belong to the proposed RCEP.

Act of Balancing with China

- India's allies in Southeast Asia, as well as Australia, want India to join it to balance China.
- Many in India feel that RCEP will aggravate India's burgeoning trade deficit with China.

Benefits for India

- It could lead to a large number of multinationals shifting their production facilities from China to India.
- RCEP being effective would enable them to access Chinese markets, without being present there, to comply with US sanctions.
- It could also bring in huge investments from many companies in the West.

Way forward

- It is one way of controlling China and keeping it in check.
- India's absence from RCEP will handover this significant grouping to China, which is certainly not in India's interest.
- Thus RCEP is a huge opportunity which India should not miss.

11. Pacific Small Islands Developing States (PSIDS)

India announced a \$150 million line of credit to the group of Pacific island nations for undertaking solar, renewable energy and climate related projects based on their requirement.

About Small Island developing states (SIDS)

- SIDS is a group of small island countries that tend to share similar sustainable development challenges.

Pacific Small Islands Developing States (PSIDS)

- The PSIDS comprises of the 14 Pacific Island countries viz. The Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

12. UYGHUR Community

- The Uyghurs are Turkic-speaking Muslims from the **Central Asian region**.
- The largest population lives in China's autonomous Xinjiang region, in the country's north-west.
- The Uyghurs are one of a number of persecuted Muslim minorities in Xinjiang, including the Kazakhs, Uzbeks, Tajiks, Kyrgyz and Hui.
- Many Uyghur communities also live in countries neighbouring China, such as Uzbekistan, Kyrgyzstan and Kazakhstan, Australia.

13. Shanghai Cooperation Organisation and Eurasian Economic Union

India skipped a meeting of the Eurasian Economic Union (EAEU), which was organised by the Shanghai Cooperation Organisation (SCO) at Xi'an in China.

The main reason for skipping

- The main reason for skipping the meet is due to India's strong opposition to BRI.
- Since the BRI's launch in 2017, India has remained firm on not signing it off at the SCO's annual summits in 2018 and 2019.

SCO

- Founded in June 2001 by China, Russia, and the Central Asian states of Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.
- It aimed to cooperate against non-traditional security challenges, in particular fighting the so-called "three evils" of terrorism, separatism, and extremism.
- SCO also strives to strengthen mutual trust and good neighbourly relations between its member states.

The Eurasian Economic Union

- An international organization for regional economic integration. It has international legal personality and is established by the Treaty on the Eurasian Economic Union.
- It provides for free movement of goods, services, capital and labor, pursues coordinated, harmonized and single policy in the sectors determined by the Treaty and international agreements within the Union.
- Member-States : The Republic of Armenia, the Republic of Belarus, The Republic of Kazakhstan, The Kyrgyz Republic and The Russian Federation.
- The Union is being created to comprehensively upgrade, raise the competitiveness of and cooperation between the national economies, and to promote stable development in order to raise the living standards of the nations of the Member-States.

The Belt and Road Initiative

- An infrastructure project unveiled by China in 2017, which plans to connect the three continents of Asia, Europe, and Africa.
- **‘Belt’ refers to the Silk Road Economic Belt**, consisting of three overland routes.
 - First, a link between China, Central Asia, Russia and Europe.
 - Second, a link through Central Asia and West Asia linking China with the Persian Gulf and the Mediterranean Sea.
 - Third, a connection from China to Southeast Asia, South Asia, and the Indian Ocean.
- The **‘Road’ refers to the 21st century Maritime Silk Road**,
 - Creating maritime trade channels from China through the South China Sea, the Indian Ocean, and the South Pacific.
- The China-Pakistan Economic Corridor, an important part of the BRI, passes through Pakistan Occupied Kashmir (PoK).

14. Caribbean Community and Common Market (CARICOM)

The Caribbean Community and Common Market (CARICOM) is a **group of twenty developing countries** in the Caribbean that have come together to form an economic and political community that works together to shape policies for the region and encourages economic growth and trade.

Seat of Secretariat: Georgetown, Guyana

History

- **Formed in 1973** after the founders had enacted the **Treaty of Chaguaramas**.
- The Caribbean Community and Common Market was established to replace the Caribbean Free Trade Area which had failed in its mission to develop policies in the region pertaining to labor and capital.

15. Financial Action Task Force (FATF)

Pakistan on Monday submitted detailed answers to 125 questions posed by the Financial Action Task Force (FATF) on moves taken by it to strengthen anti-money laundering and combat financing of terrorism, as Islamabad seeks to move out of the FATF Grey list.

About

- The FATF was created in 1989 at the behest of the G7 and is headquartered in Paris.
- The Financial Action Task Force (FATF) is an intergovernmental organization that designs and promotes policies and standards to combat financial crime.
- Financial Action Task Force (FATF) target money laundering, terrorist financing, and other threats to the global financial system.

Features

- The FATF is a “policy-making body” which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.
- There are 37 members of the Financial Action Task Force, including the European Commission and the Gulf Cooperation Council.
- To become a member, a country must be considered strategically important (large population, large GDP, developed banking and insurance sector, etc.), must adhere to globally accepted financial standards, and be a participant in other important international organizations.
- Once a member, a country or organization must endorse and support the most recent FATF recommendations, commit to being evaluated by (and evaluating) other members, and work with the FATF in the development of future recommendations.
- A large number of international organizations participate in the FATF as observers including Interpol, the International Monetary Fund (IMF), Organization for Economic Cooperation and Development (OECD), and World Bank.

16. Golden Triangle and Golden Crescent

Golden Triangle and Golden Crescent are the Asia's two largest principal illicit opium producing areas. Golden Crescent is territorially larger than Golden Triangle.

The Golden Crescent

- The Golden Crescent is located in Southwest Asia and consists of three contiguous countries of Pakistan, Afghanistan and Iran from East to West.
- Iran is the largest country, Afghanistan the only land locked country and Pakistan shares the maximum land boundaries in this region.
- This is the world's leading illicit opium producing region .
- Iran is not an opium producing country in this region but is more that of a trans-shipment country.

The Golden Triangle

- The Golden Triangle is located in Southeast Asia comprising of three contiguous countries of Laos, Thailand and Myanmar from East to West.
- Myanmar is the largest country; Laos is the only landlocked country not only of the Golden Triangle but also of that of the entire Southeast Asia and Thailand has the largest coastline in the region.
- The Golden Triangle is the world's second largest illicit opium producing region
- Laos is more that of trans-shipment country.
- Thailand and Myanmar are money laundering countries.

17. Global Goalkeeper Award

PM Narendra Modi conferred Global Goalkeeper award by Bill and Melinda Gates Foundation. He received the international award for Swachh Bharat Abhiyan.

About the award

The Goalkeeper awards felicitate change makers around the world for their contributions toward meeting the UN's Sustainable Development Goals (SDGs).

Polity and Social Issues

Polity

1. Tibetan Democracy Day

The Tibetan Government-in-Exile celebrated its 59th Democracy Day at the McLeodganj monastery on September 2.

This day marks the anniversary of the establishment of the democratic system of the Tibetan people living in exile in India.

Tibetan Democracy Day

- In February 1960, a little less than a year after he crossed over into India, the Fourteenth Dalai Lama outlined in Bodh Gaya, where The Buddha attained Enlightenment, a detailed programme of democratic practice for exiled Tibetans.
- According to the Tibetan Parliament-in-Exile, he advised them to set up an elected body with three exiled representatives each from the three provinces, and one each from the four religious schools of Tibetan Buddhism.
- Subsequently from 1975 onward, this date began to be formally observed as Tibetan Democracy Day.

Parliament-in-Exile

- It is the highest legislative body of the Central Tibetan Administration (CTA) based in Dharamsala, Himachal Pradesh.
- It is described as one of the three pillars of Tibetan democratic governance — the others being the Judiciary and the Kashag, or Executive.

The Government-in-Exile

- On March 10, 1963, the Dalai Lama promulgated the Constitution of the Tibetan Government-in-Exile.
- The The Government in Exile is not recognised officially by any country, including India.
- However, many countries, including the US, deal directly with the Sikyong and other Tibetan leaders through various forum

2. Institution of Eminence Scheme

Status granted to new institutions

- The HRD Ministry has awarded the status of Institute of Eminence to the
 - IIT-Madras,
 - The IIT-Kharagpur,
 - Delhi University,
 - Benares Hindu University
 - The University of Hyderabad.

The following Four private universities were issued Letters of Intent to grant them the status.

- The Vellore Institute of Technology,
- Amrita Vishwa Vidyapeetham,
- Jamia Hamdard University
- The Kalinga Institute of Industrial Technology

The new greenfield Bharti Institute, a project of Satya Bharti Foundation, has also been issued the letter.

Significance

- These institutions will not be subject to UGC inspections, and are free to set their own courses and curriculum, fee structure and merit-based admission systems.
- Each university will be required to sign a MoU with the Ministry, laying out its plan to achieve the objective of becoming a world-class institution.
- They will have complete academic, administrative and financial autonomy.
- The public institutions on the list will then be eligible for a government grant of ₹1,000 crore.

Institutions of Eminence scheme

- This scheme under the Union HRD ministry aims to project Indian institutes to global recognition.
- The selected institutes will enjoy complete academic and administrative autonomy.
- Only higher education institutions currently placed in the top 500 of global rankings or top 50 of the National Institutional Ranking Framework (NIRF) are eligible to apply for the eminence tag.
- The private Institutions of Eminence can also come up as greenfield ventures provided the sponsoring organisation submits a convincing perspective plan for 15 years.

3. Exercise TSENTR 2019

It is part of the annual series of large scale exercises that form **part of the Russian Armed Forces' annual training cycle**. The series rotates through the four main Russian operational strategic commands.

This year, invitations for participation have been extended to nine other countries. Apart from host Russia, military contingents from China, India, Kazakhstan, Kyrgyzstan, Tajikistan, Pakistan and Uzbekistan will also take part in this mega event.

Aim of the exercise

The exercise aims at evolving drills of the participating armies and practicing them in the fight against the scourge of international terrorism thereby ensuring military security in the strategic central Asian region.

4. 28th INDO-THAI CORPAT

28th edition of **India-Thailand Coordinated Patrol (Indo-Thai CORPAT)** between the Indian Navy (IN) and the Royal Thai Navy (RTN) is being conducted from 05 – 15 September 2019.

About the exercise

- Indian Navy has been participating in the biannual Coordinated Patrol (CORPAT) with the Royal Thai Navy (RTN) since 2003.
- The Objectives of the Indo-Thai CORPAT are to ensure effective implementation of United Nations Conventions on Laws of the Sea (UNCLOS).

UNCLOS

- It came into operation and became effective from 16th November 1982.
- It is also referred to as the Law of the Sea Convention or the Law of the Sea treaty.
- It defines the rights and responsibilities of nations with respect to their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources.
- India is a member.

5. Ration card portability

The government is showcasing the rollout of the **'One Nation One Ration Card'** scheme as one of the biggest achievements of its first 100 days in power.

The launch of the nationwide food security net is scheduled for June 2020.

Food Security in India

India runs the world's largest food security program covering more than 81 crore beneficiaries every year.

Under the **National Food Security Act (NFSA)**, each beneficiary is eligible for five kg of subsidised grains per month at the rate of ₹3/kg for rice, ₹2/kg for wheat and ₹1/kg of coarse cereals.

Ration Card

A ration card is issued to the head of the family, depending on the number of members in a family and the financial status of the applicant.

It is used by households to get essential food grains at subsidised prices from designated ration shops (also called fair price shops) under the Targeted Public Distribution System (TPDS).

Over the years, different types of ration cards were issued depending on the level of deprivation.

6. Criticizing executive , judiciary and bureaucracy cannot be called sedition

Justice Deepak Gupta, judge of Supreme Court, opined about the chilling effect caused by sedition law on legitimate criticism on the organs of state. Indians have the right to criticize the government, and criticism cannot be construed as sedition, he said, adding that stifling such criticism will make us a police state.

Sedition and Right to dissent

Criticism of the executive, the judiciary, the bureaucracy, the armed forces cannot be termed sedition. There is a very important right which is not spelt out in the Constitution... the right of freedom of opinion, the right of freedom of conscience, by themselves, include the most important right — the right to dissent.

Not only should there be criticism but there must be introspection.

7. Krishna Water Dispute

Maharashtra and Karnataka agreed to jointly oppose AP's application seeking a relook at the Krishna Water Disputes Tribunal's 2010 order on water distribution between the riparian states.

The Krishna river dispute

- A dispute over the sharing of Krishna waters has been ongoing for many decades, beginning with the erstwhile Hyderabad and Mysore states, and later continuing between successors.
- River Krishna together with its tributaries, forms a vast basin that covers 33% of the total area of the four states i.e Maharashtra , Karnataka , Telangana and AP.

Krishna Water Disputes Tribunal

In 1969, the Krishna Water Disputes Tribunal (KWDT) was set up under the Inter-State River Water Dispute Act, 1956, and presented its report in 1973.

8. Madhya Pradesh's Happiness Dept to open Time Bank

The Madhya Pradesh government's Happiness Department plans to set up a Time Bank, a new concept linked to untapped social capacity to unmet social needs. It would lend currency to an hour, which could be exchanged to learn a new skill without the need for any paper money.

Whenever a bank member needs a service or wants to acquire a skill, say gardening or playing a guitar, she could exchange a credit, worth an hour, with another member knowing the skill.

About the concept

- Conceived at the Cincinnati Time Store in 1827, the concept gained currency with the setting up of the first Time Bank in Japan in 1973, and later when Edgar Cahn, CEO of TimeBanks USA, popularised 'Time Dollars'.
- Today, there are more than 500 such communities across 32 countries.

9. India Iodine Survey 2018-19 Report

The survey was conducted by Nutrition International in collaboration with the AIIMS and the Indian Coalition for the Control of Iodine Deficiency Disorders (ICCIDD).

Findings

- Tamil Nadu has the lowest consumption of iodized salt despite being the third biggest producer of salt in the country, according to a first-of-its-kind national survey to measure the coverage of iodised salt.
- The five worst performers were Tamil Nadu (61.9%), Andhra Pradesh (63.9%), Rajasthan (65.5%), Odisha (65.8%) and Jharkhand (68.8%).

Salt production in India

Gujarat produces 71% of salt in the country, followed by Rajasthan at 17% and Tamil Nadu at 11%.

10. Motihari-Amalekhgunj Petroleum Pipeline

About the Pipeline

- To transport fuel from Barauni refinery in Bihar's Begusarai district to Amalekhgunj in southeastern Nepal.
- The 69-km pipeline will drastically reduce the cost of transporting fuel to landlocked Nepal from India.
- The pipeline will help in tackling the oil storage problem in Nepal and doing away with transportation of petroleum products through tankers.

11. Section 377 : after 1 year

One year since the SC judgment in Navtej Johar v. Union of India on Sec 377.

There has been a change in the society where transgender, intersex, lesbian, gay, bisexual and gender non-conforming persons were treated as criminals to constitutional recognition of rights to sexual orientation, gender identity, and gender expression.

Impact of the judgment

- The recognition of these rights impacts not only LGBTI persons, but everyone as it protects our rights of self-expression, equality, and autonomy.
- It laid the ground for stronger equality recognition :
 - Judgment in the Joseph Shine case decriminalising adultery (2018)
 - The judgment in the Sabarimala case recognising the rights of women to enter religious shrines (2018).

Challenges remain

- Decriminalization is the first step towards the recognition of equal rights.
- Transgender persons still face a number of legal barriers and LGBT people continue to face discrimination, exclusion, abuse, and harassment at work, school, health care settings and in public places.
- Lack of equality and anti-discrimination law to protect persons from discrimination on different protected grounds.
- **Rights of Persons with Disabilities Act, 2016**, only addresses discrimination against persons with disabilities in the public sector and does not address the private sector.
- **Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act, 1989 and the Protection of Civil Rights Act, 1955** make some discriminatory acts criminal offenses but do not provide civil remedies such as damages for acts of discrimination.
- **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013** is limited to sexual harassment at work.

- **The Transgender Persons (Protection of Rights) Bill, 2019** addresses only transgender and intersex persons' rights. The rights of equality and non-discrimination on the ground of sexual orientation are not covered.

Way forward

Overarching legislation is needed to guarantee equality to all persons on the basis of sexual orientation, gender identity and expression, sex, caste, religion, age, disability, marital status, pregnancy, nationality, and other grounds.

The law should impose obligations of equality and non-discrimination on all persons, public and private, and in the areas of education, employment, healthcare, land and housing and access to public places.

It should provide for civil remedies to stop discriminatory behavior.

Thus we need an equality law to define what equality would encompass.

12. India Urban Data Exchange

Starting with an open data platform for the 100 cities of the Smart Cities Mission by 2020, the government is planning to make a wide range of data — from health, education to finances, public by 2024.

India Urban Data Exchange (IUDX)

- A research project under smart cities mission being implemented by Union Ministry of Housing and Urban Affairs (MoHUA) in collaboration with Indian Institute of Science (IISc), Bengaluru.
- Set up by the MoHUA for its Smart Cities would be expanded, eventually leading to a “marketplace”.
- It will be an open source software platform for cities, industry and researchers to share Smart City data with each other.

13. Accessibility Standard for TV Programmes for the Hearing Impaired

Announced by Union Ministry of Information & Broadcasting to enhance the accessibility of television programmes for the hearing impaired.

About the Standards

- The Accessibility will be enhanced through the provision of captioning and Indian Sign Language.

- All news channels are advised to carry a news bulletin with sign language interpretation at least once per day and all TV channels and service providers will run at least one programme per week with subtitles / captioning.

13. Jeevan Kaushal Programme

By: University Grants Commission (UGC), a “life skills” (Jeevan Kaushal) programme in the curriculum for under-graduate courses across the country.

Aim: inculcating emotional and intellectual competencies in students develop verbal and non-verbal communication skills

About the programme

- The programme will comprise four courses – communication, professional, leadership and universal human values and skills.
- It will be effective tools in helping students develop practical knowledge that helps them when they start their careers and become responsible citizens.

14. World University Rankings 2019

Released by: UK-based Times Higher Education. Oxford University continues to lead the rankings table followed by California Institute of Technology

No Indian university this year

- For the first time since 2012, no Indian institution featured among the top 300.
- The country’s best performing institution, IISc-Bangalore, slipped 50 places from the 251-300 ranking cohort into the 301-350 bracket.

15. National Pension Scheme for traders and self employed persons

The National Pension Scheme for Traders and Self Employed Persons, a pension scheme for the Vyaparis (shopkeepers/retail traders and self-employed persons).

Key provisions of the Scheme

- A voluntary and contributory pension scheme for entry age of 18 to 40 years with a provision for minimum assured pension of Rs 3,000/- monthly on attaining the age of 60 years.
- People can also self-enroll by visiting its portal or by visiting nearest Community Service Center.
- The beneficiary is required to have an Aadhaar card and a saving bank/ Jan-dhan Account passbook only.

- He/ She should be within 18 to 40 years of age group.
- GSTIN is required only for those with turnover above Rs. 40 lakhs.
- The enrolment under the scheme is free of cost for the beneficiaries.
- An estimated 3 crore Vyaparis in the country are expected to be benefitted under the pension scheme.

Eligibility Criteria

- Annual turnover not exceeding Rs 1.5 crore are eligible for the pension.
- The beneficiary should not be income tax payer and also not a member of EPFO/ESIC/NPS (Govt.)/PM-SYM.
- The Central Government shall give 50 % share of the monthly contribution and remaining 50% contribution shall be made by the beneficiary.
- The monthly contribution is kept low to make it affordable. For example, a beneficiary is required to contribute as little as Rs.100/- per month at a median entry age of 29 years.

16. Exercise Maitree – 2019

Joint Military Exercise MAITREE-2019 **between India and Thailand** will be conducted at Foreign Training Node, Umroi (Meghalaya) this month.

Exercise MAITREE is an annual training event which is being conducted alternatively in Thailand and India since 2006 with an aim to share experience gained during various counter terrorism operations in their respective countries.

17. Central Adverse List

The Centre has removed from its blacklist — or the Central Adverse List as it is officially known — names of few foreign nationals involved in anti-India activities.

The Central Adverse List

The **Ministry of Home Affairs** maintains a list of individuals who supported the Khalistan movement in 1980s and 90s but left India to take asylum in foreign countries.

18. Scientific Social Responsibility (SSR) Policy

The new Scientific Social Responsibility (SSR) Policy has been made available by the Department of Science and Technology (DST) on its website for public comments.

India is going to be possibly the first country in the world to implement a SSR Policy on the lines of CSR.

About SSR Policy

- The policy aims to harness latent potential of the scientific community for strengthening linkages between science and society, and for making S&T ecosystem vibrant.
- To encourage S&T institutions and individual scientists in the country to proactively engage in science outreach activities to connect science with the society.
- It is aimed at developing a mechanism for ensuring access to scientific knowledge, transferring benefits of science to meet societal needs, promoting collaborations to identify problems and develop solutions.

Implementation

For implementation of the policy, a national portal will be developed up to capture societal needs requiring scientific interventions and as a platform for implementers and for reporting SSR activities.

A central agency will be established at DST to implement the SSR.

19. Inflight and Maritime Telecom Connectivity in India

Union Ministry for Communications, Electronics & Information Technology has launched the maritime communication services.

Providing Maritime connectivity

- Nelco is the first Indian company that will now provide quality broadband services to the maritime sector.
- Nelco through global partnerships, infrastructure including transponder capacity on satellite of ISRO and a comprehensive service portfolio will help Energy, Cargo and Cruise vessels by enhancing operational efficiency, improving crew welfare and enabling customer services.
- Maritime Connectivity will enable high-end support to those in sea by providing access to Voice, Data and Video services while traveling on sailing vessels, cruise liners, ships in India, using satellite technology.

20. Central Equipment identity Register (CEIR)

By: The system has been undertaken by the Department of Telecom for addressing security, theft and other concerns including reprogramming of mobile handsets.

Objectives of the project

- Blocking of lost/stolen mobile phones across mobile networks thus discouraging theft of mobile phones
- Facilitate in tracing of such reported lost/stolen mobile phones
- Prevention of mobile devices with duplicate and fake IMEIs in the network
- Curtail the use of counterfeit mobile devices

21. Collegium of Judges

What is Collegium System?

- The Collegium of judges is the Indian Supreme Court's invention. It does not figure in the Constitution, which says judges of the Supreme Court and High Courts are appointed by the President and speaks of a process of consultation.
- In effect, it is a system under which judges are appointed by an institution comprising judges.

The Judges Cases

- The **First Judges Case (1981)** ruled that the “consultation” with the CJI in the matter of appointments must be full and effective. However, it rejected the idea that the CJI's opinion, albeit carrying great weight, should have primacy.
- The **Second Judges Case (1993)** introduced the Collegium system, holding that “consultation” really meant “concurrence”. It added that it was not the CJI's individual opinion, but an institutional opinion formed in consultation with the two senior-most judges in the Supreme Court.
- The **Third Judges Case (1998)** expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues.

22. Survey of India

India's oldest scientific department, the Survey of India (SoI) historically tasked with mapping the country will for the **first time rely on drones to map the country**.

The aim is to map 75% of India's geography— about 2.4 million sq km of the 3.2 million sq km — within the next two years. However forests, hills and deserts are likely to be left out.

Survey of India

- The Survey of India is India's central engineering agency in charge of mapping and surveying.
- First modern scientific survey of India” was undertaken by W. Mather in 1793–96 on instructions of Superintendent of Salem and Baramahal (TN), Col. Alexander Read.

23. Exercise samudra Laksamana

The **Indian Navy and Malaysian Navy** had recently participated in the bilateral exercise ‘Samudra Laksamana’

24. Nirvik Scheme

By: Export Guarantee Corporation of India (ECGC), to enhance the loan availability of exporters, and the MSME sector

Commerce Ministry also launched the common digital platform for the issuance of certificates of origin in order to revive the export sector,

Features of the Scheme

- If there is any loss, then ECGC provided credit guarantee of up to 60% loss approximately.
- Under Nirvik consumers and exporters will covered up to 90% and if there is any loss then in that case ECGC will refund 90% to the banks including principal and interest.
- Both pre and post shipment credit will also be covered under the new scheme.
- Banks will get up to 50 % within 30 days of complain lodge.
- The scheme envisages simplified procedure for settlement of claim and for provisional payment up to 50% within 30 days on production of proof of end-use of the advances in default by the Insured Bank.

25. National Recruitment agency (NRA)

The proposed NRA will conduct preliminary examinations for all these recruitment, which are at present conducted by the Staff Selection Commission (SSC) and the Institute of Banking Personnel Selection (IBPS).

As per the proposal, the NRA will subsequently forward the list of qualifying candidates to the respective recruiting agencies to conduct the mains examinations.

26. Uniform Civil Code

The Supreme Court described Goa as a “shining example” with a Uniform Civil Code.

The court observed that the founders of the Constitution had “hoped and expected” a UCC for India but there has been no attempt at framing one.

What is a Uniform Civil Code?

- A Uniform Civil Code is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc.
- Article 44, one of the directive principles (not justiciable and not enforceable by any court) of the Constitution lays down that the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.

How does the idea of a Uniform Civil Code relate to the fundamental right to religion?

- Article 25 : An individual's fundamental right to religion;
- Article 26 (b) : upholds the right of each religious denomination or any section thereof to "manage its own affairs in matters of religion";
- Article 29 : The right to conserve distinctive culture.
- An individual's freedom of religion under Article 25 is subject to "public order, health, morality" and other provisions relating to FRs, but a group's freedom under Article 26 has not been subjected to other fundamental rights
- In the Constituent Assembly, there was division on the issue of putting UCC in the fundamental rights chapter. The matter was settled by a vote.
- The fundamental rights sub-committee headed by Sardar Patel held that the provision was outside the scope of FRs and therefore the UCC was made less important than freedom of religion.

27. Prevention of money laundering through NGOs

Non-governmental organisations (NGOs) "substantially" financed by the government fall within the ambit of the Right to Information Act, the Supreme Court held in a judgment.

About the judgment

- NGOs which receive considerable finances from the government or are essentially dependent on the government fall under the category of "public authority" defined in Section 2(h) of the RTI Act of 2005.
- This means that they have to disclose vital information, ranging from finances to hierarchy to decisions to functioning, to citizens who apply under RTI.

28. Ban on e-Cigarettes

The Union Cabinet approved a ban on e-cigarettes, citing the need to take early action to protect public health.

What are e-cigarettes?

- E-cigarettes are battery-powered devices that heat a solution of nicotine and different flavours to create aerosol, which is then inhaled.
- These devices belong to a category of vapour-based nicotine products called ENDS.

E-cigarettes over Cigarettes

- E-cigarettes, which were to aid smokers kick their habit, do not burn tobacco leaves.
- These battery-operated devices produce aerosol by heating a solution containing among other things, nicotine.
- Nicotine is an addictive substance that may function as a “tumour promoter” and aid neuro-degeneration.

Is ban is justified

- There is ample evidence on the harm of nicotine addiction — the reason that it is only approved under the Drugs and Cosmetics Act for use only in nicotine gums and patches.
- As the WHO’s Framework Convention on Tobacco Control (FCTC) outlines, these devices can only be believed to succeed if smokers have moved on to an alternative nicotine source.

Prohibition of E-cigarettes Ordinance, 2019

- Any production, manufacturing, import, export, transport, sale (including online sale), distribution or advertisement (including online advertisement) of e-cigarettes shall be a cognizable offence.
- It is punishable with imprisonment of up to one year, or fine up to Rs. 1 lakh, or both for the first offence; and imprisonment of up to three years and fine up to Rs. 5 lakh for a subsequent offence.
- Storage of electronic-cigarettes shall also be punishable with imprisonment of up to 6 months or a fine of up to Rs. 50,000 or both.
- The sub-inspector has been designated as the authorised officer to take action under the ordinance.
- The Central or State governments may also designate any other equivalent officer(s) as authorised officer for enforcement of the provisions of the ordinance.

Government View

- These products have neither been assessed for safety in the national population, nor been approved under provisions of the Drugs and Cosmetics Act, 1940. Yet, they have been widely available to consumers.
- Though some smokers have claimed to have cut down smoking while using ENDS, the total nicotine consumption seemed to remain “unchanged”, according to the government.

29. Under 5 malnutrition and mortality in India

The Lancet Child & Adolescent Health's report gives comprehensive estimates of disease burden due to child and maternal malnutrition and the trends of its indicators in every state of India from 1990 to 2017.

Key findings

- The **death rate** attributable to malnutrition in under-5 children in India **has dropped** by two-thirds from 1990 to 2017.
- Malnutrition is, **still the underlying risk factor** for 68% of the deaths in under-five children in India.
- The Disability-Adjusted Life Years (DALY) rate attributable to malnutrition in children varies 7-fold among the states — a gap between a high of 74,782 in Uttar Pradesh and a low of 11,002 in Kerala.
- Other states with a high burden are Bihar, Assam and Rajasthan.
- The proportion of under-5 deaths attributable to malnutrition, which is 68.2% across India, ranges between a high of 72.7% in Bihar and a low of 50.8% in Kerala.
- Rajasthan, Chhattisgarh and Uttar Pradesh are states with a high such proportion, while Meghalaya, Tamil Nadu, Mizoram and Goa have the lowest proportions of such deaths.
- Among the malnutrition indicators, low birth weight is the largest contributor to child deaths in India, followed by child growth failure which includes stunting, underweight, and wasting.

30. India's territorial integrity



The Pakistan Occupied Kashmir

- Pakistan Occupied Kashmir is an area of 13,297 sq km, which was under the control of the Pakistani forces when the ceasefire line came into effect on January 1, 1949.
- In 1963, through an agreement, Pakistan ceded to China over 5,000 sq km of J&K land under its control, in the Shaksgam area, in northern Kashmir, beyond the Karakoram.

Gilgit Baltistan

- A hilly region to the north of PoK and east of the Pakistani province of Khyber Pakhtunkhwa.
- Britishers sold it, along with Jammu and Kashmir, to the Dogra ruler of Jammu, Gulab Singh, after defeating the Sikh army in 1846.
- However they retained controlled over the area through a lease extracted from the Maharaja. This lease was last renewed in 1935.
- In 1947, a British army officer of the rank of Colonel imprisoned Maharaja Hari Singh's governor in the region, and handed over the area for accession to Pakistan.
- Its territorial extent is over 72,871 sq km, and is five-and-a-half times the size of PoK.

31. NEAT Scheme

- Ministry of HRD has announced a new Public Private Partnership Scheme, National Educational Alliance for Technology (NEAT) for using technology for better learning outcomes in Higher Education.

NEAT Scheme

- The objective is to use Artificial Intelligence to make learning more personalized and customised as per the requirements of the learner.
- This requires development of technologies in Adaptive Learning to address the diversity of learners. There are a number of start-up companies developing this and MHRD would like to recognise such efforts and bring them under a common platform so that learners can access it easily.
- Educating the youth is a National effort and MHRD proposes to create a National Alliance with such technology developing EdTech Companies through a PPP model.

Role of MHRD

- MHRD would act as a facilitator to ensure that the solutions are freely available to a large number of economically backward students.
- MHRD would create and maintain a National NEAT platform that would provide one-stop access to these technological solutions.

Implementation

- AICTE would be the implementing agency for NEAT programme.
- The scheme shall be administered under the guidance of an Apex Committee constituted by MHRD.
- Independent Expert Committees would be constituted for evaluating and selecting the EdTech solutions.

32. Pradhan Mantri Matru Vandana Yojana (PMMVY)

A flagship scheme of the Government for pregnant women and lactating mothers has achieved a significant milestone by crossing one crore beneficiaries.

About PMMVY

- A direct benefit transfer (DBT) scheme under which cash benefits are provided to pregnant women in their bank account directly to meet enhanced nutritional needs and partially compensate for wage loss.
- Under the 'Scheme', Pregnant Women and Lactating Mothers (PW&LM) receive a cash benefit of Rs. 5,000 in three installments on fulfilling the respective conditionality which include early registration of pregnancy, ante-natal check-up and registration of the birth of the child and completion of first cycle of vaccination for the first living child of the family.
- The eligible beneficiaries also receive cash incentive under Janani Suraksha Yojana (JSY). Thus, on an average, a woman gets Rs. 6,000.

Performance by states

- Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Dadra & Nagar Haveli and Rajasthan are the top five States/UT in the country in implementation of the scheme
- Odisha and Telangana are yet to start implementation of the scheme.

33. All India Survey on Higher Education (AISHE) 2018-19.

MHRD has released the All India Survey on Higher Education (AISHE) 2018-19.

All India Survey on Higher Education (AISHE)

- Conducted as an annual web-based All India Survey on Higher Education (AISHE) since 2010-11.
- It covers all the Institutions in the country engaged in higher education.
- Data is being collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance, and infrastructure.

Highlights of the survey

Fall in professional education pursuance

- Student's enrolment in B.Tech and M.Tech programmes has seen a dramatic fall.
- This has led to an overall dip in enrolment in professional courses, which has hit a four-year low.

Gross Enrolment Ratio (GER)

- GER is a statistical measure for determining the number of students enrolled in UG, PG and research-level studies within the country and expressed as a percentage of the population in the 18-23 years age group.
- According to AISHE 2018-19, the present GER in higher education is 26.3%, up from 25.8% in 2017-18.

Gender Parity on rise

- Gender Parity Index (GPI), the female: male ratio in higher education measures progress towards gender equity.
- The GPI has increased over the last five years.

Humanities is more popular

- The highest number of students are enrolled in Arts courses.
- Science is the second major stream Commerce is the third major stream with 40.3 lakh students enrolled.

34. Shodh Shuddhi

By: Ministry of HRD

What : The Plagiarism Detention Software (PDS) “Shodh Shuddhi”.

Implemented by : Information and Library Network (INFLIBNET), an Inter University Centre (IUC) of UGC.

Initially, about 1000 Universities/ Institutions are being provided with this service.

35. Participatory Guarantee Scheme (PGS)

By : Union Agriculture Ministry

For : To incentivise more farmers to grow organic food.

Participatory Guarantee Scheme

- PGS, according to the definition, is “a process in which people in similar situations assess, inspect and verify the production practices of each other and take decisions on organic certification”.
- A process of certifying organic products, which ensures that their production takes place in accordance with laid-down quality standards.
- The certification is in the form of a documented logo or a statement.
- It is an internationally applicable organic quality assurance initiative

Four pillars of PGS

- PARTICIPATION
- SHARED VISION
- TRANSPARENCY
- TRUST

36. Multipurpose National ID Card (MPNIC)

India could have a single multi-purpose unique card that will serve as an identity card and double up as a voter card, PAN and even a passport.

Multipurpose National ID Card (MPNIC)

- It was first suggested by a 2001 report on “Reforming the National Security System” by an empowered Group of Ministers in response to the K Subrahmanyam-led Kargil Review Committee, which was instituted in the wake of the Kargil conflict of 1999.
- The GOM recommended MPNIC in relation to the growing threat from illegal migration.

37. National Intelligence Grid (NATGRID)

The government is expected to launch the NATGRID by the start of 2020.

About NATGRID

- The Natgrid would reportedly be used by 10 agencies such as Intelligence Bureau (IB), Research & Analysis Wing (R&AW), CBI, and ED among others.

- It aims to scour data real-time from 21 databases such as airline travel, credit card transactions etc with the aim to track and prevent terror and illegal immigration activities.

38. PACEsetter Fund programme

The Ministry of New and Renewable Energy recently awarded Grants to the awardees of the second round of PACEsetter fund programme.

PACEsetter Fund

- Constituted by India and the USA in 2015 as a joint fund to provide early-stage grant funding to accelerate the commercialization of innovative off-grid clean energy products, systems, and business models.
- The mission of the Fund is to accelerate the commercialization of innovative off-grid clean energy access solutions by providing early-stage grant funding.
- The Fund's main purpose is to improve the viability of off-grid renewable energy businesses that sell small scale (under 1 megawatt) clean energy systems to individuals and communities without access to grid connected power or with limited/intermittent access. (less than 8 hours per day).

39. Ramanujan Prize

The SASTRA Ramanujan prize for 2019 will be awarded to mathematician Adam Harper, Assistant Professor with the University of Warwick, England.

Ramanujan prize

- Every year, this prize is awarded by SASTRA University
- The age limit is 32 years to commemorate the fact that Srinivasa Ramanujan accomplished a phenomenal body of work in this short span.
- It was instituted in 2005 and today it is amongst the top five awards of this type for mathematics.

40. Draft National Resource Efficiency Policy (NREP).

MoEFCC has drafted a National Resource Efficiency Policy (NREP).

About the Policy

- It aims to double the recycling rate of key materials to 50% in the next five years and enable upcycling of waste.
- The agenda is to develop a circular economy.

- This can be achieved by two measures i.e by recycling the materials, and by increasing the efficiency of use of these resources.

National Resource Efficiency Authority

- The draft policy envisions setting up a National Resource Efficiency Authority which will help develop resource efficiency strategies for different sectors and adopt them into a three-year action plan.
- Seven key sectors have been identified—automobile, plastic packaging, building and construction sector, electrical and electronic equipment sector, solar photo-voltaic sector, and steel and aluminium sector.

41. Sardar Patel National Unity Award

Government of India has instituted the highest civilian award in the field of contribution to the unity and integrity of India, in the name of Sardar Vallabhbhai Patel.

Sardar Patel National Unity Award

- The Award seeks to recognize notable and inspiring contributions to promote the cause of national unity and integrity and to reinforce the value of a strong and united India.
- The award will be announced on the occasion of the National Unity Day, i.e. the birth anniversary of Sardar Patel on 31st October.
- The Award shall be conferred by the President and presented by him in a presentation ceremony along with the Padma award presentation ceremony held in Rashtrapati Bhawan.

42. Exercise Malabar

The 23rd edition of the Trilateral Maritime Exercise MALABAR, is scheduled between the navies of India, Japan and USA from 26 Sep to 04 Oct 19 off the coast of Japan.

Exercise Malabar

- Exercise Malabar is a trilateral naval exercise involving the United States, Japan and India as permanent partners.
- Originally begun in 1992 as a bilateral exercise between India and the United States, Japan became a permanent partner in 2015.
- Past non-permanent participants are Australia and Singapore.

43. Campaign against TB ‘TB Harega Desh Jeetega’

Launched by : Union Ministry for Health and Family Welfare

About the campaign

- The campaign aims to improve and expand the reach of TB care services across the country, by 2022.
- It has three pillars – clinical approach, public health component and active community participation.
- The government will ensure that all patients, at private or public hospitals, receive free-of-cost and high-quality TB care.

United Nations has marked 2030 as a global target to eliminate TB worldwide but the GoI has made 2025 as its target to eliminate tuberculosis from the country

44. National Population Register (NPR)

Government has revived National Population Register (NPR) project at a time when National Register of Citizens has been published in Assam.

National Population Register (NPR)

- The NPR is a list of “usual residents of the country”. The exercise is conducted at the local, sub-district, district, state and national levels.
- **Usual resident of the country** is one who has been residing in a local area for at least the last six months, or intends to stay in a particular location for the next six months.
- It is being prepared under provisions of the Citizenship Act 1955 and the Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003.
- It is mandatory for every “usual resident of India” to register in the NPR.
- The data for the NPR were first collected in 2010 along with the house listing phase of Census 2011. In 2015, this data was further updated by conducting a door-to-door survey.
- It will be conducted by the Office of the Registrar General of India (RGI) under the MHA for Census 2021.

Difference between NPR and NRC

Unlike the NRC, the NPR is not a citizenship enumeration drive, as it would record even a foreigner staying in a locality for more than six months.

Only Assam will not be included, given the recently completed NRC.

45. India's new Emergency Number 112

Delhi became the fifth UT after Puducherry, Daman and Diu, Dadra and Nagar Haveli, and the Andaman and Nicobar Islands to implement the Emergency Response Support System (ERSS).

In November 2018, Himachal Pradesh became the first state to roll out the ERSS, under which there is a single emergency response number across the country — 112.

Emergency Response Support System (ERSS)

- The MHA accepted the recommendations of the **Justice Verma Committee** in the backdrop of unfortunate incident of Nirbhaya in December 2012 and has approved a national project by name of ERSS.

46. Pradhan Mantri Adarsh Gram Yojana (PMAGY)

Launched on a pilot basis in 2009-10 for an area-based development approach of predominantly Dalit villages.

It aimed to achieve integrated development of selected villages with more than 50% SC population through convergent implementation of all relevant Central and State schemes.

47. Inner Line Permit

It is an official travel document issued by the Government of India to grant inward travel of an Indian citizen into a protected area for a limited period. Visitors are not allowed to purchase property in these regions.

Validity of permit is generally 15-20 days.

It is news because of the protests in Manipur demanding the implementation of the Inner Line Permit in the region.

Background

- Inner Line Permit is operational in Arunachal Pradesh, Mizoram and Nagaland.,
- Meghalaya, Manipur, Andaman and Nicobar Islands and Leh also require Indian citizens to have a permit before they enter.
- It has been issued under the Bengal Eastern Frontier Regulation, 1873 and the conditions and restrictions vary from state to state.

- It can be issued for travel purposes solely.
- Visitors are not allowed to purchase property in these regions.

Purpose

- To regulate the movement of visitors into sensitive regions
- To strengthen security of the sensitive areas near to international borders
- To protect the cultural ethos of a specific region

48. Logistics Index Chart

Gujarat has retained the top slot on the logistics index chart.

It is an indicator of the efficiency of logistical services necessary for promoting exports and economic growth.

About

- Logistics Ease Across Different States 2019, prepared with the help of consultancy firm Deloitte,
- The findings would help in identifying the problem areas in the sector and prepare policy responses to deal with them.
- The index aims at enhancing the focus on improving logistics performance across states which is essential for improving the country's trade and reducing transactions cost.
- It is based on the Logistics Performance Index created by World Bank.

49. Zonal councils

Union Minister for Home Affairs, Amit Shah chaired the 29th meeting of the Northern Zonal Council held at Chandigarh

Zonal councils

- They are statutory (and not the constitutional) bodies and are established by an Act of the Parliament, that is, States Reorganisation Act of 1956.
- Each Zonal Council is an advisory body
- The act divided the country into five zones (Northern, Central, Eastern, Western and Southern) and provided a zonal council for each zone.

North-Eastern Council:

- In addition to the above Zonal Councils, a North-Eastern Council was created by a separate North-Eastern Council Act of 1971.

- Its members include Assam, Manipur, Mizoram, Arunchal Pradesh, Nagaland, Meghalaya, Tripura and Sikkim.

Members of the Zonal council

- The home minister of Central government is the common chairman of the five zonal councils.
- Each chief minister acts as a vice-chairman of the council by rotation, holding office for a period of one year at a time.
- Chief Ministers of all the States in the zone.
- Two other ministers from each state in the zone.
- Administrator of each union territory in the zone.

Objectives of Zonal Councils

- Bringing out national integration and enabling the Centre and the States to co-operate and exchange ideas and experiences.
- Establishing a climate of co-operation amongst the States for successful and speedy execution of development projects.

50. Digital census 2021

The home minister Amit Shah said that a mobile app will be used for the first time in the 2021 census.

Census

- The **first census was conducted in India non-synchronously in different parts in 1972.**
- The responsibility of conducting the decennial Census rests with the **Office of the Registrar General and Census Commissioner, India under Ministry of Home Affairs, Government of India.**

About Digital census 2021

- A mobile app will be used in Census 2021..
- The **2021 census is the 16th Indian census.**
- This mammoth nationwide **exercise will be carried out in 16 languages.**
- The census will have its reference date as March 1, 2021, but for snow-bound Jammu and Kashmir, Himachal Pradesh and Uttarakhand it will be October 1, 2020.

Science and Technology

1. BIOMONITOR III

By : BIOTRONIK has designed an injectable cardiac monitor named BIOMONITOR III and has received FDA clearance also.

- The device helps in detecting arrhythmia with increased clarity, enabling fast diagnosis and appropriate treatment.
- It is injected under the skin where it can reside for up to four years and continuously monitor cardiac signals and can also help to detect loss of consciousness.
- It is mainly designed for patients suffering from atrial fibrillation type conditions.

2. Tiny Ant-inspired Tribots

By : Researchers at the Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland, have developed tiny robots Tribots, weighing 10g that can behave and operate like ants.

They possess intelligence and strength, hence, as a colony, they may use complex strategies to achieve tasks and can evade large predators too. The tiny ant-inspired Tribots mainly required for emergency search and rescue operation. The study was published in Nature.

3. Indian Astronomers find Evidence of Supernova Remnants

By : The team consisted of scientists from Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, Indian Institute of Science (IISc), Bengaluru, and National Centre of Radio Astrophysics (NCRA), Pune.

Massive stars with a mass more than 8-10 times that of our Sun end up as supernova explosions. The explosions brighten to intensity of million suns for a few days and then slowly fade into oblivion. The bursts throw up vast amounts of gas and particles at high velocity in all directions and they appear mostly circular (in many cases bubble-shaped) with hot filament-like structures. The blasts rip off the outer layers of the dead star while the inner core collapses to become exotic stellar objects such as a neutron star, a pulsar or a black hole.

The group was using the Giant Metrewave Radio Telescope (GMRT), operated by the National Centre of Radio Astrophysics in Pune.

4. Successful Abort-test for Orion Spacecraft

By : NASA, tested the launch-abort system of Orion Spacecraft designed to take astronauts to the Moon. Its success indicates that the project is on schedule for its first crewed flight in 2022.

5. Aphelion day – Earth was Farther Away from the Sun

Aphelion day which occurs once in a year took place on 4 July 2019 for this year. On this day Earth reaches aphelion — maximum distance nearly of 152.1 million kilometres from the Sun which was farthest than at any other time of the year.

Earth experienced perihelion distance on 3 January 2019. On this day Earth is at the minimum distance from Sun

6. Another Fast Radio Burst -A Newly Discovered Explosion

Astronomers have detected another non-repeating Fast Radio Burst (FRB) namely FRB 190523 by the Deep Synoptic Array-10 at Caltech's Owens Valley Radio Observatory.

Fast Radio Burst (FRB) is a transient [radio](#) pulse of length ranging from a fraction of a [millisecond](#) to a few milliseconds, caused by some high-energy astrophysical process not yet understood. While extremely energetic at their source, the strength of the signal reaching Earth has been described as 1,000 times less than from a [mobile phone](#) on the [Moon](#).^[2] The first FRB was discovered by Duncan Lorimer in 2007 and it is therefore commonly referred to as the Lorimer Burst.

The present discovery may help researchers to resolve the mystery behind the causes of such explosions.

7. TESS Discovers the Tiniest Planet Yet

NASA's TESS (Transiting Exoplanet Survey Satellite) unveiled the smallest planet ever spotted till date which is between the size of Earth and Mars and has been named L 98-59b. The planet was 10% smaller than the previous record of TESS.

8. Make it Rain Mission

Rocket Lab Electron launch vehicle successfully launched seven satellites from Launch Complex 1 on New Zealand's Mahia Peninsula on 29 June 2019.

The mission was named 'Make it Rain' because of the high volume of rainfall in Seattle in the Spaceflight home city and New Zealand is also quite wet.

9. European Organization for Nuclear Research (CERN) – Accelerating Science

The Department of Atomic Energy entered into a co-operation agreement with CERN on 28 March 1991, followed by a protocol for collaboration in the Large Hadron Collider (LHC) on 29 March 1996.

CERN invited India to participate in construction commissioning of Advanced Accelerators under the Novel Accelerator Technology Protocol (NAT) in 2006. India's participation and contribution strengthened further when India became an Associate Member of CERN in 2017.

10. Laser Interferometer Gravitational Wave Observatory (LIGO) India

LIGO is a world-leading observatory designed to detect gravitational waves from the most violent events in the Universe. LIGO-India, an ongoing enterprise to set up a new gravitational wave detector on Indian soil, is a mega-science collaborative project between the LIGO laboratory in the USA, along with its international partners.

Australia, Germany and the UK and three lead institutions of India i.e Institute of Plasma Research Gandhinagar, Inter University Centre for Astronomy and Astrophysics, Pune and Raja Ramanna Centre for Advanced Technology, Indore.

This project is jointly supported and funded by the DAE and DST with \$300 million for the \$950 million project.

LIGO India will serve as one of the detectors to detect the gravitational waves, an essential element of Einstein's Theory of General Relativity. This opened a completely new window with which scientists are starting to probe hitherto unexplored phenomena such as the formation of black holes, exploding neutron stars, witnessing the birth of our Universe and so on.

India will provide the site, vacuum system and other infrastructure required to house and operate the interferometer, manpower, materials and supplies for installation, commissioning and operations.

11. Square Kilometer Array (SKA): Exploring the Universe with World's Largest Radio Telescope

India is a member of the group of 13 countries (Australia, Canada, China, France, Germany, India, Italy, New Zealand, Spain, South Africa, Sweden, the Netherlands and the United Kingdom) that have got together to build the world's largest radio telescope, with eventually over a square kilometre (one million square metres) of collecting area.

While 13 countries including India are currently funding the SKA, around 100 organisations in about 20 countries representing over 1,000 scientists and engineers make it one of the largest scientific endeavours in history.

Benefits

The SKA will push several areas of technology to the next level, i.e. spanning antenna design, radio frequency electronics and optical fibre technologies, low-power electronics, signal processing, high-performance computing, as well as complex system management software.

The National Centre for Radio Astrophysics , Pune

NCRA in Pune is leading India's participation in the SKA, funded by the DAE and DST. The SKA-India Consortium (SKAIC) is responsible for overseeing SKA-related activities in India, which has almost twenty member organisations from all over the country.

India has led the design of the Telescope Manager, which is the brain and nervous system of the entire SKA Observatory and interacts with all the other elements to run the Observatory.

Indian institutions and industry have also been involved in technology and science with the SKA precursor and pathfinder facilities such as Murchison Widefield Array (MWA) Observator in Australia and the Giant Metrewave Radio Telescope (GMRT) Observatory in India.

12. Thirty Meter Telescope (TMT)

India is a full member of the TMT Consortium with the other partners being Canada, China, Japan and the USA. TMT is the world's largest and most advanced telescope which will help to unveil discoveries beyond our imagination.

Benefits

- This unique instrument will allow astronomers to see deeper into space and observe cosmic objects with extraordinary sensitivity.
- It will allow astronomers to address the fundamental questions in astronomy ranging from understanding star and planet formation to unraveling the history of galaxies, black holes and the development of large-scale structure in the universe.

India-TMT Coordination Centre (ITCC), located at the Indian Institute of Astrophysics (IIA) is responsible for managing India's contribution, which is \$213 million to the \$1.47 billion project, jointly funded by DST and DAE.

India's 70% in kind contribution of the TMT project will be contributed through hardware and software systems for the project which will be developed indigenously.

13. Vigyan Samagam

It would serve as a travelling platform bringing cutting-edge S&T to the doorsteps of multi stakeholders and the general public. It will display theme-based galleries, working models and exhibits, informative audio visual content & electronic displays, interactive kiosks and invited talks & lectures by eminent speakers.

Not only will the event showcase India's strength, capability and contribution in multi-country mega science projects, a gathering of schools, colleges, universities, industry partners, researchers, scholars, scientific organisations, policymakers, representatives of media and community members would help in emergence of ideas. It will also attract and motivate the young to take up exciting science based career options.

14. Genome sequencing of bacteria to help with biocontrol in farming

Bacteria with antimicrobial properties

Scientists in Kerala have completed the whole genome sequencing of a rare bacterium capable of producing antifungal and insecticidal compounds.

This has opened up the potential to develop a new line of products for biocontrol applications in agriculture.

Helping Biocontrol

Bioinformatics analysis showed that the genome contained a plant chitinase, an enzyme capable of degrading fungi and insect exoskeleton.

The scientists have cloned the gene and engineered the recombinant protein. The strain can produce metabolites that are toxic to plant pathogens, making it a candidate for biocontrol applications.

15. Samudrayaan Project

India's ambition to send men to the deep sea in a submersible vehicle is likely to be a reality in 2021-22 with the 'Samudrayaan' project. It will be a part of the 'Deep Ocean Mission' that has received in-principle approval but is awaiting a final nod from the Union Finance Ministry.

About the project

- The 'Samudrayaan' is a part of the Ministry of Earth Sciences' pilot project for deep ocean mining for rare minerals.
- The project proposes to send a submersible vehicle with three persons to a depth of about 6000 metres to carry out deep underwater studies.
- The project is undertaken by the National Institute of Ocean Technology (NIOT), Chennai in line with the ISRO's ambitious 'Gaganyaan' mission of sending an astronaut to space by 2022.
- The indigenously developed vehicle is capable of crawling on the sea bed at a depth of six kilometre for 72 hours.
- The project proposes to carry three persons in a submersible vehicle to a depth of 6000 metres under sea for various studies. Submarines go only about 200 metres.

16. Asteroid Impact Deflection Assessment (AIDA)

An ambitious double-spacecraft mission to deflect an asteroid in space, to prove the technique as a viable method of planetary defence. The mission includes NASA and the European Space Agency (ESA) and is known as the Asteroid Impact Deflection Assessment (AIDA).

The project aims to deflect the orbit of the smaller body through an impact by one spacecraft, Then a second spacecraft will survey the crash site and gather the maximum possible data on the effect of this collision.

17. India declared free of Avian Influenza

India has been declared free of Avian Influenza (H5N1). The status will last only till another outbreak is reported. India was last declared free of the disease in 2017.

18. National Animal Disease Control Programme

Prime Minister will be launching National Animal Disease Control Programme for Foot and Mouth Disease and Brucellosis today.

National Animal Disease Control Programme

- The programme for Foot and Mouth Disease and Brucellosis is a 100% centrally funded programme, with a total outlay of Rs.12,652 crore from 2019 to 2024.
- It aims to control Foot and Mouth Disease and Brucellosis by 2025 with vaccination and eventual eradication by 2030.

About Foot and Mouth Disease

- Foot and mouth disease (FMD) is a severe, highly contagious viral disease of livestock that has a significant economic impact.
- The disease affects cattle, swine, sheep, goats and other cloven-hoofed ruminants.
- Intensively reared animals are more susceptible to the disease than traditional breeds.

19. National Genomic Grid

The government plans to set up a National Genomic Grid in order to take cancer research to the next level and make treatment viable for people of different economic classes. It will study genomic data of cancer patients from India.

The grid to be formed will be in line with the National Cancer Tissue Biobank (NCTB) set up at the IIT Madras.

It will collect samples from cancer patients to study genomic factors influencing cancer and identifying the right treatment modalities for the Indian population. The grid will have four parts, with the country divided into east, west, north and south.

About National Cancer Tissue Biobank

- The NCTB is functioning in close association with the Indian Council for Medical Research (ICMR).
- NCTB, which has the capacity to stock 50,000 genomic samples from cancer patients, already has samples from 3,000 patients.

20. ISRO's Moon mission presents India a chance to reassess its space priorities

Vikram lander appears to have made a hard-landing because of which ISRO is not able to establish any contact so far.

ISRO – What lies ahead

ISRO has raised the stature of the country internationally with its earlier successes. India should make an assessment of the technical resources and expertise available with ISRO to carry forward a major space programme.

Space is important for multiple reasons, including the quest for minerals and energy security.

India should avoid getting swayed by the “Space Race”. Space should emerge as an important constituent of foreign policy. International collaborations could allow technology sharing and they could also prove to be more cost-effective and time-saving.

India needs to make more investments in its strategic programme. Today, the armed forces require many more satellites for various purposes. There is a need to evolve a separate agency for this purpose.

CONCLUSION

Investments in this domain should be done only for social reasons, for science and for security. If India has to emerge as a space power, then it should be via a combination of soft and hard power. Missions like the ones to the Moon offer such opportunities.

21. Zero Budget Natural Farming

Addressing the COP14 to the UNCCD, PM mentioned that India was “focusing on Zero Budget Natural Farming (ZBNF)”.

ZBNF

- ZBNF is a farming technique that seeks to bring down input costs for farmers by encouraging them to rely upon “natural products”.
- The concept behind ZBNF is that over 98 per cent of the nutrients required by crops for photosynthesis — carbon dioxide, nitrogen, water, and solar energy are already available “free” from the air, rain, and Sun. Only the remaining 1.5 per cent to 2 per cent nutrients need to be taken from the soil, and converted from “non-available” to “available” form (for intake by the roots) through the action of microorganisms.
- The idea is that since these too, need not be purchased, farming remains practically “zero-budget”.

22. Bombay blood group

The “Bombay blood group”, a rare blood type, has been at the centre of attention in Mumbai’s healthcare scene. Demand for the blood type has coincidentally spiked at hospitals, but supply has been scarce.

Bombay blood group

- The rare, Bombay blood group was first discovered in Mumbai (then Bombay) in 1952.
- Each red blood cell has antigen over its surface, which helps determine which group it belongs to.
- The Bombay blood group, also called hh, is deficient in expressing antigen H, meaning the RBC has no antigen H.

23. Cryodrakon boreas : The largest flying animal

Cryodrakon boreas, the largest flying animal was a plane-sized reptile

Cryodrakon boreas

With a wingspan of 10 m and weighing 250 kg, C. boreas rivals another pterosaur as the largest flying animal of all time.

Its remains were first discovered more than 30 years ago in Alberta, Canada, yet elicited scant excitement because of the misclassification.

24. [K2-18b](#)

K2-18b is now the only planet orbiting a star outside the Solar System known to have both water and temperatures that could be potentially habitable.

K2-18b

- About 110 light years from Earth, an exoplanet eight times the mass of Earth orbits a star.
- It was discovered in 2015 by NASA's Kepler spacecraft.
- The researchers used data from the Hubble Space Telescope
- It resides in a habitable zone — the region around a star in which liquid water could potentially pool on the surface of a rocky planet.

25. **Global Antimicrobial Resistance Research and Development Hub**

India has joined the Global Antimicrobial Resistance (AMR) Research and Development (R&D) Hub as a new member.

Global AMR R&D Hub

- Launched in May 2018 in the margins of the 71st session of the World Health Assembly, following a call from G20 Leaders in 2017.
- It is supported through a Secretariat, established in Berlin and currently financed through grants from the German Federal Ministry of Education and Research (BMBF) and the Federal Ministry of Health (BMG).
- It supports global priority setting and evidence-based decision-making on the allocation of resources for AMR R&D through the identification of gaps, overlaps and potential for cross-sectoral collaboration and leveraging in AMR R&D.

From this year onward, India will be the member of Board of members of Global AMR R&D Hub.

Antimicrobial resistance

Antimicrobial resistance is the ability of a microbe to resist the effects of medication that once could successfully treat the microbe. The term antibiotic resistance is a subset of AMR, as it applies only to bacteria becoming resistant to antibiotics.

26. Lunar Reconnaissance Orbiter

ISRO'S attempts to figure out what happened to Chandrayaan-2's Vikram will get a boost when NASA's Lunar Reconnaissance Orbiter (LRO) flies over the lander's landing site on the Moon.

Lunar Reconnaissance Orbiter (LRO)

The Lunar Reconnaissance Orbiter and Lunar Crater Observation and Sensing Satellite missions began on June 18, 2009.

- It is a robotic spacecraft currently orbiting the Moon.
- It studies the Moon's surface, clicks pictures, and collects data that help in figuring out the presence and possibility of water ice and other resources on the Moon, as well as plan future missions to it.
- The primary mission of the LRO, managed by NASA's Goddard Space Flight Center, located in Greenbelt, Maryland, was to measure the entire lunar surface to create a high-resolution 3-D map of the Moon.

27. Controlled Human Infection Model (CHIM)

The Department of Biotechnology (DBT) is close to finalising three projects involving Indian and European scientists to develop new influenza vaccines using a Controlled Human Infection Model (CHIM).

About CHIM

- In a Controlled Human Infection Model (CHIM) study, a well-characterized strain of an infectious agent is given to carefully select adult volunteers.
- This is done in order to better understand human diseases, how they spread, and find new ways to prevent and treat them.
- These studies play a vital role in helping to develop vaccines for infectious diseases.
- Such studies, which are being employed in vaccine development in the US, the UK and Kenya, are being considered in India.

Benefit

- It will speed up the process whereby scientists can quantify whether potential vaccine candidates can be effective in people and identify the factors that determine why some vaccinated people fall sick and others do not.

- CHIM models help vaccine-makers decide whether they should go ahead with investing in expensive trials.

Concerns

- The risk in such trials is that intentionally infecting healthy people with an active virus and causing them to be sick is against medical ethics.
- It also involves putting human lives in danger.

28. Threats to children across the world

The UNICEF has enlisted eight growing challenges for the children across globe.

Children at risk

- Protracted conflicts, the worsening climate crisis, a decline in mental health, mass migration and online misinformation are some of the most concerning emerging global threats to children.
- Majority of children will grow up as natives of a digital environment saturated with online misinformation.
- For example, so-called ‘deep fake’ technology uses artificial intelligence techniques to create convincing fakes of audio and video content, relatively easily.

Threats to the future of world’s children as highlighted by UNICEF

- Access to clean water, clean air and a safe climate
- Conflict and disaster zones
- Mental illness
- Migration
- Skill development
- Vulnerability for being the least trusting generation of citizens

29. Head on Generation (HOG) technology

The Railway Ministry has announced that it would be upgrading all existing Linke Hofmann Busch (LHB) coaches with the Head on Generation (HOG) technology, a move that would cause **the trains to become more cost-efficient and less polluting.**

The HOG system is free of air and noise pollution. The system would bring down yearly CO₂ and NO_x emissions.

30. Sagittarius A*

It is a **supermassive black hole** that sits 26,000 light years away from Earth, near the Galactic Centre, or the centre of the Milky Way. It is one of the few black holes where we can witness the flow of matter nearby.

Since the discovery of Sagittarius A* 24 years ago, it has been fairly calm.

31. UMMID Initiative

UMMID stands for Unique Methods of Management and treatment of Inherited Disorders.

Department of Biotechnology has started the UMMID Initiative which is designed on the concept of 'Prevention is better than Cure'.

Taking into account the congenital and hereditary genetic diseases are becoming a significant health burden in India, and realizing the need for adequate and effective genetic testing and counselling services.

Aim

- To establish NIDAN Kendras to provide counselling, prenatal testing and diagnosis, management, and multidisciplinary care in Government Hospitals wherein the influx of patients is more.
- To produce skilled clinicians in Human Genetics.
- To undertake screening of pregnant women and new born babies for inherited genetic diseases in hospitals at aspirational districts.

NIDAN (National Inherited Diseases Administration) Kendras

As a part of this initiative five NIDAN kendras have been established to provide comprehensive clinical care.

32. Methane-powered Rocket Engine

ISRO is planning to develop methane-powered rocket engines.

About

- The space agency is developing two ‘LOx methane’ engines (liquid oxygen oxidiser and methane fuel) engines.
- One of the two projects is trying to convert the existing cryogenic engine, which uses liquid hydrogen for fuel, into a LOx methane engine.
- These are being developed at ISRO’s Liquid Propulsion Systems Centre at Trivandrum.

Why methane?

Di-Methyl Hydrazine like all hydrazine-based fuels, is said to be highly toxic and cancer-causing. Methane, apart from being non-toxic, it has a higher specific impulse which means one kg of the gas can lift one kg of mass for a longer time.

Methane is often described as the space fuel of the future. It is easy to store, does not leave a residue upon burning, less bulky, and, importantly, can be synthesized up in space.

33. Radioactive Cesium Technology for measuring Soil Erosion

Indian scientists have developed a method to measure the rate of soil erosion and associated decrease in organic content in soil by assessing levels of radioactive cesium in soil.

Radioactive Cesium Technology

Researchers at the ICAR-Indian Institute of Soil and Water Conservation, Dehradun have developed a way to monitor soil erosion and decrease in carbon content in soil by relating it with levels of radioactive cesium in soil.

Benefits of this technique

- A more rapid and less expensive method for soil erosion studies in the severely intensive croplands.
- It gives more accurate results for all types of erosion studies including historic, comparative and long-term soil and soil organic carbon erosion.
- This method can help in monitoring the effects of soil erosion and effectiveness of soil conservation strategies.

34. Quantum Supremacy

It refers to a quantum computer solving a problem that cannot be expected of a classical computer in a normal lifetime. This relates to the speed at which a quantum computer performs.

What is quantum computing?

Quantum computing takes advantage of the strange ability of subatomic particles to exist in more than one state at any time. Due to the way the tiniest of particles behave, operations can be done much more quickly and use less energy than classical computers.

Quantum Mechanics

Quantum mechanics (QM) is a fundamental theory in physics which describes nature at the smallest scales of energy levels of atoms and subatomic particles. It is the body of scientific laws that describe the wacky behavior of photons, electrons and the other particles that make up the universe.

35. Project NETRA

By : ISRO , it is an early warning system in space to detect debris and other hazards to Indian satellites.

Project NETRA (Network for space object Tracking and Analysis)

It will enhance India's capabilities in space situational awareness (SSA) like the other space powers which is used to 'predict' threats from debris to Indian satellites. NETRA's eventual goal is to capture the GEO, or geostationary orbit, scene at 36,000 km where communication satellites operate.

Under NETRA, ISRO plans to put up many observational facilities: connected radars, telescopes; data processing units and a control centre. They can, among others, spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.

The NETRA effort would make India a part of international efforts towards tracking, warning about and mitigating space debris.

Enhancing Space situational awareness (SSA)

- India, as a responsible space power, should have SSA as a part of a national capability, as in the U.S. This is a vital requirement for protecting our space assets and a force multiplier.
- The SSA has a military quotient to it and adds to the country's overall security.
- It uses satellites, ground and air radars to secure its two countries against attacks from air, space or sea.
- With long-range tracking radars, the SSA also provides us the capability of an early warning system against ballistic missiles coming in at a height.

36. Ranitidine

India's drug regulator this week began looking into concerns of potential cancer-causing substances contaminating popular acidity drug ranitidine.

Ranitidine

Ranitidine is an over-the-counter prescription antacid used in the treatment of acid reflux and peptic ulcer diseases. It is commonly used to relieve acid-related indigestion and heartburn by decreasing stomach acid production. It is still widely used in India.

Why in news

According to US FDA it has the potential to cause cancer.

37. Goldschmidtite

A new mineral has been discovered inside a diamond unearthed from a mine in South Africa.

The mineral has been named goldschmidtite, after Victor Moritz Goldschmidt, the Norwegian scientist acknowledged as the founder of modern geochemistry.

Goldschmidtite has an unusual chemical signature for a mineral from Earth's mantle,

38. Asteroid named after Pandit Jasraj

The International Astronomical Union (IAU) has named an asteroid, discovered in 2006, after Indian classical singer Pandit Jasraj.

About the asteroid

- The asteroid, or more formally known as a minor planet, is located between Mars and Jupiter, and was discovered on November 11, 2006, by the Catalina Sky Survey in the United States.

Naming an asteroid

- The privilege of naming a planet is first given to discoverers, who have 10 years to propose a name.
- All names proposed are judged by the Working Group for Small Body Nomenclature (CSBN) of the IAU, comprising professional astronomers with research interests in minor planets and/or comets from around the world.

39. Project Miniature Sun

Scientists in France are trying to create a 'miniature Sun' on Earth and India is a partner in this mega project.

Project Miniature Sun

- Nick named as 'miniature sun', International Thermonuclear Experimental Reactor (ITER) is the largest plasma based fusion reactor ever built.
- It is the costliest technological project of the 21st century with an estimated construction cost of \$25 Billion.
- The project site is located in Cadarache, Southern France.
- The term 'Thermonuclear' indicates the nuclear fusion reaction.
- The mega project is undertaken by USA, Russia, South Korea, China, Japan, European Union and India.

International Thermonuclear Experimental Reactor (ITER)

It is a magnetic fusion device to harness fusion energy by mimicking the sun and other stars.

40. African swine fever (ASF)

As per United Nations Food and Agriculture Organization (FAO) report ASF has caused the deaths of more than 3.7 million pigs across a vast swathe of Asia, primarily in its east and south-east, where pork is the primary meat staple.

What

- The disease has been reported in multiple countries across Africa, Asia and Europe, in both domestic and wild pigs.
- African swine fever (ASF) is a highly contagious haemorrhagic viral disease (severe illness, sometimes associated with bleeding), of domestic and wild pigs.
- It is caused by a large DNA virus of the Asfarviridae family. Although signs of ASF and classical swine fever (CSF) may be similar, the ASF virus is unrelated to the CSF virus.

Transmission and spread

Direct contact with infected domestic or wild pigs : It can be spread by live or dead pigs, domestic or wild, and pork products.

Indirect contact : through ingestion of contaminated material (e.g. food waste, feed, or garbage).

Symptoms

It is characterised by high fever, depression, anorexia and loss of appetite, haemorrhages in the skin (redness of skin on ears, abdomen and legs), abortion in pregnant sows, cyanosis, vomiting, diarrhoea and death within 6-13 days (or up to 20 days). Mortality rates may be as high as 100%

ASF is not a risk to human health as it is relatively harmless.

Prevention and control

Currently there is no approved vaccine for ASF.

41. 2 New Ginger Species

Scientists from the Botanical Survey of India (BSI) have discovered two new species of Zingiber, commonly referred to as ginger, from Nagaland. Species include Zingiber perenense and Zingiber dimapurense

42. New species of Frog discovered in Arunachal Pradesh

A team of scientists from the University of Delhi and Zoological Survey of India (ZSI) discovered a new species of frog in Arunachal Pradesh and named it *Microhyla eos*.

The new frog was discovered from riparian habitats in a primary evergreen forest in the Namdapha Tiger Reserve of the state.

Microhyla

Are a group of narrow-mouthed frogs (subfamily Microhylinae) that is primarily and widely distributed in Asia. Commonly known as 'Rice Frogs' or 'Chorus Frogs'