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THE HINDU

GS 2 : Polity, Governance, International Relations

1. Like Minded Developing Countries (LMDC)

In News : Recently, the Union Minister for Environment Forest and Climate Change virtually participated in the Like Minded Developing Countries (LMDC) Ministerial meeting titled '**Preparations for COP 26 on Climate Change - Expectations and Challenges**'.

- This meeting has been hosted by Bolivia ahead of the 26th climate change conference to be held in Glasgow.
- A ministerial statement was endorsed by the LMDC Ministers during the meeting, expressing their full support for the COP26 Presidency.

Like-Minded Developing Countries(LMDC) group

- LMDC comprises around 25 developing countries from Asia and other regions.
- It organises themselves as a block of negotiators in international organizations such as the United Nations.
- They represent more than 50% of the world's population.
- **Member countries:** Algeria, Bangladesh, Belarus, Bhutan, China, Cuba, Egypt, India, Indonesia, Iran, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Sudan, Syria, Vietnam, and Zimbabwe.

26th Conference of Parties (COP26)

- The COP26 is the 26th United Nations Climate Change conference.
- It is scheduled to be held in Glasgow, Scotland, between 31 October and 12 November 2021, under the presidency of the United Kingdom.
- The conference comes months after the Intergovernmental Panel on Climate Change (IPCC) published its assessment report on Earth's climate, highlighting heat waves, droughts, extreme rainfall and sea-level rise in the coming decades.
- The CoP comes under the United Nations Climate Change Framework Convention (UNFCCC) which was formed in 1994.
 - The UNFCCC was established to work towards "stabilisation of greenhouse gas concentrations in the atmosphere."

Four Goals of COP26

- Secure global net-zero by mid-century and keep 1.5 degrees within reach.
- Adapt to protect communities and natural habitats.
- Mobilise finance.
- Work together to deliver.

2. Rising Fuel Prices

In News : The price of crude oil is nearing its highest level since 2018, as the price of Brent Crude breached the \$85 per barrel mark by Oct 15th (\$42.5 per barrel a year ago). This is happening as the price of natural gas and coal are also hitting record highs, intensifying the energy shortage.

Why are fuel prices rising?

- **Economic Recovery:** Global crude oil prices are rising on the back of a sharp increase in global demand as the world economy recovers from the pandemic.
- **Supply not increasing commensurately:** In its latest round of meetings, the OPEC+ group of oil producing countries reaffirmed that they would increase total crude oil supply by only 400,000 barrels per day in November despite a sharp increase in prices.
 - OPEC+ had agreed to sharp cuts in supply in 2020 in response to Covid-19 global travel restrictions in 2020 but the organisation has been slow to boost production as demand has recovered.
- **Rise in Prices of other energy resources:**
 - Supply side issues in the US including disruptions caused by hurricane Ida and lower than expected natural gas supplies from Russia amid increasing demand in Europe have raised the prices of natural gas.
 - International coal prices have also reached all-time highs as China faces a coal shortage that has led to factories across China facing power outages.
 - A faster than expected recovery in global demand has pushed the price of Indonesian coal up from about \$60 per tonne in March to about \$200 per tonne in October.
 - Naturally, when prices of these energy resources increase, it will have impact on prices of crude oil as well.

What is the impact on India?

- High crude oil prices have contributed to the regular increase in **prices of petrol and diesel** across the country in 2021.
- The price of petrol in Delhi is Rs 105.84 per litre in Oct 15th, while the price of diesel is at Rs 94.6 per litre.
- High fuel prices will feed into increased cost of goods & services causing **inflation in the economy**.
- **The demand for diesel in India** was expected to go up in the next few months with the upcoming festive season set to accelerate the economic recovery and push up diesel consumption. Diesel accounts for about 38% of petroleum product consumption in India and is a key fuel used in industry and agriculture.
- Rising Fuel prices can dampen the festive consumption (travel & increased cost of goods) & **hurt economic recovery prospects**.
- The increase in gas prices has put upward pressure on the price of both Compressed Natural Gas (CNG) used as a transport fuel and Piped Natural Gas (PNG) used as a cooking fuel.
- High international prices of coal have added to a **coal shortage** at India's thermal power plants

Way Forward

India and other oil importing nations have called on OPEC+ to boost oil supply faster, arguing that elevated crude oil prices could undermine the recovery of the global economy.

3. PM orders drive to cut red tape

In News :

Prime Minister Narendra Modi has directed all government departments to have a fresh look at all existing processes and scrap unnecessary paperwork and compliances, as part of a special spring-cleaning exercise this month.

Details:

- The timely and effective disposal of public grievances, references from MPs and State Governments, inter-ministerial consultations, parliamentary assurances, etc. is an important part of the work of Ministries and Departments.

- Files must neither be prematurely destroyed nor kept for periods longer than necessary.
- During the special campaign, all-out efforts will be made to dispose of the identified pending references.
- The special campaign would be monitored by the Department of Administrative Reforms and Public Grievances (DARPG) in the Ministry of Personnel, Public Grievances and Pensions.
- Cabinet Secretary has asked each department to weed out old files, clear all pending public grievances and references from MPs and States, while endeavouring to meet any assurances made to Parliament as part of a special campaign.
- Secretaries have been asked to monitor the progress on resolving pending issues on a daily basis and send a weekly report to the DARPG.
- In addition, the existing processes would be reviewed with a view to reducing compliance burden, and unnecessary paperwork done away with, wherever feasible.

GS 3 : Economy, Science and Technology, Environment

4. A global player in solar power

Context

Large-scale solar projects in Tamil Nadu have seen rapid growth in recent years. By embracing advances in solar technologies, India can continue to lead in this sector.

Factors driving growth

- In the past five years, the cumulative installed capacity witnessed a four-fold increase in Tamil Nadu to 4.4 GW, as of March 2021.
- **High insolation level:** Aiding this capacity addition is the State's reasonably high insolation levels and matching solar potential, estimated at 279GW.
- **Decline in price:** The sharp decline in the prices for solar and resulting cost competitiveness is another factor.
- **National target:** Additionally, in response to the ambitious national targets and to spur sector specific development, Tamil Nadu released the Solar Policy of 2019, aiming for 9GW of solar installations by 2023.

Type of technology use for solar panel

- **1) Mono-crystalline Vs multi-crystalline panels: 'First-generation'** solar cells use mono-crystalline and multi-crystalline silicon wafers.
- The efficiency of **mono-crystalline panels is about 24%**, while for multi-crystalline panels it is about 20%.
- Mono-crystalline cells are dominant today.
- Although mono-crystalline panels are priced higher than multi-crystalline ones, **the difference is diminishing** and will soon attain parity.
- This would result in mono panels being preferred over multi due to their higher efficiency, greater energy yield and lower cost of energy.
- **2) Bifacial solar cells:** Newer technologies incorporating crystalline silicon focus on bifacial solar cells, **capable of harvesting energy from both sides of the panel.**
- Bifacials can augment the power output by 10-20%.
- Within this, the Passive Emitter and Rear Contact technology is predicted to gain popularity. However, it is yet to achieve price parity for large-scale deployment.
- **3) Thin-film technologies:** It is classified as the 'second generation of solar PVs.
- In addition to being used in solar farms and rooftops, thin films with their low thickness, **light weight and flexibility** are also placed on electronic devices and vehicles, power streetlights and traffic signals.
- Mainstream thin films utilise semiconductor chemistries like **Cadmium Telluride** with module efficiencies of around 19%.
- Other technologies include Amorphous Silicon and Copper Indium Gallium Di-Selenide.
- **Nanocrystal and dye-sensitised solar cells** are variants of the thin film technology. These are in early stages for large-scale commercial deployment
- However, the **efficiency of thin films is lower than that of crystalline silicon.**
- **4) Perovskite:** These are grouped as 'third generation' and contain technologies such as perovskite, nanocrystal and dye-sensitised solar cells.
- Perovskites have seen rapid advances in recent years, achieving **cell efficiency of 18%**.
- They have the highest potential to replace silicon and disrupt the solar PV market, due to factors such as **ease of manufacture**, low production costs and potential for higher efficiencies.
- **5) Use of Graphene Quantum-dots:** Graphene is made of a single layer of carbon atoms bonded together as hexagons.
- Solar cells made of graphene are of interest due to **high theoretical efficiency of 60%** and its super capacitating nature.

- Quantum-dot PVs use semiconductor nanocrystals exhibiting quantum mechanical properties capable of **high efficiency of about 66%**.
- However, both these are in the early stages of research.

Technologies to better integrate solar PVs into the grid

- These technologies include weather forecasting and **power output prediction systems**; operation monitoring and control systems; and scheduling and optimisation systems.
- Additionally, automatic systems have been developed for the **smooth resolution of output fluctuations**.

Way forward

- A portion of the budget for renewable energy targets should be set aside exclusively for new technologies.
- **Grants and subsidies** can also be provided for their adoption.
- Efforts must be taken to **address gaps in research**, development, and manufacturing capabilities in the solar sector through sector-specific investment and incentives.
- There must also be greater **industry-academia collaborations** and funding opportunities for startups.
- A comprehensive **sector-specific skilling programme** is also required for workers.

Conclusion

All these efforts would help the country become a global player in the solar power sector.

5. Gross NPAs of Banks to Rise

Gross Non-Performing Assets (NPAs) of banks are expected to rise to 8-9% this fiscal from 7.5% as on March 31, 2021 but they would still remain below the peak of 11.2% seen at the end of fiscal 2018.

What are Non-Performing Assets?

- For a bank, the loans given by the bank is considered as its assets.
- Any asset which stops giving returns to its investors for a specified period of time is known as Non-Performing Asset (NPA).
- So, if the principle or the interest or both the components of a loan is not being serviced to the lender (bank), then it would be considered as NPA.

Classification of NPAs in India

- According to the RBI, a NPA is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days.
 - Banks are required to classify NPAs further into Substandard, Doubtful and Loss assets.
1. **Substandard Assets:** Assets which has remained NPA for a period less than or equal to 12 months.
 2. **Doubtful Assets:** An asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months.
 3. **Loss Assets:** As per RBI, loss asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.

NPAs of Agriculture Loans

In terms of Agriculture/Farm Loans, the NPA is defined as under:

- **For short duration crop** such as paddy, Jowar, Bajra etc. if the loan (instalment/interest) is not paid for 2 crop seasons, it would be termed as an NPA.
- **For Long Duration Crops**, the above would be 1 Crop season from the due date

Reasons for NPAs in India

Impact of NPA on Economy

- **Depositors' loss:** Depositors do not get rightful returns and many times may lose uninsured deposits.
- **High interest on lending:** Banks may begin charging higher interest rates on some products to compensate NPA loan losses.
- **Trust issues:** Bad loans imply redirecting of funds from good projects to bad ones. Hence, the economy suffers due to loss of good projects and failure of bad investments

Steps taken to curb NPA

(A) By the Govt

- **Mission Indradhanush:** to make the working of public sector bank more transparent and professional in order to curb the menace of NPA in future.
- **Insolvency and Bankruptcy Code:** To make it easier for banks to recover the loans from the debtors.

- **Stringent NPA recovery rules:** The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act or SARFESI Act of 2002 was amended in 2016.

(B) By RBI

RBI introduced number of measures in last few years which include:

- **Corporate Debt Restructuring (CDR) mechanism,**
- **Setting up a Joint Lenders' Forum,** providing banks to disclose the real picture of bad loans, asking them to increase provisioning for stressed assets,

Other terms related to NPAs

Write-off effect

- A loan write-off is a tool used by banks to clean up their balance-sheets.
- If a loan turns bad on the account of the repayment defaults for at least three consecutive quarters, the exposure (loan) can be written off.
- A loan write-off sets free the money parked by the banks for the provisioning of any loan.

Twin Balance Sheet

- It deals with two balance sheet problems. One with Indian companies and the other with Indian Banks.
- Debt accumulation on companies is very high and thus they are unable to pay interest payments on loans.

Four Balance Sheet Challenge

- In his paper named 'India's Great Slowdown', Arvind Subramanian (former Chief Economic Advisor) mentions the new 'Four balance sheet challenge'.
- It includes the original two sectors - infrastructure companies and banks, plus NBFCs and real estate companies.

6. EU food recalled over alleged GM rice exports from India

The European Union has recalled some packaged food items which were made up of Indian GMO.

GM crops in India

The Genetic Engineering Appraisal Committee (GEAC) under Environment Ministry oversees the approval of GM Crops in India.

- **Bt cotton:** It is the only GM crop that has been approved for commercial cultivation in 2002.
- **Bt Brinjal:** Resistant to brinjal shoot fly, it was approved by GEAC in 2009. However due to 10 years moratorium imposed on GM crops by the Technical Expert Committee (TEC) appointed by the Supreme Court of India, its commercialization has stalled.
- **GM Dhara Mustard Hybrid 11:** DMH 11 developed by Delhi University is pending for commercial release as GEAC has advised to generate complete safety assessment.

However, unauthorized HtBt Cotton and Bt Brinjal are being grown commercially, with hundreds of growers blatantly defying the governmental ban.

What about GM Rice?

- GM rice is not grown commercially in India.
- However, multiple GM rice varieties have been approved for confined field trials.
- There seems a possibility of cross-contamination from such field trials directly or through seed leakages.

India's rice exports

- India's annual rice exports amount to 18 million tonnes worth ₹65,000 crore, and reach more than 75 countries.

What is the EU move?

- A European candy has recalled several batches of its product from the market due to the use of rice flour with genetically modified (GM) contamination that allegedly originated in India.
- The EU notification has identified the product as 'Unauthorised genetically modified (p35S and tNos) rice flour from India'.

Impact of the EU move

- This has led to the loss of reputation of India and its agricultural market.
- With such a move by the EU, it is Indian farmers and exporters who have much to lose.

Threats posed by GM crops

- It is believed that consumption of genetically engineered foods can cause the development of diseases which are immune to antibiotics.
- Besides, as these foods are new inventions, not much is known about their long term effects on human beings.
- Genetically modified rice may potentially cause serious public health and environmental problems.
- Two major issues about GM rice are their tendencies to provoke allergic reactions and the uncertainty of gene transfers.

What can be done to reverse this?

- Ban on field trials of GM crops
- Slapping liability for illegal release of GMOs into the environment on developers
- Probe to identify the source of the GM rice contamination

7. EU food recall linked to GM rice from India

Issue:

- Mars Wrigley (the world's leading manufacturer of chocolate, mints and fruity confections) has alleged that one of its ingredients – rice flour was contaminated with genetically modified (GM) rice that originated in India.
- France issued a notification for unauthorised genetically modified rice flour, identifying India as the point of origin.

India's Stance:

- Commerce Ministry has pointed out that GM rice is not grown commercially in India, let alone exported.
- It has promised a thorough enquiry by its agricultural exports authority.
- It has said that APEDA is collecting all the details and will enquire every aspect of it thoroughly with the technical and scientific institutions like GEAC and the strictest form of action will be taken accordingly.
- In 2007, when there was widespread concern about GM rice trials and the possibility of cross-contamination, the All India Rice Exporters Association took up the issue with the Department of Biotechnology and the Genetic Engineering Appraisal Committee.

- A policy decision was taken that field trials would not be allowed in the basmati belt, because of worries that the export crop could be affected.
- India's Basmati belt includes Jammu and Kashmir, Punjab, Haryana, Chandigarh, Delhi, Himachal Pradesh, Uttarakhand and (western) Uttar Pradesh.

Concerns:

- Worried farmers' groups and environmental activists have noted that multiple GM rice varieties had been approved for confined field trials, and warned that any cross-contamination could dampen the country's agricultural export ambitions.
- The issue with GM field trials is that once they take place, they can contaminate crops long after the actual trials either directly or through seed leakages.

India's Rice Exports:

- India's annual rice exports amount to 18 million tonnes worth ₹65,000 crore.
- It is exported to more than 75 countries.

Note:

- In India, the Genetic Engineering Appraisal Committee (GEAC) is the apex body that allows for the commercial release of GM crops.
- Use of the unapproved GM variant can attract a jail term of 5 years and a fine of Rs. 1 lakh under the Environment Protection Act, 1986.
- Food Safety and Standards Authority of India (FSSAI) is the authorised body to regulate the imported crops in India.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. EU, India and the Indo-Pacific

In News :

Last month, the EU released its “EU strategy for cooperation in the Indo-Pacific”. This document is very rich and needs to be analysed in the context of the rapprochement between the EU and India, which culminated in the June EU-India summit, a “turning point” according to some analysts.

Important takeaways from EU’s Indo-Pacific strategy

- The EU strategy in the Indo-Pacific appears to be over-determined by **China’s expansionism**.
- “The display of force and increasing tensions in regional hotspots such as in the South and East China Sea and in the Taiwan Strait may have a **direct impact on European security** and prosperity,” the document says.
- If security interests are highlighted in the beginning, they are rather low in the list of the objectives of the EU Indo-Pacific strategy, which are listed as: “**Sustainable and inclusive prosperity**; green transition; ocean governance; digital governance and partnerships; connectivity; security and defence; human security”.
- Many paragraphs of the document are dedicated to values, including **human rights**.

India does not figure prominently in the policy document

- In terms of partnerships, **India does not figure very prominently**.
- By contrast, ASEAN is presented as “an increasingly important partner for the EU”.
- However, India appears in the list of the countries which already have an Indo-Pacific strategy and with which the **EU is interested in a deeper “engagement”**, a list made of ASEAN, Australia, India, Japan, New Zealand, the Republic of Korea, the UK and US.

- However, the document **does not mention the role India could play in value-chain diversification**, a top priority of the EU since the Covid-19 pandemic in particular.
- Yet, India is mentioned few pages later in a similar perspective when it is said that the EU will help “low and middle-income Indo-Pacific partners to secure access to the Covid-19 vaccine through the Covax facility and through other means”.
- What the French see as India’s main asset, **its strategic dimension**, is not central in the EU document.
- India is listed as the EU’s first partner only in one area: “under the project Enhancing Security Cooperation in and with Asia (ESIWA), which covers **counter-terrorism, cybersecurity, maritime security and crisis management**.”
- The pilot partners are India, Indonesia, Japan, the Republic of Korea, Singapore and Vietnam, with EU military experts already operating in Indonesia and in Vietnam.”

Understanding the German influence on the policy document

- Thus, the EU strategy for cooperation in the Indo-Pacific is more in tune with the German vision of the Indo-Pacific than with the French one.
- The fact that the German approach prevails in the EU document is a reflection of the **influence of Berlin’s weltanschauung (worldview) in Europe** – something Brexit has accentuated, Great Britain’s Indo-Pacific strategy being similar to France’s.
- But China’s attitude may force Germany – and the EU – to **change their mind in the near future**.

Conclusion

By and large, the Indo-Pacific strategy of the EU remains driven by economic considerations and India, whose main asset is geopolitical and even geostrategic, does not figure prominently in it.

2. INSACOG to track SARS-CoV-2 in sewage

In News : The decline in daily new infections across India has prompted INSACOG, the consortium of labs focused on sequencing coronavirus variants, to “prioritise” new surveillance approaches.

Key takeaways

- INSACOG will prioritise developing and expanding a SARS-CoV-2 sewage surveillance program.
- The CSIR-Centre for Cellular and Molecular Biology, which is also part of the INSACOG network, has since early 2020 been collecting sewage from large drains in cities to check for the presence of the virus.

Reason for sewage surveillance

- Because a large fraction of those afflicted by the virus are asymptomatic but are carriers of infection, their body fluids and stool often contain traces of the virus.
- Finding large proportions of it in public drains can often be a precursor to a fresh outbreak, with a rise in symptomatic infections.

What is Indian SARS-CoV-2 Genomic Consortia (INSACOG)?

- **Coordinated by:** Department of Biotechnology (DBT) along with MoH&FW, ICMR, and CSIR
- The consortium will ascertain the status of new variant of SARS-CoV-2 in the country.
- INSACOG will have a high level Inter-Ministerial Steering Committee.
- It will have a Scientific Advisory Group for scientific and technical guidance.
- **Aim:** To monitor the genomic variations in the SARS-CoV-2 on a regular basis through a multi-laboratory network.
- This vital research consortium will also assist in developing potential vaccines in the future.
- The consortium will also establish a sentinel surveillance for early detection of genomic variants with public health implication, and determine the genomic variants in the unusual events/trends (super-spreader events, high mortality/morbidity trend areas etc.).

3. The Other Quad

Context: Recently, the Foreign Ministers of India, the U.S., Israel and the UAE virtual met to discuss on exploring areas of cooperation.

Significance of the new quadrilateral meeting (India, Israel, UAE & USA)

- It is a strong manifestation of the changes in West Asian geopolitics.

- If Israel and the UAE did not even have formal diplomatic relations a year ago, their growing economic and strategic cooperation since Abraham Accords is opening up opportunities for other powers, including India.
- The four-nation meeting also points to **India's strategic desire to adopt a regional foreign policy** strategy towards West Asia, moving beyond its bilateralist approach.
- Over the years, India has built vibrant bilateral ties with all the countries in the grouping. So India adopting regional approach is natural evolution of this vibrancy given that there is **moderation of Israel's policy** towards Arab states.
 - Israel is one of India's top defence suppliers.
 - The UAE is vital for India's energy security and hosts millions of Indian workers.
 - India has deepened its relationship with US as was seen by signing foundational defence agreements and being part of another QUAD grouping.
- While it is too early to speak of the strategic significance of such a grouping, there are areas where it can deepen its engagement – trade, energy ties, fighting climate change and enhancing maritime security.

Challenges Ahead

- The U.S. is clearly seeking to lessen its footprint here as part of its pivot to East Asia to tackle China's rise, which is redrawing West Asia's traditional equations. India should be careful **not to get sucked into the many conflicts of West Asia**
- While the Abraham Accords made it easier for India to find common ground with the Israelis and UAE, the **contradiction between this Israel and Iran remains** as intense as ever. India should be mindful of this.
- With US withdrawing from Afghanistan, India will have to work closely with countries such as **Iran** to deal with the challenges emanating from a reduced American presence in the region.
- So the challenge before New Delhi is to retain a healthy relationship with Iran even as it seeks to build a stronger regional partnership with the U.S.-Israel-UAE bloc.

4. Role of Women in Armed Forces

In news: India has taken a number of steps to strengthen the role of women within the security setup in general and the armed forces in particular.

Government has taken evolutionary path to ensure equal participation of women in Armed Forces.

- Indian Army, Air Force and Navy began inducting women as short-service commission (SSC) officers in 1992. This was the first time when women were allowed to join the military outside the medical stream.
- One of the turning points for women in the military came in 2015 when Indian Air Force decided to induct them into the fighter stream.
- In 2020, the Supreme Court (SC) ordered the central government to grant permanent commission (PC) to women officers in the Army's non-combat support units on par with their male counterparts.
- In March 2021, the Indian Navy deployed four women officers on warships after a gap of 23 years.
- Two months later in May 2021 Indian Army got its first batch of 83 women soldiers, in the Corps of Military Police.
- From 2022 women will also be able to join the premier tri-service training institute, the National Defence Academy.

Challenges in bringing women officers at par with their male colleagues

- Though women officers are now allowed as pilot of fighter jets and leader of battleships but women officers in Army are not inducted in army's infantry and armoured divisions, due to fear of getting caught by enemy and torture. In Israel, too, women are mostly deployed in the military police and perimeter security rather than in actual combat.
- It is claimed that male troops, who are predominantly drawn from rural backgrounds, may be unwilling to "accept" a woman commander.
- Concerns are raised over physiology, motherhood and physical attributes of women officers.
- The differences in conditions of service for women officers and their men counterparts is perceived in favour as well as, against them. The women officers have concessions in physical standards during recruitment, in battle physical efficiency tests.
- Women officer appointments need extra considerations to hygiene, sensitivities and privacy issues while accommodating them. In Siachen, there are posts with only four soldiers. They sleep and share the same cramped post.
- Male officer's tenures in difficult field stations have increased, in adjusting women officers for spouse postings, child care leave.

The Way Forward

- Certain concessions given to women officers can be withdrawn, and they can be put through the field and rough appointments with troops, to be at par with male counterparts and be accepted as 'Leaders' and not 'Appointed Officers'.
- The selection for command assignments has to merit-based irrespective of gender.
- The selection for the command should be done through officer's confidential reports and closed promotion board, common for both genders, and the names and gender of the profile should be hidden from selection board

GS 3 : Economy, Science and Technology, Environment

5. World Economic Outlook (WEO) Report by IMF

The International Monetary Fund (IMF) has unveiled its 2nd World Economic Outlook (WEO) Report.

About WEO Report

- The WEO is a report by the IMF that analyzes key parts of the IMF's surveillance of economic developments and policies in its member countries.
- It also projects developments in the global financial markets and economic systems.
- The report comes out twice every year – April and October.
- It is based on a wide set of assumptions about a host of parameters – such as the international price of crude oil – and set the benchmark for all economies to compare one another with.

Key takeaways from the October 2021 WEO

- The central message was that the global economic recovery momentum had weakened due to the pandemic-induced supply disruptions.
- It is the increasing inequality among nations that IMF was most concerned about.
- The dangerous divergence in economic prospects across countries remains a major concern.

Reasons for the slowdown

There are two key reasons:

1. Large disparities in vaccine access
2. Differences in policy support

What about Employment?

- Employment around the world remains below its pre-pandemic levels.
- This reflects a mix of negative output gaps, worker fears of on-the-job infection in contact-intensive occupations, childcare constraints, labour demand changes due to automation etc.
- The main concern is the gap between recovery in output and employment which is likely to be larger in emerging markets and developing economies than in advanced economies.
- Further, young and low-skilled workers are likely to be worse off than prime-age and high-skilled workers, respectively.

Implications for India

- IMF has suggested that India's economic recovery is gaining ground.
- Some sectors such as the IT-services sectors have been practically unaffected by Covid, while the e-commerce industry is doing brilliantly.
- However, the recovery in unemployment is lagging the recovery in output (or GDP).
- This matters immensely for India as it reflects jobless growth.
- India was already facing a deep employment crisis before the Covid crisis, and it became much worse after it.
- Lack of adequate employment levels would again drag down overall demand and affect the growth momentum.

Threats to growth momentum

- **Usual unemployment:** Even before the pandemic, India already had a massive unemployment crisis.
- **Sector-wise recovery:** India is witnessing a K-shaped recovery. That means different sectors are recovering at significantly different rates.
- **Unorganized sector:** A weak recovery for the informal/unorganized sectors implies a drag on the economy's ability to create new jobs or revive old ones.
- **Contact-based services:** Such services which can create many more jobs, are not seeing a similar bounce-back.

How informal is India's economy?

- A NSO report titled 'Measuring Informal Economy in India' gives a detailed account of informal Indian economy.

- It shows the share of different sectors of the economy in the overall Gross Value Added and the share of the unorganised sector therein.
- The share of informal/unorganised sector GVA is more than 50% at the all-India level, and is even higher in certain sectors.
- It creates a lot of low-skilled jobs such as construction and trade, repair, accommodation, and food services.

This is why India is more vulnerable.

6. Pig kidney transplant in human patient

In News : For the first time, a pig kidney has been transplanted into a human without triggering immediate rejection by the recipient's immune system.

- This is a potentially major advance that could eventually help alleviate a dire shortage of human organs for transplant.

Key takeaways

- The procedure was done at NYU Langone Health in New York City.
- It involved use of a pig whose genes had been altered so that its tissues no longer contained a molecule known to trigger almost immediate rejection.
 - The genetically altered pig, dubbed GalSafe, was used as the donor.
- The recipient was a brain-dead patient with signs of kidney dysfunction whose family consented to the experiment before she was due to be taken off of life support.
- **Finding:** The team theorized that removing out the pig gene for a carbohydrate that triggers rejection – a sugar molecule, or glycan, called alpha-gal – would prevent the problem.
- **Future possibility:** The NYU kidney transplant experiment should pave the way for trials in patients with end-stage kidney failure, possibly in the next year or two,

Prelims Practice Questions

1. With reference to the Earthshot Prize, consider the following statements:

1. It is given for finding innovative solutions to Climate change.
2. It is bestowed by the United Nations Environment Programme (UNEP).
3. India's Vidyut Mohan has won the inaugural edition of this Prize.

Which of the above statements is/are correct?

- A 1 and 3 only
B 2 only
C 2 and 3 only
D 1, 2 and 3

Answer : A

Explanation

Earthshot Prize:

- The award will honour **five finalists between 2021 and 2030 for developing solutions to fight the climate crisis. Hence, statement 1 is correct.**
- **Each year five winners will be selected, one for each of the Five United Nations Sustainable Development Goals (SDGs) :**
 - Restoration and protection of nature
 - Air cleanliness
 - Ocean revival
 - Waste-free living
 - Climate action.
- It is an award set up by **Prince William and the Royal Foundation**, the charity founded by the Duke and Duchess of Cambridge, **and historian David Attenborough. Hence, statement 2 is not correct**
- **Vidyut Mohan**, a Delhi-based entrepreneur, won the **inaugural edition of The Earthshot Prize**. He won it for his innovative **technology that recycles agricultural waste to create fuel. Hence, statement 3 is correct.**

2. What was the main reason for the split in the Indian National Congress at Surat in 1907?

- a. Introduction of communalism into Indian politics by Lord Minto
- b. Extremists' lack of faith in the capacity of the moderates to negotiate with the British Government
- c. Foundation of Muslim League
- d. Aurobindo Ghosh's inability to be elected as the President of the Indian National Congress

Answer: b

Explanation:

Extremists questioned the ability of moderates to negotiate with the British Government through their ways and means. They lacked faith in the capacity of the moderates to negotiate with the British Government. Hence there was a disagreement between the moderates and extremists leading to the Surat split of 1907.

3. The term 'Allium negianum', recently seen in the news, refers to?

- A A newly discovered crater on the lunar surface.
- B A medicine developed for the treatment of Covid infection.
- C A rare animal species sighted in western ghats endemic to himalayan ecosystem.
- D A newly discovered onion species from Uttarakhand having various medicinal utilities

Answer : D

Explanation

- Recently, a newly discovered plant **Allium negianum, in Uttarakhand** has been confirmed to belong to the genus that includes **many staple foods such as onion and garlic**.
- Allium is one of the largest genera in Amaryllidaceae.
 - Amaryllidaceae is a family of herbaceous (connected with plants that have soft stems), mainly perennial and bulbous flowering plants.
- The genus Allium contains about 1,100 species worldwide, including many staple foods like onion, garlic, scallion, shallot and chives.
- The genus naturally occurs in dry seasons in the northern hemisphere and South Africa but the newly-identified species is restricted to the region of the western Himalaya.
- The scientific name Allium negianum **honours the late Dr. Kuldeep Singh Negi**, an eminent explorer and Allium collector from India.

- They are useful for **various medicinal purposes**.
- **Hence, option D is correct.**

4. Which of the following statements is/are correct?

1. Cabinet Committees find a mention in the Constitution under Article 77.
2. Appointments Committee of the Cabinet (ACC) is composed of the Prime Minister of India and the Minister of Home Affairs.

Options:

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: b

Explanation:

- Cabinet Committees are extra-constitutional in emergence, which means, they are not mentioned in the Indian Constitution. But, the Rules of Business provide for their formation.
- Cabinet Committees are not mentioned in the Constitution but are still constituted by governments.
- They are established by the PM as per the exigencies of the time and needs of the situation. Hence, their number, nomenclature, and composition vary from time to time.
- Appointments Committee of the Cabinet (ACC) is composed of the Prime Minister of India and the Minister of Home Affairs.

5. Consider the following statements with respect to the polar bear:

1. It is a hypercarnivore animal.
2. Its IUCN status is 'Vulnerable'.
3. Polar bears do not feed on penguins because they have a symbiotic relationship.

Which of the above statements is/are correct?

- a. 1 only

- b. 1 and 2 only
- c. 2 only
- d. 1, 2 and 3

Answer: b

Explanation:

- A hypercarnivore is an animal whose nutritional requirements are found only in animal meat. Moreover, these organisms might be able to ingest plant matter but they do not have the physiological mechanisms that are required to effectively digest it.
- The polar bear is a hypercarnivore animal.
- Polar Bear (*Urus maritimus*) is classified as “Vulnerable” in the IUCN Red List.
- Polar bears do not eat penguins as penguins do not make up the ecosystem of the Arctic.
- Yet another reason as to why polar bears would not have preferred to prey on penguins is that birds such as this cannot provide sufficient protein for the bears to survive the frigid Arctic weather.

6. Which of the following can reduce the Urban Heat Island Effect?

1. Planting gardens on urban rooftops
2. Increasing tree and vegetation cover
3. Darkening the streets to absorb more heat
4. Using impermeable materials for construction

Select the correct answer using the codes given below:

- a. 1 and 2 only
- b. 1, 2 and 3 only
- c. 1, 2 and 4 only
- d. 1, 2, 3 and 4

Answer : a

Heat Islands

- These are urbanized areas that experience higher temperatures than outlying areas.
- Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies.
- Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas.

Causes

- **Natural landscapes** - Natural landscapes which tend to cool the air by providing shade, transpiring water from plant leaves, and evaporating surface water are very low in urban areas.
- **Urban Material Properties** - Conventional human-made materials used in urban environments such as pavements or roofing tend to reflect less solar energy, and absorb and emit more of the sun's heat.
- **Urban Geometry** - In heavily developed areas, surfaces and structures obstructed by neighbouring buildings become large thermal masses that cannot release their heat readily.
- Cities with many narrow streets and tall buildings become urban canyons, which can block natural wind flow that would bring cooling effects.
- **Anthropogenic activities** - Vehicles, air-conditioning units, buildings, and industrial facilities all emit heat into the urban environment.
- **Weather and Geography** - Calm and clear weather conditions result in more severe heat islands by maximizing the amount of solar energy reaching urban surfaces and minimizing the amount of heat that can be carried away.

Measures to reduce Urban Island Effect

- Increasing tree and vegetation cover
- Growing plants, shrubs, grasses, and/or trees on a rooftop
- Installing a cool roof made of materials or coatings that significantly reflect sunlight and heat away from a building
- Using paving materials on sidewalks, parking lots, and streets that remain cooler than conventional pavements
- Smart growth practices which cover a range of development and conservation strategies that help protect the natural environment.

MAINS PRACTICES QUESTIONS

1Q. What is meant by 'Peri-Urban Agriculture'? How can it help in adapting to the challenges posed by climate change? (250 words)

Approach

- Describe 'Peri-Urban Agriculture'.
- Elaborate on its benefits in dealing with climate change.
- Give conclusion.

2Q. Discuss how the Shraman tradition marked the beginning of new religious and social movements in ancient India? (150 words)

Approach

- In the introduction briefly explain Shramanas and explain how they were different from existing brahmanical order.
- In the body, discuss in detail about the new social and religious movement brought about by the Shramanas traditions.
- In conclusion, mention the long term impacts of Shramanic traditions.