PAPER I, II, III – CURRENT AFFAIRS (INDIA) TEST (17.10.2021)
PART I

POSHAN ABHIYAAN

Introduction

Recently, the **Ministry for Women and Child Development** inaugurated **Poshan 2.0** and urged all **Aspirational Districts** to establish a **Poshan Vatika (nutrition garden)** during the N**utrition Month (Poshan Mah)** from 1st September.

- A month-long celebration of the **POSHAN Abhiyan** mission places special attention on **Severe Acute Malnourished** (SAM) children.

Key Points

About:

- It is an umbrella scheme covering the **Integrated Child Development Services (ICDS)** (Anganwadi Services, Poshan Abhiyan, Scheme For Adolescent Girls, National Creche Scheme).
- It was announced in **Union Budget 2021-22** by merging **supplementary nutrition programmes and the POSHAN Abhiyaan.**
- It was launched to strengthen nutritional content, delivery, outreach and outcome, with renewed focus on **developing practices that nurture health, wellness and immunity to disease and malnutrition** in the country.

Poshan Maah:

- Month of September is celebrated as POSHAN Maah since 2018 to **improve nutritional outcomes for children, adolescent girls, pregnant women, and lactating mothers.**

- It includes a month-long activities focussed on antenatal care, optimal breastfeeding, **Anaemia**, growth monitoring, girls education, diet, **right age of marriage**, hygiene and sanitation and eating healthy (Food Fortification).
- The activities focus on **Social and Behavioural Change Communication (SBCC)** and are based on Jan Andolan Guidelines.
    - SBCC is the strategic use of communication approaches to promote changes in knowledge, attitudes, norms, beliefs and behaviours.

Poshan Vatika:

- It's main objective is **to ensure supply of nutrition through organically home grown vegetables** and fruits simultaneously ensuring that the soil must also remain healthy.
- Plantation drives for Poshan Vatikas would be taken up by all the stakeholders in the **space available at anganwadis, school premises and gram panchayats.**

POSHAN Abhiyaan:

- Also called National Nutrition Mission, was launched by the government on the occasion of the **International Women's Day** on **8th March, 2018**.
- The Abhiyaan targets to **reduce Stunting, undernutrition, Anemia** (among young children, women and adolescent girls) and reduce low birth weight by **2%, 2%, 3% and 2% per annum respectively.**
- It also targets to **bring down stunting among children in the age group 0-6 years** from **38.4% to 25% by 2022.**

Scenario of Malnutrition in India:

- According to a 2010 **World Bank** report, India suffered an economic loss of Rs 24,000 crore due to lack of toilets. And that the health impact on the economy was 38 million dollars.
- According to an Assocham study of the year 2018, the **GDP (Gross Domestic Product)** suffered a decline of 4% due to malnutrition.
    - The report also found that **children suffering from malnutrition** after growing up **earn 20% less** than those who have had healthy childhoods.
- The number of **SAM children** in the country was earlier **80 lakh**, which has now come down to 10 lakh.

INDIA'S ACHIEVEMENT IN PARA-OLYMPICS

Key Highlights of Tokyo Paralympics

Name of the Game	Paralympics 2020
Govern By	International Paralympics Committee
Stadium Name	Olympic stadium Tokyo
Paralympics Schedule Date	24 August to 5 September 2021
Motto	United by Emotions
Nations	163
Official Website	www.paralympics.org

Tokyo Paralympics 2021 India

- There are a total of 54 Indian athletes who will play these nine international games at the Tokyo Paralympics 2021.
- A total of 4,537 players are participating in the Paralympics 2020.
- Tokyo Paralympics India's players are governed by the International Paralympic Committee.
- It is playing the 16th Summer Paralympics.

India's medal tally at Paralympics 2020:

India scripted history at Tokyo Paralympics 2020 with its best-ever medal tally of 19 medals, which includes five gold medals, eight silver medals, and six bronze medals. The 19 medals were clinched by Indian para-athletes across five sporting disciplines including shooting, javelin throw, badminton, athletics and archery.

List of Indian Paralympic Medal Winners

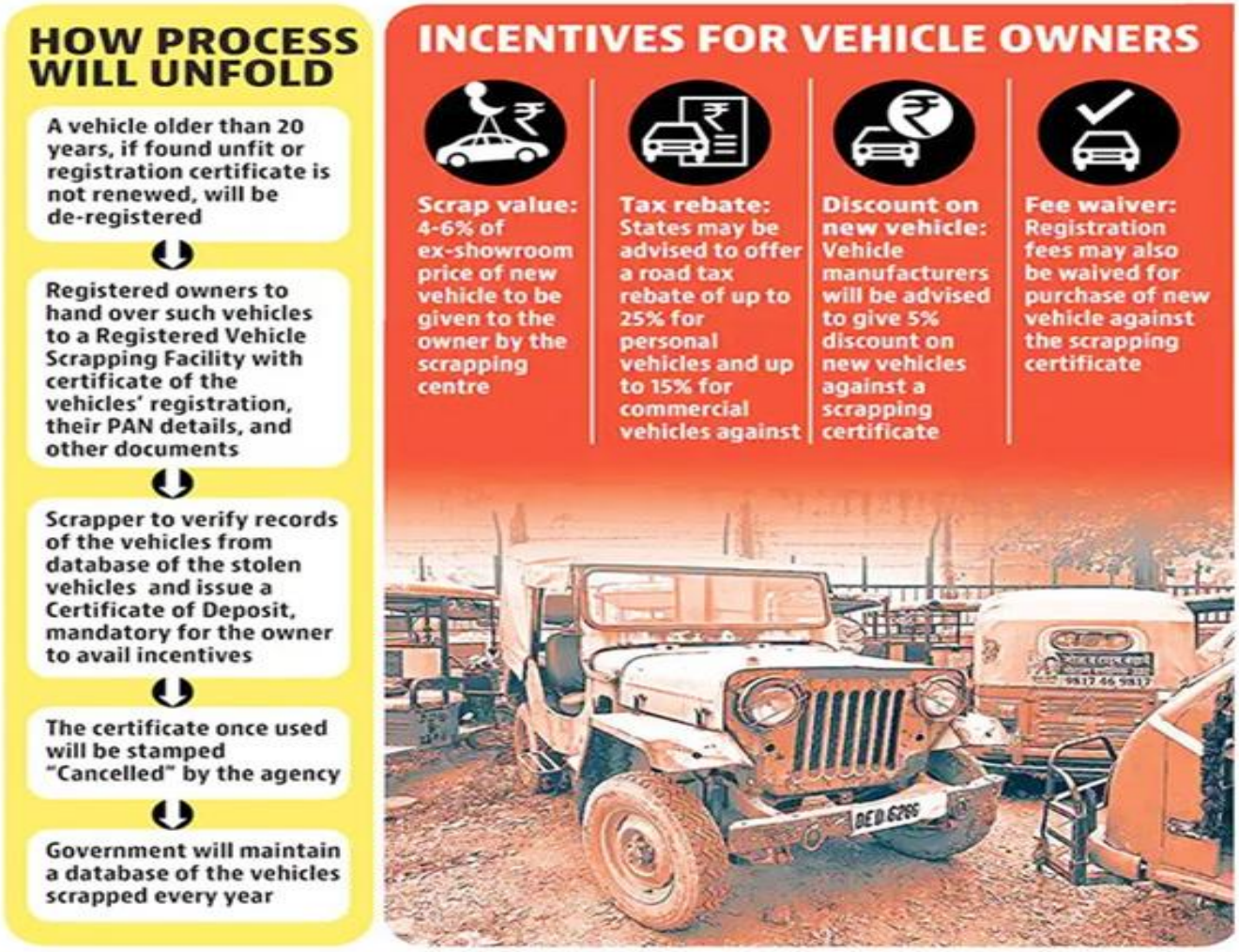
Event	Sportsperson	Medal
Women's 10m air rifle standing SH1 event	Avani Lekhara	Gold
F64 Javelin Throw	Sumit Antil	Gold
Badminton men's singles SL3	Pramod Bhagat	Gold
P4 mixed 50m air pistol SH1	Manish Narwal	Gold
Badminton men's singles SH6 -final	Krishna Nagar	Gold
Class 4 Table Tennis	Bhavina Patel	Silver
Badminton men's singles SL4 event	Suhas Yathiraj	Silver
T64 High Jump	Praveen Kumar	Silver
T42 High Jump	Mariyappan Thangavelu	Silver
F46 Javelin Throw	Devendra Jhajharia	Silver
F56 Discus Throw	Yogesh Kathuniya	Silver
T-47 High Jump	Nishad Kumar	Silver
P4 mixed 50m air pistol SH1	Singhraj Adana	Silver
F46 Javelin Throw	Sundar Singh Gurjar	Bronze
Men's 10m air pistol SH1	Singhraj Adhana	Bronze
T42 High Jump	Sharad Kumar	Bronze
R8 Women's 50m Rifle 3P SH1	Avani Lekhara	Bronze
Men's individual recurve archery	Harvinder Singh	Bronze
Badminton men's singles SL3	Manoj Sarkar	Bronze

NATIONAL AUTOMOBILE SCRAPPAGE POLICY – 2021

Introduction:

Recently, the Prime Minister while addressing the Investor Summit in Gujarat via video conferencing launched the **Vehicle Scrapping Policy/National Automobile Scrappage Policy.**

- The Summit will **invite investment for setting up vehicle scrapping infrastructure** under the Vehicle Scrapping Policy.
- The Vehicle Scrapping Policy was **announced in March 2021** by the government.
- The policy is estimated to cover **51 lakh Light Motor Vehicles (LMVs) that are above 20 years of age** and another **34 lakh LMVs above 15 years of age.**



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Key Points

- **Aim:**
    - Reducing the population of old and defective vehicles, bringing down vehicular air pollutants, improving **road and vehicular safety.**
- **Provisions:**
    - **Fitness Test:**
        - **Old vehicles** will have to **pass a fitness test before re-registration** and as per the policy **government commercial vehicles more than 15 years old** and **private vehicles which are over 20 years old will be scrapped.**
        - Old vehicles will be tested at authorized **Automated Fitness Center** and will **not be scrapped merely on the basis of age.**
            - Emission test, braking system, safety components will be tested and the vehicles which fail in the fitness test will be scrapped.
            - If the **old vehicle passes the test,** the owner can continue to use it, but the **charges for reregistration will be much steeper.**
            - The Union Road and Transport Ministry has also **issued rules for registration procedure for scrapping facilities,** their powers, and scrapping procedure to be followed.
    - **Road Tax Rebate:**
        - The state governments may be advised to **offer a road-tax rebate of up to 25% for personal vehicles** and up to **15% for commercial vehicles to provide incentive to owners of old vehicles** to scrap old and unfit vehicles.
    - **Vehicle Discount:**
        - Vehicle manufacturers will also give a **discount of 5% to people who will produce the 'Scrapping Certificate'** and registration fees will be waived off on the purchase of a new vehicle.
    - **Disincentive:**
        - As a disincentive, **increased re-registration fees** would be applicable **for vehicles 15 years or older** from the initial date registration.

Significance:

Creation of Scrap yards:

- It will lead to **creation of more scrap yards** in the country and effective **recovery of waste from old vehicles.**
- India had to **import 23,000 crore worth of scrap steel** during the last year as India's scrapping is not productive and **India is not able to recover energy and rare earth metals.**

- **Employment:**

  - In the new fitness centers, **35 thousand people will get employment** and an investment of Rs 10,000 crores will be pumped in.

- **Improved Revenue:**

  - This will **boost sales of heavy and medium commercial vehicles** that had been in the contraction zone as a result of economic slowdown triggered by the **bankruptcy of IL&FS** (Infrastructure Leasing & Financial Services) and **Covid-19 pandemic.**
  - The government treasury is expected to get around Rs 30,000 to 40,000 crores of money through **Goods and Services Tax (GST)** from this policy.

- **Reduction in Prices:**

  - **Prices of auto components would fall** substantially with the recycling of metal and plastic parts.
  - As scrapped materials will get cheaper the production cost of the vehicle manufacturers will also reduce.

- **Reduce Pollution:**

  - It will play a **major role in modernising the vehicular population** as it will help in **phasing out the unfit and polluting vehicles** across the country and **promote a circular economy and waste to wealth campaign.**
  - As **older vehicles pollute the environment 10 to 12 times** more, and estimated that 17 lakh medium and heavy commercial vehicles are more than 15 years old.

NATIONAL MISSION ON EDIBLE OIL-OIL PALM

Introduction

Recently, the Prime Minister has announced a new national initiative on palm oil production to help increase farm incomes.

- The scheme, called National Edible Oil Mission-Oil Palm (NMEO-OP), **for self-reliance in edible oil** involves investment of over Rs. 11,000 crore (over **a five year period**).

Key Points

- **Aims:**
  - To **harness domestic edible oil prices** that are dictated by expensive palm oil imports.
  - To **raise the domestic production of palm oil** by three times to 11 lakh MT by 2025-26.
    - This will involve **raising the area under oil palm cultivation** to 10 lakh hectares by 2025-26 and 16.7 lakh hectares by 2029-30.
- **Features:**
  - The **special emphasis of the scheme will be in India's north-eastern states and the Andaman and Nicobar Islands** due to the conducive weather conditions in the regions.
  - Under the scheme, **oil palm farmers will be provided financial assistance** and will get remuneration under a price and viability formula.
- **Significance of the Scheme:**
  - **Reduction in Import dependence:**
    - It is expected to incentivise production of palm oil to reduce dependence on imports and help farmers cash in on the huge market.
    - India is the **largest consumer of vegetable oil in the world.** Of this, palm oil imports are almost 55% of its total vegetable oil imports.
  - **Rise in Yields:**
    - India **produces less than half of the roughly 2.4 crore tonnes of edible oil that it consumes annually.** It imports the rest, buying palm

oil from Indonesia and Malaysia, soyoil from Brazil and Argentina, and sunflower oil, mainly from Russia and Ukraine.

- In India, **94.1% of its palm oil is used in food products,** especially for cooking purposes. This makes palm oil extremely **critical to India's edible oils economy.**

Edible Oil Economy

- There are **two major features,** which have significantly contributed to the development of this sector. One was the **setting up of the Technology Mission on Oilseeds in 1986** which was **converted into a National Mission on Oilseeds and Oil Palm (NMOOP) in 2014.**
  - Further it was **merged with <u>NFSM (National Food Security Mission).</u>**
- This gave a thrust to Government's efforts for augmenting the production of oilseeds. This is evident by the very impressive **increase in the production of oilseeds from about 11.3 million tons in 1986-87 to 33.22 million tons in 2019-20.**
- The **other dominant feature** which has had significant impact on the present status of edible oilseeds/oil industry has been the **program of liberalization under which the Government's economic policy allows greater freedom to the open market and encourages healthy competition and self regulation** rather than protection and control.
- The **Yellow Revolution** is one of the colour revolutions that was launched to increase the production of Edible oilseeds in the country to meet domestic demand.
- The government has also launched the **Kharif Strategy 2021 for oilseeds.**
  - It will bring an additional 6.37 lakh hectare area under oilseeds and is likely to produce 120.26 lakh quintals of oilseeds and edible oil amounting to 24.36 lakh quintals.
- **Oils Commonly Used in India:** Groundnut, mustard, rapeseed, sesame, safflower, linseed, niger seed, castor are the major traditionally cultivated oilseeds.
  - Soybean and sunflower have also assumed importance in recent years.
  - Coconut is most important amongst the plantation crops.

NET-ZERO EMISSIONS BY 2050

Introduction

Recently, **The Energy and Resources Institute (TERI) and Shell** have released a report titled **"India: Transforming to a Net-Zero Emissions Energy System".**

- It illustrates a pathway to steer the **domestic energy system towards net-zero emissions by 2050,** while achieving India's sustainable **economic development ambitions.**

Key Points

- **Possible yet Challenging:** India needs a suitable policy and innovation-driven context to deploy clean energy technologies on a massive scale.
- **Increase Renewables:** The **share of renewables** in the power mix needs to **increase to 90% for India to meet its net-zero goal.** This is around 11% in 2019-2020.
- **Coal-fired Power Plants:** India must phase out its coal-fired power plants and remove it altogether by 2050.
- **Technology Access:** The availability, or **absence, of Carbon Capture and Storage (CCS)** would **define the shape of India's energy systems.** If CCS technology were commercially unviable:
  - Biofuels would have to account for 98% of India's oil, compared to a negligible share currently.
  - Over two-thirds of India's industrial and transport energy use would have to be electrified, compared to less than 20% share of electricity in industrial energy use and negligible share in transport energy use as of now.
- **Suggestion by TERI:**
  - **Focus on Energy Efficiency:**
    - Will need **energy efficient buildings, lighting, appliances and industrial practices** to meet the net-zero goal.
  - **Use of Biofuels:**
    - Can help reduce emissions from light commercial vehicles, tractors in agriculture.
    - In aviation, the only practical solution for reducing emissions is greater use of biofuels, until hydrogen technology gains scale.

- **Carbon Sequestration:**
  - **India will** have to **rely on natural and man-made carbon sinks to soak up those emissions.** Trees can capture 0.9 billion tons, the country will need carbon capture technologies to sequester the rest.
- **Carbon Pricing:**
  - India, which already taxes coal and petroleum fuels, should consider putting a tax on emissions to drive change.
- **Deploying lower-carbon Energy:**
  - There are four main types of low-carbon energy: wind, solar, hydro or nuclear power. The first three are renewable, which means these are good for the environment – as natural resources are used (such as wind or sun) to produce electricity.
  - Deploying lower carbon energy would help address both domestic and international climate challenges while simultaneously improving the economic well-being of India's citizens.

AREAS OF ACTION IN THE NEXT 30 YEARS

Accelerate clean technologies

1. Grow the power sector by a factor of more than four in 30 years, dominated by renewables.

2. Target 13% hydrogen in final energy, including as a fuel for industry and transport.

3. Transform bioenergy, with liquid biofuels surpassing petroleum products by 2040 to fuel industry and transport, including hard-to-abate sectors such as aviation.

Support energy-efficient and lower-carbon choices

4. Invest in processes, technologies and end uses to improve energy intensity per unit of GDP by almost 60% by 2050, a rate of improvement nearly twice historical levels.

5. Adopt economic mechanisms, such as carbon pricing, to drive the reallocation of capital and resources and support the commercialisation of new fuels and technologies.

Remove unavoidable emissions

6. Capture and store 400 megatonnes of CO_2 using CCS by 2050; construction needs to begin in the near-term.

7. Remove 0.9 gigatonnes of CO_2e/year by 2050; this requires at least 30-40 million hectares of additional forest cover (an area equivalent to Rajasthan) and plant more trees outside of forests.

Net-Zero Emissions

- **About:**
    - 'Net zero emissions' refers to achieving an overall balance between **greenhouse gas emissions** produced and greenhouse gas emissions taken out of the atmosphere.
    - First, human-caused emissions (like those from fossil-fueled vehicles and factories) should be reduced as close to zero as possible. Second, any remaining GHGs should be balanced with an equivalent amount of carbon removal, for example by restoring forests.
- **Time-Frame:**
    - The time frame for reaching net-zero emissions differs significantly if one is referring to CO_2 alone, or referring to all major GHGs (including methane, nitrous oxide, and HFCs).
        - For non-CO_2 emissions, the net-zero date is later because some of these emissions — such as methane from agricultural sources — are somewhat more difficult to phase out.
        - In scenarios that limit warming to **1.5 degrees C,** carbon dioxide (CO_2) reaches **net-zero on average by 2050.** Total GHG emissions reach net-zero between 2063 and 2068.
- **Global Scenario:**
    - As of June 2020, twenty countries and regions have adopted net-zero targets. This list only includes countries that adopted a net-zero target in law or another policy document.
    - The **Kingdom of Bhutan is already carbon-negative,** i.e. absorbs more CO_2 than it emits.
- **Indian Scenario:**
    - **Emissions:** India's per capita CO_2 emissions – at 1.8 tonnes per person in 2015 – are around a **ninth of those in the USA** and around a **third of the global average of 4.8 tonnes per person.**
        - However, overall, India is now the **planet's third-largest emitter of CO_2,** behind China and the USA.

- **Debate around Commitment:** There is global pressure on India to commit net-zero emissions by 2050.
  - On one hand, few argue that India should pledge to reduce its "net" emissions (emissions minus uptake of emissions) to zero by 2050, backed by a climate law. This will make India "hypercompetitive", attract investment and create jobs.
    - **For example,** more ambitious policies to promote electric vehicles along with cleaner electricity and hydrogen electrolysis can create jobs in the auto manufacturing industry and in the electricity and construction sectors
  - While, on the other hand, there is a long-standing principle of **"common but differentiated responsibility"** that requires richer countries to lead and argue against any pledge that risks prematurely limiting Indian energy use for development.
- **Sectors that are the largest emitters:**
  - Energy>Industry>Forestry>Transport>Agriculture>Building

PM'S 75TH INDEPENDENCE DAY SPEECH

Introduction

Commemorating the **75th Independence Day**, Prime Minister announced a slew of measures/initiatives and called for **making the next 25 years a glorious one for India**.

- A day before Independence Day, the Prime minister also declared 14th August would now be observed as **Partition Horrors Remembrance Day.**

Key Points

- **Gati Shakti Master Plan:**
  - It is a Rs.100 lakh-crore project for **developing 'holistic infrastructure'.**
  - It will help **raise the global profile of local manufacturers** and help them compete with their counterparts worldwide. It also **raises possibilities of new future economic zones**.
  - It will be a **source of employment** opportunities for the youth in future.

- **National Hydrogen Mission:**
  - The **National Hydrogen Mission** and the **green hydrogen** sector will give India a quantum jump in meeting its climate targets.
    - **Green hydrogen** is produced by splitting water into hydrogen and oxygen using an electrolyzer powered by electricity from renewable energy sources such as wind and solar.
  - It will also **help India to become energy independent.** Today India spends over Rs 12 lakh crore on importing energy.
- **Rice Fortification Plan:**
  - The rice distributed under various government schemes will be **fortified** by 2024. It includes the **Public Distribution System (PDS)**, **Mid-Day Meals** in schools and **Integrated Child Development Scheme (ICDS)**.
  - It is a significant initiative as the country has high levels of malnutrition among women and children.
    - According to theMinistry of Consumer Affairs, Food and Public Distribution, **every second woman in the country is anaemic** and **every third child is stunted**.
    - India ranks 94 out of 107 countries and is in the 'serious hunger' category on the **Global Hunger Index (GHI)**.
  - Six states, including Maharashtra and Gujarat, **have started distributing fortified rice as part of the pilot scheme**.
    - Food fortification or enrichment is the process of **adding micronutrients to food.**
- **Vande Bharat Trains:**
  - 75 **Vande Bharat' trains** will connect different parts of the country in 75 weeks to mark the ongoing **'Azadi ka Amrit Mahotsav'.**
  - Vande Bharat, the **indigenous semi-high speed train** set, is being given a boost, with the Railways gearing to roll out at least 10 of them, linking around 40 cities, by August 2022 to commemorate 75 years of Independence.
- **Sainik Schools for Girls:**
  - All Sainik Schools in the country will now be open for girls also. At present, 33 **Sainik schools are operating in the country**.

- Sainik schools are **run by the Sainik Schools Society which is under the administrative control of the Ministry of Defence.**
- The aim of establishing Sainik schools was **to prepare the students from an early age for their entry into the Indian armed forces.**

- **E-commerce platform for Self-Help Groups:**
  - This digital platform will **connect the products of women Self-Help Groups with people in far flung areas of the country as well as abroad** and it will have far-reaching consequences.
  - The government will create an e-commerce platform to ensure a huge market in the country and abroad for their products.
    - More than eight crore women in the villages are associated with Self-Help Groups and they design top-end products.
- **Partition Horrors Remembrance Day:**
  - **14th August** would now be observed as **Partition Horrors Remembrance Day**.
  - This day will remind Indians of the **need to remove the poison of social divisions, disharmony** and further **strengthen the spirit of oneness, social harmony and human empowerment**.

AYUSHMAN BHARAT DIGITAL MISSION

Introduction

Recently, the **Ayushman Bharat Digital Mission** was launched by the Prime Minister through a video conference.

- The nationwide rollout of the project coincides with the **National Health Authority (NHA)** celebrating the third anniversary of **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)**.
- **Ayushman Bharat** is a flagship scheme of India which was launched as recommended by the **National Health Policy 2017**, to achieve the vision of **Universal Health Coverage (UHC)**.

Key Points

- **About:**

  - It aims to provide **digital health IDs** for all Indian citizens to help hospitals, insurance firms, and citizens access health records electronically when required.
  - The **pilot project of the Mission** had been announced by the Prime Minister from the ramparts of the **Red Fort on 15th August 2020.**

    - The project is being **implemented in the pilot phase in six States & Union Territories.**

- **Features of the Mission:**
  - **Health ID:**
    - It will be issued **for every citizen** that will also work as their health account. This **health account** will contain details of every test, every disease, the doctors visited, the medicines taken and the diagnosis.
    - Health ID is **free of cost, voluntary**. It will help in doing analysis of health data and lead to better planning, budgeting and implementation for health programs.
  - **Healthcare Facilities & Professionals' Registry:**
    - The other major component of the programme is creating a **Healthcare Professionals' Registry (HPR)** and **Healthcare Facilities Registry (HFR)**, allowing easy electronic access to medical professionals and health infrastructure.
    - The HPR will be a comprehensive repository of all healthcare professionals involved in delivering healthcare services across both modern and traditional systems of medicine.
    - The HFR database will have records of all the country's health facilities.
  - **Ayushman Bharat Digital Mission Sandbox:**
    - The Sandbox, created as a part of the mission, **will act as a framework for technology and product testing** that will help organisations, including private players intending to be a part of the **national digital health ecosystem** become a **Health Information Provider or Health Information User** or efficiently link with building blocks of Ayushman Bharat Digital Mission.

- **Implementing Agency:**
  - **National Health Authority (NHA)** under the Ministry of Health and Family Welfare.
- **Expected Benefits:**
  - **Ensure ease of doing business** for doctors and hospitals and healthcare service providers.
  - **Enable access and exchange of longitudinal health records** of citizens with their consent.
  - **Create integration within the digital health ecosystem**, similar to the role played by the **Unified Payments Interface (UPI)** in revolutionising payments.

NITI AAYOG'S STRATEGY OF FLOOD MANAGEMENT

A NITI Aayog report has suggested effective and long-lasting strategies for flood control and management that involve structural and non-structural measures along with the use of modern technologies.

The report stressed on adopting less expensive non-structural measures like flood forecasting, flood plain zoning, flood proofing to accommodate high spat of water in majority of the places.

The report of the committee constituted for Formulation of Strategy for Flood Management Works in Entire Country and River Management Activities and Works Related to Border Areas (2021-26) further said the room of the river should be provided by taking up the measures like creating wetlands, lakes and check dams.

The committee, headed by Niti Aayog Vice Chairman Rajiv Kumar, also proposed National Water Model for India which can be built with the help of some scalable models.

The committee is of the view to provide priority to non-structural measures to mitigate the floods and shall go for long term and medium-term structural measures when and where those are unavoidable.

"In majority of the places, less expensive non-structural measures like flood forecasting, flood plain zoning, flood proofing etc should be adopted to accommodate high spat of water," the report said.

It also stressed on the use of advanced technology like artificial intelligence, satellites, remote sensing and GIS for flood forecasting and warning systems.

"The committee has also proposed to extend the Flood Management and Border Area Programme (FMBAP) for the period of 2021-26, co-terminus with the period of 15th Finance Commission with the provision of inclusion of new projects for funding under the scheme," the report said.

According to the report, some changes like revisions in monetary limits for appraisal of flood control schemes etc have been suggested in the scheme for its successful implementation.

"The committee has also advocated the formation of Flood Management Plans which can also help in rescue and relief works during and after the floods" it said.

The report also pitched for the policy to provide flood cushion in the existing dams to accommodate peak time flood so that the tragedy like Kerala floods doesn't repeat itself.

It also pointed out that the construction of embankments/levees should be taken up as the medium-term measures to provide protection to the railway lines, national highways, valuable assets or international boundary.

Noting that the long-term structural measures like dams, reservoirs, detention basins etc have been used in few cases, the report said the long-term measures should be taken up in the cases where there is compulsion for protection of larger area, population or assets.

NATIONAL CLIMATE VULNERABILITY ASSESSMENT REPORT

Introduction

The **Department of Science and Technology** has released a report titled **'The Report Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework'.**

Key Points

- **About the Report:**
  - It **identifies the most vulnerable states and districts in India with respect to current climate risk** and key drivers of vulnerability.
  - It **aids in prioritizing adaptation investment**, developing and implementing adaptation programs.
  - The assessment is unique as it uses a common framework across the states & union territory to make them comparable thereby **empowering the decision-making capabilities** at the policy and administrative levels.
  - Some **key indicators** for the assessment include percentage of population living below the poverty line; income share from natural resources; the proportion of marginal and small landholdings, women's participation in the workforce; density of healthcare workers etc.
  - It is **part of the capacity building programme** under the two missions of the **National Action Plan on Climate Change** (total 8 missions).
    - National Mission on Sustaining the Himalayan Ecosystem (NMSHE)
    - National Mission on Strategic Knowledge for Climate Change (NMSKCC).
- **Key Findings of the Report:**
  - **Highly Vulnerable States:** It identified Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal as states highly vulnerable to climate change.
  - **Lower-middle Vulnerable States:** Himachal Pradesh, Telangana, Sikkim and Punjab.
  - **Low Vulnerable States:** Uttarakhand, Haryana, Tamil Nadu, Kerala, Nagaland, Goa and Maharashtra.

- **Highly Vulnerable Districts:** Among all states, **Assam, Bihar, and Jharkhand have over 60% districts** in the category of **highly vulnerable districts.**

  - Vulnerability scores in all the districts of India lies in a very small range. It shows that **all districts & states are somewhat vulnerable with respect to current climate risk in India.**

Significance of the Findings:

- The assessments can be used for India's reporting on the **Nationally Determined Contributions (NDCs)** under the **Paris Agreement.**

  - **NDCs** embody efforts by each country **to reduce national emissions and adapt to the impacts of climate change.**
- These assessments will help support India's National Action Plan on Climate Change.
- It will contribute to the development of more targeted climate change projects and will support the implementation of the **State Action Plans on Climate Change.**
- It will help in developing adaptation projects for the Green Climate Fund, **Adaptation Fund and funds from multilateral and bilateral agencies.**
- It will **also benefit climate-vulnerable communities** across India through development of better-designed climate change adaptation projects.

CLIMATE CHANGE ACTION PLAN 2021-2025 BY WORLD BANK GROUP

Introduction:

The World Bank Group today announced its new Climate Change Action Plan that aims to deliver record levels of climate finance to developing countries, reduce emissions, strengthen adaptation, and align financial flows with the goals of the Paris Agreement. The Action Plan for 2021-25 broadens World Bank Group efforts from investing in "green" projects to helping countries fully integrate their climate and development goals. The Plan also comes as countries seek sustainable pathways out of the disruption caused by the COVID-19 pandemic.

"Our new Action Plan will identify and prioritize action on the most impactful mitigation and adaptation opportunities, and we will drive our climate finance accordingly. This means helping the largest emitters flatten the emissions curve and helping countries achieve successful adaptation and resilience to climate change," said **World Bank Group President David Malpass.** *"We will be delivering climate finance at record levels and seeking solutions that achieve the most impact."*

Key highlights of the Action Plan include:

- Providing major increases in climate finance. The World Bank is already the largest multilateral provider of climate finance for developing countries. The Plan includes a commitment to increase delivery to an average of 35% of total World Bank Group financing for climate over the duration of the Plan. At least 50% percent of International Development Association (IDA) and International Bank for Reconstruction and Developing (IBRD) climate finance will support adaptation.

- Identifying and prioritizing opportunities for high-impact climate action to inform future World Bank Group climate engagements and investments. A new core diagnostic tool, the Country Climate and Development Report (CCDR), will help countries align climate action and development efforts and absorb new climate-related technologies as they emerge.

- Boosting support to countries for implementing and updating their Nationally Determined Contributions and Long-Term Strategies pursuant to the Paris Agreement; and adjusting incentives by reducing subsidies for and increasing taxation of greenhouse gas emissions.

- Catalyzing and mobilizing private capital for climate action; stepped up efforts to develop carbon credit markets, green bonds and loan markets in countries; and support for global public goods in the poorest countries through IDA funds as well as other sources.

- Prioritizing action in key systems—energy; agriculture, food, water, and land; cities; transport; and manufacturing—that must be transformed to address climate change, achieve a resilient and low-carbon future, and support the protection of natural capital and biodiversity. The Action Plan will place a strong emphasis on supporting a "just transition" out of coal.

- Aligning all World Bank Group financing flows with the objectives of the Paris Agreement to support countries' climate commitments. The World Bank – comprising of the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) – will align all new operations starting July 1, 2023. For the World Bank Group's private sector

development arms, IFC and MIGA, 85 percent of Board approved real sector operations will be aligned starting July 1, 2023, and 100 percent of these operations starting July 1, 2025, two fiscal years later.

The World Bank Group will regularly update its Board on the implementation of the Action Plan.

The new Action Plan builds on the World Bank Group's achievements under its first Climate Change Action Plan, which delivered over $83 billion in climate finance over five years, including a record $21.4 billion in 2020.

NATIONAL MONETISATION PIPELINE

Introduction

Recently, the government of India has launched the **National Monetisation Pipeline (NMP)**. The NMP **estimates aggregate monetisation potential of Rs 6 lakh crores through core assets of the Central Government, over a four-year period**, from FY 2022 to FY 2025.

- The plan is in line with **Prime Minister's strategic divestment policy**, under which the government will retain presence in only a few identified areas with the rest tapping the private sector.

Key Points

- **About the NMP:**
  - It **aims to unlock value in brownfield projects by engaging the private sector, transferring to them revenue rights and not ownership in the projects**, and **using the funds generated for infrastructure creation across the country.**
  - The NMP has been announced to provide a **clear framework for monetisation** and give potential investors a ready list of assets to generate investment interest.
  - **Union Budget 2021-22** has identified monetisation of operating public infrastructure assets as a key means for sustainable infrastructure financing.
  - Currently, **only assets of central government line ministries and Central Public Sector Enterprises (CPSEs) in infrastructure sectors** have been included.
  - The government has stressed that these are brownfield assets, which **have been "de-risked" from execution risks**, and therefore should encourage private investment.
  - **Roads, railways and power sector assets will comprise over 66% of the total estimated value of the assets to be monetised**, with the remaining upcoming sectors including telecom, mining, aviation, ports, natural gas and petroleum product pipelines, warehouses and stadiums.
    - In terms of annual phasing by value, 15% of assets with an indicative value of Rs 0.88 lakh crore are envisaged for rollout in the current financial year.
  - The NMP **will run co-terminus with the Rs 100 lakh crore National Infrastructure Pipeline (NIP)** announced in December 2019.
    - The estimated amount to be raised through monetisation is around 14% of the proposed outlay for the Centre of Rs 43 lakh crore under NIP.
    - NIP will enable a forward outlook on infrastructure projects which will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive. NIP **includes economic and social infrastructure projects.**

- Other Initiatives for Infrastructure Development include **Scheme of Financial Assistance to States for Capital Expenditure**, **Industrial corridors**, etc.

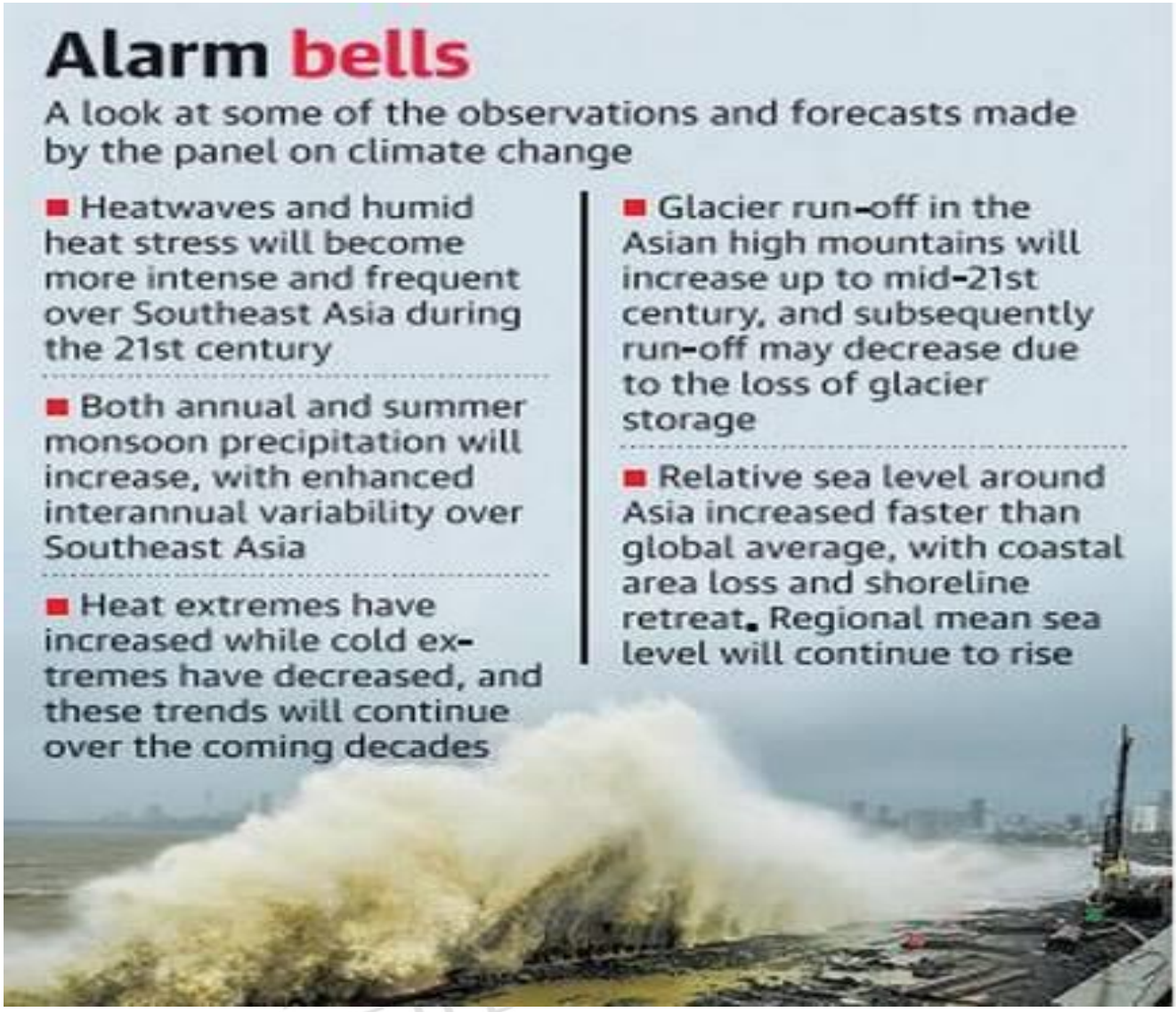
- **Associated Challenges:**
  - **Lack of identifiable revenue streams** in various assets.
  - The **slow pace of privatisation in government companies** including Air India and BPCL.
    - Further, less-than-encouraging bids in the recently launched PPP initiative in trains indicate that attracting private investors' interest is not that easy.
  - **Asset-specific Challenges:**
    - Low Level of capacity utilisation in gas and petroleum pipeline networks.
    - Regulated tariffs in power sector assets.
    - Low interest among investors in national highways below four lanes.
    - Konkan Railway, for instance, has multiple stakeholders, including state governments, which own stake in the entity.

IPCC- 6TH ASSESSMENT REPORT

Introduction

Recently, the **Intergovernmental Panel on Climate Change (IPCC)** released the first part of its **Sixth Assessment Report (AR6)** titled **Climate Change 2021: The Physical Science Basis.**

- It is prepared by the scientists of **Working Group-I.** The **two remaining parts would be released in 2022.**
- It noted that global **net-zero by 2050** was the **minimum required to keep the temperature rise to 1.5 degree Celsius.**
- It sets the stage for the **Conference of Parties (CoP)** 26 conference in **November 2021.**



Key Points

- **Average Surface Temperature:**
  - The average surface temperature of the Earth will **cross 1.5 °C over pre-industrial levels in the next 20 years** (By 2040) and **2°C by the middle of the century** without sharp reduction of emissions.
    - In 2018, the IPCC's **Special Report Global Warming of 1.5°C** had estimated that two-fifths of the global population lived in regions with warming above 1.5°C.
  - The **last decade was hotter than any period of time in the past 1,25,000 years.** Global surface temperature was 1.09°C higher in the decade between 2011-2020 than between 1850-1900.
  - This is the **first time** that the IPCC has said that the **1.5°C warming was inevitable even in the best-case scenario.**

- **Carbon dioxide (CO_2) Concentrations:**
  - They are the **highest in at least two million years.** Humans have emitted 2,400 billion tonnes of CO_2 since the late 1800s.
  - Most of this can be **attributed to human activities, particularly the burning of fossil fuels.**
    - The effect of human activities has **warmed the climate at a rate unprecedented in 2,000 years.**
  - The world has already **depleted 86% of it's available carbon budget.**
- **Impact of Global Warming:**
  - **Sea- Level Rise:**
    - **Sea-level rise** has **tripled compared with 1901-1971.** The Arctic Sea ice is the lowest it has been in 1,000 years.
    - Coastal areas will see continued sea-level rise throughout the 21st century, resulting in **coastal erosion and more frequent and severe flooding in low-lying areas.**
    - About 50% of the sea level rise is **due to thermal expansion** (when water heats up, it expands, thus warmer oceans simply occupy more space).
  - **Precipitation & Drought:**
    - Every additional 0.5 °C of warming will **increase hot extremes, extreme precipitation and drought.** Additional warming will also weaken the Earth's carbon sinks present in plants, soils, and the ocean.
  - **Heat Extremes:**
    - Heat extremes have increased while cold extremes have decreased, and these trends will continue over the coming decades over Asia.
  - **Receding Snowline & Melting Glaciers:**
    - Global Warming will have a **serious impact on mountain ranges across the world, including the Himalayas.**
    - The freezing level of mountains are likely to change and snowlines will retreat over the coming decades.
    - Retreating snowlines and melting glaciers is a cause for alarm as **this can cause a change in the water cycle, the precipitation patterns, increased floods as well as an increased scarcity of water** in the future in the states across the Himalayas.

- The level of temperature rise in the mountains and glacial melt is unprecedented in 2,000 years. The retreat of glaciers is now attributed to anthropogenic factors and human influence.

- **Indian Sub-continent Specific Findings:**
  - **Heatwaves: Heatwaves** and humid heat stress **will be more intense and frequent during the 21st century** over South Asia.
  - **Monsoon:** Changes in monsoon precipitation are also expected, with both annual and summer monsoon precipitation projected to increase.
    - The **South West Monsoon has declined** over the past few decades **because of the increase of aerosols,** but **once this reduces, we will experience heavy monsoon rainfall.**
  - **Sea Temperature:** The **Indian Ocean,** which includes the Arabian Sea and Bay of Bengal, has **warmed faster than the global average.**
    - The **sea surface temperature over Indian ocean is likely to increase by 1 to 2 °C** when there is 1.5°C to 2°C global warming.
    - In the Indian Ocean, the sea temperature is heating at a higher rate than other areas, and therefore may influence other regions.
- **Net- Zero Emissions:**
  - **About:**
    - It means that **all man-made greenhouse gas emissions must be removed from the atmosphere through reduction measures,** thus reducing the Earth's net climate balance, after removal via natural and artificial sink, to zero.
    - This way humankind would be **carbon neutral and global temperature would stabilise.**
  - **Current Situation:**
    - Several countries, **more than 100, have already announced their intentions to achieve net-zero emissions by 2050.** These include major emitters like the United States, China and the **European Union.**
    - **India, the third largest emitter in the world,** has been holding out, arguing that it was already doing much more than it was required to do, performing better, in relative terms, than other countries.

- Any further burden would **jeopardise its continuing efforts to pull its millions out of poverty.**

- IPCC has informed that a global net-zero by 2050 was the minimum required to keep the temperature rise to 1.5°C. **Without India, this would not be possible.**

  - Even **China, the world's biggest emitter, has a net-zero goal for 2060.**

KIGALI AMENDMENT

Introduction

Recently, the Union Government approved the ratification of the **Kigali Amendment to the Montreal Protocol on phasing down climate-damaging refrigerant Hydrofluorocarbons (HFCs).**

- It comes close on the heels of similar decisions by the United States and China, the world's largest producers and consumers of HFCs. 122 countries had ratified the Kigali Amendment by the end of July 2021.

Key Points

- **About:**

  - The United States, China and India are in separate groups of countries, with different time schedules to phase out their HFCs and replace them with climate-friendly alternatives.
  - India has to reduce its HFC use by 80% by the year 2047, while China and the United States have to achieve the same target by the year 2045 and 2034 respectively.
  - India will complete its phasedown of HFCs in four steps from 2032 onwards with a cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 80% in 2047.
  - **Amendments** to the existing legislation framework, the **Ozone Depleting Substances (Regulation and Control) Rules** to allow appropriate control of the production and consumption of hydrofluorocarbons to ensure compliance with the Kigali Amendment **will be done by mid-2024.**

Background:

- The **1989 Montreal Protocol** is not a climate agreement. It is instead **aimed at protecting the earth from Ozone-Depleting Substances (ODSs)** like the Chlorofluorocarbons (CFCs), that were earlier used in the air-conditioning and refrigerant industry.
  - The widespread use of **CFCs had caused a hole in the Ozone layer of the atmosphere**, which allowed some harmful radiation to reach the earth. These radiations were considered potential health hazards.
- The Montreal Protocol **led to the replacement of CFCs with Hydrofluorocarbons (HFCs)** which do not destroy the Ozone layer.
- But they were **later found to be extremely potent in causing Global Warming**. So, the HFCs solved one problem, but were contributing in a major way to another.
- But these could not be eliminated under the original provisions of Montreal Protocol which was meant to phase-out ODSs only.
- The **Kigali Amendment enabled the Montreal Protocol to mandate the elimination of HFCs** as well.
  - In October 2016, with the United States' leadership, 197 countries adopted an amendment to phase down HFCs under the Montreal Protocol in Kigali, Rwanda.

- **Kigali Amendment to Montreal Protocol:**
  - The Kigali Amendment aims for the **phase-down of hydrofluorocarbons (HFCs)** by cutting their production and consumption.
  - The goal is to achieve **over 80% reduction in HFC consumption by 2047.**
  - Given their zero impact on the depletion of the ozone layer, **HFCs are currently used as replacements of hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs)** in air conditioning, refrigeration and foam insulation, however they are powerful greenhouse gases.
  - **Under the amendment :**
    - Developed countries will reduce HFC consumption beginning in 2019.
    - Most developing countries will freeze consumption in 2024,
    - Some developing countries including India with unique circumstances will freeze consumption in 2028.

- The plan also **provides financing to certain countries**, to help them transition to climate-friendly alternatives.
- With the Kigali Amendment, the **Montreal Protocol has become an even more powerful instrument** against global warming.

- **Significance:**

  - This important instrument is crucial to **achieving the target of restraining the increase in global temperatures to 2 degree Celsius** from pre-industrial times.
    - As pointed out by a recent report of the **Intergovernmental Panel on Climate Change (IPCC)**, the average temperature of the planet has already risen by about 1.1 degree Celsius.
  - The collective action is expected to **prevent emissions of upto 105 million tonnes of carbon dioxide equivalent of greenhouse gases helping to avoid up to 0.5 degree Celsius** of global temperature rise by 2100, while continuing to protect the ozone layer.
  - Because **HFCs** were not ozone-depleting, they were not controlled substances under the Montreal Protocol. They were part of the problematic greenhouse gases whose emissions are **sought to be curtailed through climate change instruments such as the Kyoto Protocol of 1997 and the 2015 Paris Agreement.**
    - But the Montreal Protocol has been a far more effective and successful agreement than the climate change instruments. It has already resulted in the phase-out of 98.6% of ozone-depleting substances. The remaining 1.4% are the HCFCs that are in the process of being transitioned.

- **Significance for India:**
  - **India became a party** to the Montreal Protocol on Substances that Deplete the Ozone Layer **in June 1992** and since then has ratified the amendments to the Montreal Protocol. India **has successfully met the phase-out targets of all the Ozone Depleting Substances** as per the Montreal Protocol Schedule.
  - India is o**ne of the first countries in the world to launch a cooling action plan in 2019**. This comprehensive plan is aimed at reducing cooling demand, enabling refrigerant transition, enhancing energy efficiency and better technology options with a 20-year time horizon.

- The **signing of the Kigali Amendment is a cue for the markets to make a faster transition from HFCs to cleaner gases.**

- It would **boost domestic manufacturing and employment generation goals.**
- The ratification would signify that **India is ready to compete in the market for low-Global Warming Potential GWP (climate-friendly) refrigerants**, which will spur domestic innovation and attract international investments.
- The decision would **pave the way for India to achieve its climate change mitigation goals and cooling commitments.** India is among a small group of countries on track to meet its climate commitments under the Paris Agreement.