DAILY CURRENT AFFAIRS

Time: 45 min **Date: 31-10-2023**

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Sardar Vallabhbhai Patel Birth Anniversary

Syllabus: GS1/Modern Indian History

Context

- The Prime Minister of India has paid tributes to **Sardar Patel on his Jayanti.**

Early Life of Sardar Patel

- Sardar Vallabhbhai Patel was born on October 31, 1875, in Nadiad, Gujarat.
- He was a barrister, an activist, a freedom fighter, and a political leader who played a crucial role in India's struggle for independence.
- In the initial years, he was indifferent to Indian politics. But, later, he started getting **influenced by Mahatma Gandhi**, and by **1917 he embraced Gandhi's principle of Satyagraha (Non-violence).**
- Patel played a key role in organising mass campaigns against British policies and **served as the Municipal Commissioner** and **President of Ahmedabad** from 1917 to 1928.

- Patel was one of the senior leaders of the **Indian National Congress** and served as the **first Deputy Prime Minister and Home Minister of India from 1947 to 1950.**

<u>Contributions in India's Freedom Struggle</u>

- **Kheda Satyagraha (1917): Patel** supported and assisted Mahatma Gandhi in organising and leading the Satyagraha.
    - He provided strong leadership and direction to the local community, encouraging them to join the protest against the British-imposed unjustified tax on land revenue.
- **Non-Cooperation Movement (1920-22):** Patel recruited approximately 300,000 members and raised 1.5 million rupees for the Non-cooperation Movement.
    - He advocated the **boycott of British goods** and **use of Khadi** as a symbol of economic and cultural self-sufficiency.
- **Bardoli Satyagraha (1928):** Sardar Patel stood in solidarity with the people of Bardoli who were suffering from the devastating effects of famine along with the burden of increased land taxes imposed by the British.
    - The **dual crisis of food scarcity and higher taxes** had caused immense hardships to the local population.
    - The **central strategy** of Bardoli Satyagraha was **complete denial of tax payments to the British**.
    - The **contributions of Patel in the Bardoli Satyagraha** earned him the popular epithet **'Sardar,' which means 'leader' or 'chief'.**
- **Leadership in the Indian National Congress:** He was **President of the Karachi Session (1931) of the Indian National Congress**.
    - **Karachi Session** called upon **to ratify the Gandhi-Irwin Pact,** and known for passing **a resolution of Fundamental Rights.**
    - He assumed the role of the Chairman of the Central Parliamentary Board in 1934.
- **Civil Disobedience Movement (1930-34):** During the course of the movement, he promoted **boycotts of British goods, refusal to pay taxes, and nonviolent protests and strikes.**
    - He aligned himself with Gandhi in advocating for **individual disobedience,** and as a result, he was **arrested and sentenced to prison for around 9 months.**
- **Quit India Movement (1942):** He organised protests and strikes against British rule, and delivered compelling and electrifying speeches throughout India, inspiring and mobilising people to join mass protests, engage in acts of civil disobedience, boycott tax payments, and stage civil service shutdowns.
    - He implemented strategies to safeguard national leaders from arrest along with spearheading fundraising campaigns to support the movement.

- **Support for Liberal Industrial Policy (1948):** It laid the foundation for India's economic growth and development.

Contributions in Unification of India

- **Political Integration of India:** He played a pivotal role during the political integration of India and the Indo-Pakistani War of 1947.
- **Integration of Princely States:** He was instrumental in persuading almost every princely state to accede to India. His commitment to national integration in the newly independent country earned him the sobriquet **'Iron Man of India'.**
    - Through a combination of diplomacy, persuasion, and coercion he succeeded in bringing these states under the umbrella of the Indian government. This process ensured the territorial integrity and unity of India.
- **Administrative Reforms:** Sardar Patel played a crucial role in creating a unified administrative structure for the newly independent India.
    - Patel is remembered as the **'patron saint of India's civil servants'** for playing a pioneering role in establishing the modern **All India Services system**.
    - He was **instrumental in creation of the Indian Administrative Service (IAS)**, which became the backbone of India's civil services. He, himself, called it the **'steel frame' of India**.
    - **Sardar Vallabhbhai Patel National Police Academy** in Hyderabad, this prestigious institution **for training police officers**.
- **Promotion of National Integration:** He promoted the **'Idea of India'** as a single nation, and emphasised that despite its diversity, the country must stand united.

Other Contributions

- **Constitutional Role:** He headed various **Constitutional Committees**, such as ***Advisory Committee on Fundamental Rights, Committee on Minorities and Tribal and Excluded Areas, Provincial Constitution Committee.***

Honours

- **Iron Man of India** for his unparalleled roles in ensuring unity and integrity of India.
- **Bharat Ratna:** He was **posthumously honoured** with the Bharat Ratna, the highest civilian award in the country **in 1991**.
- **National Unity Day:** The **Rashtriya Ekta Diwas, or National Unity Day** is celebrated **every year on 31st October** to commemorate Sardar Patel's **birth anniversary**.
- **The Statue of Unity:** It is the **tallest statue in the world** which was unveiled on October 31, 2018 in **Kevadia, Gujarat** on the occasion of his 143rd birth anniversary.

- **Sardar Sarovar Dam:** It was built across the Narmada River in Gujarat.

Conclusion

- Patel's life and work serve as a beacon of selfless service, unity, and indomitable determination. His role in shaping modern India is unparalleled, and his legacy continues to inspire generations of Indians and his contributions to nation-building are celebrated every year on his birth anniversary, observed as National Unity Day.
- His vision and dedication towards national integration cemented his place as one of the most influential leaders in Indian history.

Source: PIB

India to become $30-trillion economy by 2047: Niti draft vision document

Syllabus: GS3/Indian Economy/Planning

In News

- Niti Aayog CEO BVR Subrahmanyam said a vision document is being prepared for India to become a **developed economy of about USD 30 trillion by 2047.**

About

- The vision document will outline the **institutional and structural changes/ reforms** that will be needed for the country to **become a developed nation by 2047 with a $18,000–20,000 per capita GDP.**
- The goal of the national vision plan is to prevent the **nation from falling into the middle-income trap.**
- It is also expected to include information about the country's global engagement in trade, investment, technology, capital, and R&D entities.

Growth path

What does the future hold? Scenario building for macroeconomic indicators

Indicator	Units	2030	2040	2047
GDP at current prices	₹ trillion	609.04	1,759.79	3,604.94
Per capita GDP at current prices	₹	4,02,008	10,93,037	21,84,812
Exports	$ trillion	1.58	4.56	8.67
Imports	$ trillion	1.88	5.92	12.12
Investment	₹ trillion	195.5	591.1	1,273.40
Savings	₹ trillion	207.8	649.4	1,339.70

Source: NITI Aayog

- The economy must grow by an average of 9.2% per year between 2030 and 2040, 8.8% per year between 2040 and 2047, and 9% per year between 2030 and 2047.

Middle-Income Trap

- It is a concept in economics that describes a situation in which a country reaches a certain level of average income, often referred to as **"middle**

income," and then struggles to progress further to become a high-income country.

- Economies with a **GNI (Gross National Income) per capita between USD 1,036 and USD 4,045** are defined as **lower middle-income economies** and those with a GNI per capita between USD 4,046 and USD 12,535 are defined as **upper middle-income economies**.
- Middle-income countries are home to **75 percent of the world's population and 62 per cent of the world's poor**. They also represent about one-third of global GDP and are major engines of global growth.
- The middle-income trap occurs when a country **faces challenges that hinder its transition to a high-income status.**
- These challenges often include rising production costs and a decline in competitiveness, making it difficult for the country to sustain the economic growth required to reach high-income levels.

Issue with Middle Income Trap

- According to the Asian Development Bank (ADB), the middle-income trap captures a situation where a middle-income country can **no longer compete internationally in standardized, labor-intensive goods** because wages are relatively too high, but it also cannot compete in **higher value-added activities** on a broad enough scale because **productivity is relatively too low**.

Challenges need to be addressed

- **Lack of larger firms:** Even though India's GDP has tripled from 1.1% in 1991 to 3.5% in 2023, making it the fifth largest economy in the world, none of the biggest banks, contractors, law, consulting, or accounting firms in the world are based in India.
- **Sustaining High Economic Growth Rates:** Achieving and sustaining consistently high economic growth rates will be challenging. India will need to overcome periodic fluctuations and external shocks.
- **Demographic Shifts:** India's demographic transition, with a large youth population, can be an asset, but it also requires significant investment in education and job creation.
- **Job Creation:** Creating enough quality jobs to accommodate the expanding labor force is a formidable task. Economic growth alone may not necessarily translate into sufficient employment opportunities.
- **Persistant Income Inequality:** India has a significant income inequality issue. Addressing this and ensuring that the benefits of economic growth reach all segments of society will be critical.
- **Environmental Sustainability:** Balancing rapid economic growth with environmental sustainability is challenging. Managing pollution, resource depletion, and climate change while pursuing growth is a matter of concern.
- **Ensuring Financial Sector Stability:** Ensuring the stability and efficiency of the financial sector is essential for funding economic growth and managing financial risks.

Way Forward

- Achieving India's ambitious economic vision will require a long-term commitment from government, private sector, and civil society. The strategies which are expected to be outlined in the vision document can serve as a foundation for a comprehensive and coordinated effort to overcome challenges and work towards sustained economic growth and development.

Source: TOI

Lewis Model

Syllabus:GS3/Economy

News

- A Lower share of the manufacturing sector in employment has raised questions about the implementation of the Lewis Model in India.

What is the Lewis Model?

- **Economist William Arthur Lewis** set out the dual sector model in his 1954 publication, "Economic Development with Unlimited Supplies of Labor." The model seeks to provide a framework for understanding how relatively poor countries can develop economically.
- It begins by assuming that one of the characteristics shared by poor countries is that their economies tend to consist largely of "subsistence sectors" in which the supply of labor is very large and the amount of capital invested per worker is very low.
- The Lewis model describes a **path whereby a developing economy can foster the growth of a new "capitalist sector,**" which will employ a growing share of the excess labor available from the subsistence sector. Over time, this capitalist sector can come to eclipse the subsistence sector, causing the overall economy to grow.

Why has the Lewis Model in India not worked?

- **Agriculture** employed about two-thirds of India's workforce till the early nineties. The share fell from **64.6% to 48.9%** between 1993-94 and 2011-12. Currently this share is **45.8% .**
- **For manufacturing,** the share in employment rose marginally, **from 10.4% to 12.6%,** between 1993-94 and 2011-12. In 2022-23 the share is **11.4%.**
- The jobs being generated outside agriculture are **mostly in low-paid services and construction**, not in manufacturing and high-productivity services.
- Hence in India the virtuous structural transformation, entailing a transfer of surplus labor from "subsistence" to "capitalist" sectors hasn't worked.
- However, **in the case of China** the Lewis model was successful. The country, from the late 1970s to the 2000s, leveraged its demographic dividend and large pool of surplus rural labor to become "the world's factory".

Source:IE

Urban Expansion & Flooding

Syllabus: GS3/Disaster Management

Context

- A recent Nature journal study, conducted by the **World Bank** reveals that urban expansion into flood-prone zones has intensified flood risks.

Findings of the Study

- **Rising Flood-Prone Settlements:** The study reveals a more than twofold surge in human settlements in flood-prone regions since 1985, spanning 40 years.
- **Middle-Income Countries Lead:** Middle-income countries outpace low- and high-income nations in urban settlement expansion within flood-prone zones.
- **Global Trends:** East Asia experiences the highest rate of expansion into flood-prone areas, while Sub-Saharan Africa and North America exhibit the least expansion into these regions. India falls under the low-middle-income category.

Reasons

- **Lack of Topographical Oversight:** City expansions often neglect topography, leading to adverse consequences like the 2022 Bengaluru floods.
- **Impact on Socio-economic Groups:** Urban expansion into flood-prone regions affects diverse socio-economic groups, with informal housing carrying higher risks, as seen in the Yamuna floodplains.
- **Lack of Governance Mechanism:** Inadequate governance mechanisms fail to prevent environmentally unsustainable development in flood-prone areas.
- **Regulatory Gaps:** Environmental regulations primarily target major projects, neglecting smaller-scale modifications in localities, leading to disparities.
- **Violation of Regulations:** Widespread non-compliance with regulations, illustrated by eco-tourism resorts on forested lands and the construction of significant infrastructure on river floodplains, is a persistent issue.

Way Forward

- Comprehensive scientific mapping of flood-prone areas in every city is essential.
- Implement improved storm-water management plans, including the installation of storm-water drains to collect and divert rainwater in flood-prone areas.
- Prioritize resilience in housing construction to withstand floods.
- Upgrade and protect low-income housing, focusing on their flood resilience.
- Learn from successful examples of stilt houses in riverside settlements for flood-prone areas.
- Promote resilient construction practices that adapt to flood risk and safeguard vulnerable communities.

Source: DTE

Cloud Seeding

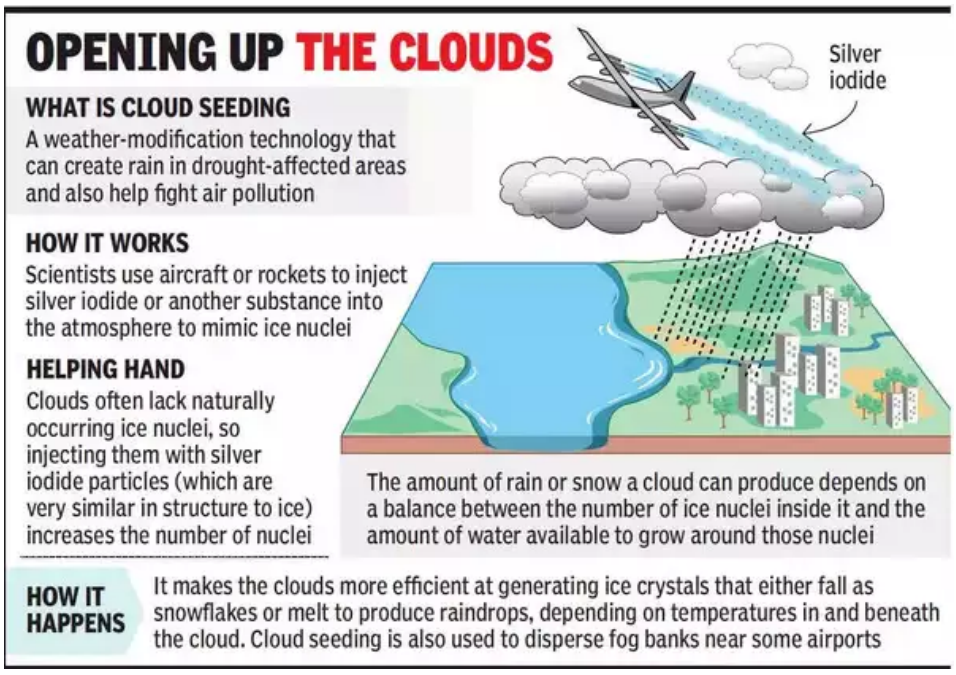
Syllabus:GS3/Science and Technology

News

- A cloud seeding experiment in Solapur city, which is on the leeward side of the Western Ghats, was able to achieve 18% relative enhancement in rainfall.

What is Cloud Seeding?

- **Cloud seeding** is a kind of a weather modification technology to create artificial rainfall. It works only when there are enough pre-existing clouds in the atmosphere.
- Rain happens when moisture in the air reaches levels at which it can no longer be held, and cloud seeding aims to facilitate and accelerate that process by making available chemical **'nuclei'** around which condensation can take place.
- These 'seeds' of rain can be the **iodides of silver or potassium, dry ice (solid carbon dioxide), or liquid propane**. The seeds can be delivered by plane or by spraying from the ground.



Suitable Conditions for Cloud Seeding

- Cloud seeding requires existing clouds; it will not produce rain out of thin air.
- Not all types of clouds are suitable for seeding. Clouds must be deep enough and of a suitable temperature (between -10 and -12 degrees Celsius) to be seeded effectively.
- The wind must be below a certain speed. These conditions are most common in mountainous areas.

Applications of Cloud Seeding

- **Creation of Rain:** Cloud seeding is the best way to consider improving rainfall quantity in case of inadequate rainfall.
- **Boosting of the Economy:** Rain is important in achieving a proper harvest and boost the economy.

Concerns

- **Use of Chemicals:** Some chemicals are potentially harmful to the natural environment. Mostly, this applies to the plants which depend on the contaminated rain to produce food.
- **Expensive:** Cloud seeding is an expensive process. Planes are used to get the chemicals into the air.

Source:TH

Rapid Melting of West Antarctica's Ice Sheet

Syllabus: GS3/Environment

Context:

- The study, ***'Unavoidable future increase in West Antarctic ice-shelf melting over the twenty-first century'***, was published by **Nature**.

About

- According to the study, the rapid melting of the ice sheet of West Antarctica is now unavoidable due to warm waters around it.
    - No matter how much carbon emissions are cut.
- The scientists have **used a computer model of the Amundsen Sea** to provide the most comprehensive assessment of warming in West Antarctica to date, and run many different simulations, totalling over 4,000 years of ocean warming and ice-shelf melting in the Amundsen Sea.
    - **The Amundsen Sea** is an arm of the **Southern Ocean**, off the Marie Byrd Land in the **western area of Antarctica**, and lies just **between Cape Flying Fish and Cape Dart**.

Highlights of the Study

- **Implications:** If lost completely, the **ice sheet would raise the global mean sea level by 5.3 metres** — a potentially devastating consequence for millions of people living in vulnerable coastal cities across the world, **including in India.**
- Even under a **best-case scenario of limiting global warming to 1.5°C above pre-industrial levels**, water in West Antarctica will **continue to get warmer three times faster than in the 20th century**, leading to an increased melting of the region's ice sheet.

Do you know about the Paris Agreement

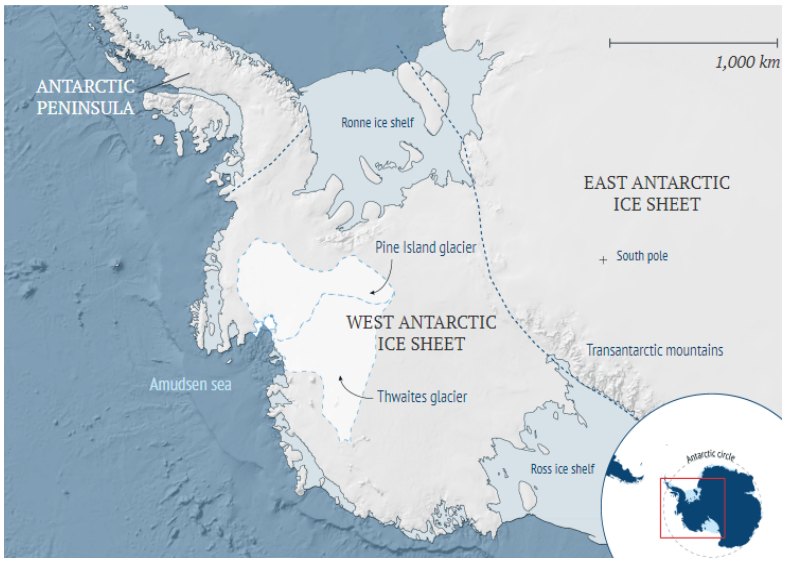
- It is **a legally binding international treaty** on climate change. It was adopted at the **UN Climate Change Conference (COP21)** in **Paris**, France.
    - **For the first time**, a binding agreement brings all nations together to combat climate change and adapt to its effects.
- Its overarching goal is to hold *'the increase in the global average temperature to well below 2°C above pre-industrial levels'* and pursue efforts *'to limit the temperature increase to 1.5°C above pre-industrial levels'.*

- **To limit global warming to 1.5°C**, greenhouse gas emissions must peak before 2025 at the latest and decline 43% by 2030.

What is an Ice Sheet?

- An ice sheet is a mass of glacial ice that covers more than 50,000 square kilometres of land.
- There are two major ice sheets in the world today, containing about two-thirds of all the freshwater on Earth.
    1. The Greenland ice sheet; and
    2. The Antarctic ice sheet.
- When ice sheets gain mass, they contribute to a fall in global mean sea level, and when they lose mass, they contribute to a rise in global mean sea level.

West Antarctica



- It is already the continent's largest contributor to global sea level rise and has enough ice to raise sea levels.
- It's home to the **Thwaites Glacier,** also known as the **'Doomsday glacier'**, because its collapse could raise sea levels by several feet, forcing coastal communities and low-lying island nations to either build around sea level rise or abandon these places.

The Melting Process:

- The main driver of ice loss in West Antarctica is relatively warm ocean water that amplifies melting underneath the ice shelves, which are the floating extensions of the grounded ice sheet.

Do you know?

- **West Antarctica is one of the tipping elements in the Earth's climate system.**
- **Tipping elements** are the **critical threshold for a system that influences the climate and ecology of the planet**, indicating the point beyond which that system begins to undergo a large-scale irreversible shift.
- These include *long-term loss of major ice sheets on Greenland and in Antarctica, large-scale ecosystem shifts for the Amazon rainforest and*

northern evergreen forests, species loss for coral reefs, shrinking Arctic sea-ice, and potential weakening of the AMOC etc.

Consequences of Sea Level Rise

- **Destructive Erosion and Wetland Flooding:** When sea levels rise rapidly, it can cause destructive erosion, wetland flooding, and lost habitat for fish, birds, and plants.
- **Soil Contamination:** Rising sea levels can lead to aquifer and agricultural soil contamination with salt.
- **Permanent Flooding:** The impacts of sea level rise include permanent flooding (inundation) of low-lying areas, and increased frequency, extent, and depth of tidal inundation.
- **Beach Erosion:** Sea level rise will cause most sandy beaches to recede (where beaches will move further inland) and erode.
- **Global Refugee Crisis:** If sea levels rose significantly, submerging some of the world's megacities like New York, Shanghai, and Mumbai, the amount of refugees worldwide could increase 20-fold or more.
- **More Powerful Hurricanes:** Higher sea levels can lead to more powerful hurricanes.
- **Destroyed Economies:** The economic impact of this sea level rise could run into the trillions. Coastal hubs of economic activity would be destroyed, infrastructural damage and health care costs would be unprecedented, and the relief efforts would be seemingly permanent.
- **Food and Water Crises:** As sea levels submerge coastal cities, precious water sources could become contaminated with saltwater and other contaminants let loose by destroyed infrastructure.

Conclusion

- The rapid melting of West Antarctica's ice sheet is a stark reminder of the urgent need for global action on climate change. Despite efforts to reduce carbon emissions and limit global warming, some effects may now be unavoidable.
- However, understanding these processes can help us prepare for and mitigate their impacts.

Source: IE

Facts In News

Prisoner's Dilemma

Syllabus: GS2/ International Relations

In News

- The Defense Minister emphasized the importance of global collaboration over conflicting interests, using the **"Prisoner's Dilemma" concept**.

About

- The Prisoner's Dilemma is a classic game theory scenario used to study strategic decision-making.
- It involves two players who have been arrested and are faced with the choice of cooperating with or betraying their partner.
- The game is represented through a payoff matrix, where players choose between cooperation (C) or betrayal (B), and the outcomes yield different payoffs.
    - **Mutual Cooperation**: If both players cooperate, they both receive a moderate sentence, reflecting a win-win outcome.
    - **Mutual Betrayal:** If both players betray each other, they both receive a relatively high sentence, resulting in a lose-lose scenario.
    - **Temptation to Betray**: If one player cooperates (C) while the other player betrays (B), the betrayer receives the lowest sentence (temptation payoff), and the cooperator receives the highest sentence.

- **Dilemma:** The dilemma arises because each player, looking out for their self-interest, is tempted to betray their partner to minimize their sentence.
- **Paradox of Rationality:** The game demonstrates a paradox of rational decision-making where individually rational choices lead to a collectively suboptimal outcome.
- **Applications**: The Prisoner's Dilemma model is applied to various real-world situations, such as International Relations, Economics, Politics, and Environmental cooperation, to study the challenges of cooperation and trust in competitive environments.

Source: IE

Meri Maati Mera Desh

Syllabus:GS1/Culture

News

- PM Modi will participate in a programme marking the culmination of Meri Maati Mera Desh campaign's Amrit Kalash Yatra at Kartavya Path.

Meri Maati Mera Desh

- The campaign is a **tribute to the Veers and Veeranganas** who have made the supreme sacrifice for the country.
- It is being organized by the **Ministry of Culture.**
- It comprises many activities and ceremonies conducted across the country at Panchayat/Village, Block, Urban Local Body, State and National levels.
- **The campaign includes the Amrit Kalash Yatra,** which comprises collection of mitti and rice grains from over 6 lakh villages in rural areas and from wards in urban areas. The collected soil is mixed and will be sent to the National Capital.
- **The Amrit Vatika and Amrit Mahotsav Memorial,** is built at Kartavya Path from the soil collected from every part of the country.

Mera Yuva Bharat (MY Bharat) platform

- During the programme, the PM will also launch **'Mera Yuva Bharat (MY Bharat) platform** for youth of the country.
- **MY Bharat** is being established as an **autonomous body** to serve as a one stop whole-of-government platform for youth of the country.
- **The aim** of MY Bharat is to inspire youth to become community change agents and nation builders, and enable them to act as the '**Yuva Setu'** between the Government and the citizens.

Source:PIB

COP28 Presidency's Action Agenda

Syllabus:GS3/Environment

News

- Recently a joint report was launched on the sidelines of the Pre-COP28 titled "Tripling Renewable Power and Doubling Energy Efficiency by 2030: Crucial Steps Towards 1.5 °C".

Findings of the report

- There is a need to cut 22 gigatonnes of greenhouse gases in the next seven years in order to keep 1.5°C within reach.
- **The world's installed renewable power** generation capacity has to be multiplied by more than three times to reach 11,174 GW by 2030.

- **Installed solar photovoltaic capacity**, an increase to more than 5,400 GW from 1,055 GW in 2022 is required.
- **Wind installations** need to **exceed 3,500 GW** (3,040 GW onshore and 500 GW offshore), from 899 GW in 2022.
- **Global installed hydropower capacity** (excluding pumped hydro) would need to grow by almost 17 per cent from the 2022 level, reaching 1 465 GW by 2030.

Measures Needed

- **Technical energy efficiency improvements** embodied by heat pumps, more efficient appliances, and electric vehicles — together with flexible, smart electrification strategies and deployment of decentralized energy – are of tremendous importance in decarbonising end-use sectors such as buildings and transportation.
- **Funding from multilateral development banks** should be increased exponentially, and public capital should be redirected from the fossil fuel industry to renewable energy development.
- **Energy efficiency policy measures**: Adoption of targets with specific time horizons; strong regulatory frameworks including building codes and energy efficiency standards for appliances; fiscal and financial incentives; and public campaigns to build awareness of the role of energy efficiency measures.
- There is a need to boost cross sector infrastructure planning, increase cross-border co-operation and develop regional power grids.

Source:DTE

Pink Bollworm

Syllabus: GS3/Agriculture

Context:

- Farmers across cotton-growing states are struggling to manage the **pink bollworm (PBW) pest** that is wreaking havoc, resulting in heavy economic losses.

About Pink Bollworm (PBW):

- **Pink Bollworm *(Pectinophora Gossypiella)*** is a significant pest that primarily affects cotton crops.
- It damages parts of the developing cotton fruit, like the square (the flower bud) and the boll (rounded sac of seeds with cotton fibres).

Concerns

- Indian farmers have faced consistent **losses of Bt cotton crops due to pink bollworm attacks** since the mid-2000s, when scientists found that the insect had become **resistant to Cry1Ac gene** and the genetically modified variety of cotton.
    - Bt cotton was **introduced to India in 2002** after its success in the United States and Australia in 1996.
- Another major pest affecting cotton is the **Fruit borer.**

Solution

- **Cotton Pest Dynamics:** It refers to the study of the population behaviour of pests that affect cotton crops, which involves understanding the factors that influence pest populations and developing strategies to manage them effectively.

Source: DTE