News Analysis (20 Mar, 2021)
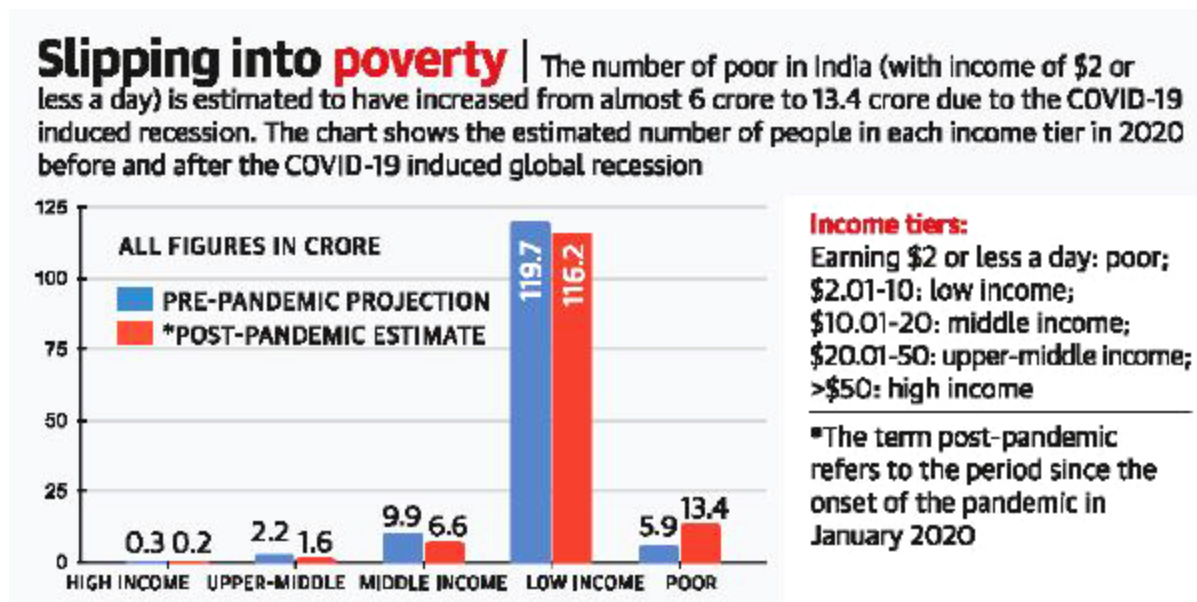
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Covid Increased Poverty: Pew Report

Why in News

Recently, a new research conducted by **Pew Research Center** has found that the **coronavirus pandemic** has pushed about 32 million Indians out of the middle class and increased poverty in the country.

- The report is based on an analysis of **World Bank** data.
- **Pew Research Center** is a **nonpartisan fact tank** that informs the public about the issues, attitudes and trends shaping the world.

Slipping into poverty | The number of poor in India (with income of $2 or less a day) is estimated to have increased from almost 6 crore to 13.4 crore due to the COVID-19 induced recession. The chart shows the estimated number of people in each income tier in 2020 before and after the COVID-19 induced global recession

ALL FIGURES IN CRORE

■ PRE-PANDEMIC PROJECTION
■ *POST-PANDEMIC ESTIMATE

	HIGH INCOME	UPPER-MIDDLE	MIDDLE INCOME	LOW INCOME	POOR
Pre-pandemic	0.3	2.2	9.9	119.7	5.9
Post-pandemic	0.2	1.6	6.6	116.2	13.4

Income tiers:
Earning $2 or less a day: poor;
$2.01-10: low income;
$10.01-20: middle income;
$20.01-50: upper-middle income;
>$50: high income

*The term post-pandemic refers to the period since the onset of the pandemic in January 2020

Key Points

- **Indian Scenario:**
  - **Poverty Rate:**
    - The poverty rate in India likely **rose to 9.7% in 2020,** up sharply from the January 2020 forecast of 4.3%.
  - **Increased Poverty:**
    - From **2011 to 2019,** the number of poor in India was estimated to have **reduced to 78 million from 340 million.**
    - In **2020,** the number **increased by 75 million.**
      - **Poor:** People with incomes of **USD 2 or less** a day.
      - Increase in India accounts for nearly **60% of the global increase in poverty.**
    - Record increase in **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** participants as proof that the poor were struggling to find work.
  - **Reduced Middle Class:**
    - The middle class in India is estimated to have **shrunk by 3.2 crore in 2020.**
      - **Middle Class:** Includes people with incomes of approximately Rs. 700-1,500 or USD 10-20 per day.
    - The middle income group is likely to have decreased from almost **10 crore to just 6.6 crore.**
  - **Shrinked Low Income Group:**
    - The vast majority of India's population fall into the low income group.
    - This group **shrank from 119.7 crore to 116.2 crore per day,** with about **3.5 crore dropping below the poverty line.**
      - **Low Income Group:** Includes people earning about Rs.150 to 700 per day.
  - **Rich Population:**
    - The richer population also **fell almost 30% to 1.8 crore people.**
      - **Rich:** Includes the people who earn more than Rs.1,500 a day.
- **Comparison with China:**
  - Like India, China has a large population of around 1.4 billion people. But the **pandemic's effect on poverty was much smaller in China.**
  - It was the **only major economy to grow in 2020** and that has helped poverty levels to remain "virtually unchanged".
    - In January 2021, the **International Monetary Fund** in its **World Economic Outlook Report**, estimated **India's economy to contract 8%** in the **Financial Year (FY)** 2020 while **China's economy was expected to expand by 2.3% in 2020.**
  - China's **middle class is likely to see a miniscule dip** of just one crore, while the number of **poor people may have gone up by 10 lakh.**

- **Global Scenario:**
  - **Poverty Rate:**
    - The global poverty rate also **increased to 10.4%** last year after witnessing a steady decline over the years.
    - It was previously expected that the poverty rate would decrease to 8.7% in 2020.
  - **Poor Class:**
    - The number of **'global poor'** are **estimated to have increased to 803 million in 2020,** which is a significant increase from 672 million, the pre-pandemic prediction.
  - **Middle Class:**
    - From 2011 to 2019, the **middle class population globally had increased** to 1.34 billion from 899 million. Further, it was expected to increase by 54 million annually on average.
  - **South Asia:**
    - South Asia saw the **greatest reduction in the number of middle class and the largest 'expansion' in poverty in 2020.**
      - This could be attributed to **South Asia experiencing sharp decrease in economic growth** during the pandemic.
- **Reason:**
  - The **lockdown triggered by the pandemic** resulted in **shut businesses, lost jobs and falling incomes,** plunging the Indian economy into a deep **recession**.
  - Sharp rise in global poverty was owing to the fact that **many under the low income tier prior to the pandemic were living on the margin of poverty.**
- **Effect:**
  - **India and China also account for more than a third of the global population,** with about 1.4 billion people each, the course of the pandemic in these two countries and **how each recovers will have a substantial effect on changes in the distribution of income at the global level.**
  - It claws back **several years of progress** on the economic front.
    - At least **271 million people were lifted out of multi-dimensional poverty between 2005-06 and 2016-17,** claimed India's Voluntary National Review (VNR) of Sustainable Development Goals (SDG).

Source:TH

World Happiness Report 2021

Why in News

The **Sustainable Development Solutions Network** for the __United Nations__ released the __World Happiness Report 2021__, a day before the **International Happiness Day.**

This year it focuses on the effects of __Covid-19__ and how people all over the world have fared.

International Happiness Day

- **About:**
    - It is **celebrated every year on 20th March** to highlight the importance of happiness in the diurnal lives of people.
    - The **United Nations started to celebrate the International Day of Happiness in 2013** but a **resolution for the same was passed in July, 2012.**
        - This resolution was **first initiated by Bhutan** which emphasised on the importance of national happiness over national income since the early 1970s, thereby adopting the __Gross National Happiness__ **(GNH)** over **Gross National Product (GNP).**
            - **Gross National Happiness:** The phrase 'gross national happiness' was first **coined by the 4th King of Bhutan, King Jigme Singye Wangchuck, in 1972.**
                - The concept **implies that sustainable development should take a holistic approach** towards notions of progress and give equal importance to non-economic aspects of wellbeing.
            - **GNP** is the total value of all finished goods and services produced by a country's citizens in a given financial year, irrespective of their location.
- **Theme of 2021:** "Happiness For All, Forever".

Key Points

- **About:**
    - The World Happiness Report **ranks 149 countries** by how happy their citizens perceive themselves to be.
    - The rankings are based on polling (Gallup World Poll) which looks at six variables:
        - __Gross Domestic Product__ Per Capita (Purchasing Power Parity).
        - Social Support.
        - Healthy life expectancy at birth.
        - Freedom to make life choices.
        - Generosity.
        - Perceptions of corruption.
    - Respondents are asked to rate their own current lives on a **0-10 scale.**

- **Top Performers:**
  - **Finland has been ranked as the happiest country** in the world for the **fourth consecutive year.**
  - Followed by Iceland, Denmark, Switzerland, The Netherlands, Sweden, Germany and Norway.
- **Worst Performers:**
  - **Afghanistan (149)** is the **most unhappy** country.
  - Followed by Zimbabwe (148), Rwanda (147), Botswana (146) and Lesotho (145).
- **India's Neighbours:**
  - **Pakistan-**105.
  - **Bangladesh-**101.
  - **China-**84.
- **India:**
  - India has been ranked **139, out of 149 countries** evaluated.
  - In 2020, India was ranked **144 out of 156 countries** surveyed.

Sustainable Development Network Solution

- The SDSN, **launched in 2012,** mobilizes global scientific and technological expertise to promote practical problem solving for the **Sustainable Development Goals (SDGs)** and the **Paris Climate Agreement.**
- It was established under the auspices of the United Nations Secretary-General.
- The **SDSN and the Bertelsmann Stiftung** have been publishing the **annual SDG Index & Dashboards Global Report** since 2016.

Source:HT

Open Market Operations by RBI

Why in News

The **Reserve Bank of India** (RBI) has decided to conduct **simultaneous purchase and sale of government securities (G-Sec)** under **Open Market Operations (OMOs)** for an amount of Rs. 10,000 crore each.

Key Points

- **About:**
  Simultaneous purchase and sale of government securities under OMOs, popularly known as **operation twist**, involves purchasing G-Sec of longer maturities and selling equal amounts of G-Sec of shorter maturities.

- **Open Market Operations:**
  - **Meaning:** Open Market Operations **refers to buying and selling of bonds issued by the Government** in the open market.
  - **One of the Quantitative Tools:** OMO is one of the quantitative tools that RBI uses to smoothen the liquidity conditions through the year and minimise its impact on the interest rate and inflation rate levels.
    - Quantitative tools control the extent of money supply by changing the Cash Reserve Ratio (CRR), or bank rate or open market operations.
    - **Qualitative tools** include persuasion by the Central bank in order to make commercial banks discourage or encourage lending which is done through moral suasion, margin requirement, etc.
  - **Impact on Money Supply:**
    - When **RBI buys a Government bond** in the open market, it pays for it by giving a cheque. This cheque increases the total amount of reserves in the economy and thus **increases the money supply.**
    - **Selling of a bond by RBI** (to private individuals or institutions) **leads to reduction in quantity of reserves and hence the money supply.**
  - **Two Types of OMOs:** Outright and Repo.
    - **Outright OMOs are permanent in nature:** when the central bank buys these securities (thus injecting money into the system), it is **without any promise to sell them later.** Similarly, when the central bank sells these securities (thus withdrawing money from the system), it is without any promise to buy them.
    - **Repo:**
      - This is a type of operation in which when the central bank buys the security, the **agreement of purchase also has specification about date and price of resale of this security.** This type of agreement is called a **repurchase agreement or repo.** The interest rate at which the money is lent in this way is called the **repo rate.**
      - Similarly, instead of outright sale of securities the **central bank may sell the securities through an agreement** which has a specification about the date and price at which it will be repurchased. This type of agreement is called **a reverse repurchase agreement or reverse repo.** The rate at which the money is withdrawn in this manner is called the **reverse repo rate.**
      - The Reserve Bank of India **conducts repo and reverse repo operations** at various maturities: overnight, 7-day, 14- day, etc. These types of operations have now become the **main tool of monetary policy of the Reserve Bank of India.**

Government Securities

- A G-Sec is **a tradable instrument** issued by the central government or state governments. It **acknowledges the Government's debt obligation.**
- **Short term securities** (with original maturities of less than one year) are usually called **Treasury Bills.**
- **Long term securities** (with original maturities of more than one year or more) are usually **called Government Bonds or Dated Securities.**
- In India, the **Central Government issues both treasury bills and bonds or dated securities** while the **State Governments issue only bonds or dated securities,** which are called the State Development Loans (SDLs).
- G-Secs carry practically no risk of default and, hence, are **called risk-free gilt-edged instruments.**
  - Gilt-edged securities are high-grade investment bonds offered by governments and large corporations as a means of borrowing funds.
- Recently, the **Reserve Bank of India has proposed to allow retail investors to open gilt accounts** with the central bank **to invest in Government securities (G-secs) directly** and without the help of intermediaries.

Source: TH

Supplementary Demand for Grants

Why in News

The Lok Sabha has passed **supplementary demand for grants** for the second batch (2020-2021).

Key Points

- **About:** It is needed when the amount authorised by the Parliament through the **appropriation act** for a particular service for the current financial year is found to be **insufficient** for that year.
  - This grant is **presented and passed by the Parliament before the end of the financial year.**
- **Constitutional Provisions: Article 115** pertains to supplementary, additional or excess grants.

- **Other Grants:**
    - **Additional Grant:** It is granted when a need has arisen during the current financial year for additional expenditure upon some **new service not contemplated in the budget** for that year.
    - **Excess Grant :** It is granted when **money has been spent on any service during a financial year in excess of the amount granted f**or that service in the budget for that year. It is **voted by the Lok Sabha** after the financial year. Before the demands for excess grants are submitted to the Lok Sabha for voting, they **must be approved by the <u>Public Accounts Committee of Parliament.</u>**
    - **Vote of Credit:** It is **granted for meeting an unexpected demand upon the resources of India,** when on account of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in a budget. Hence, it is like a blank cheque given to the Executive by the Lok Sabha.
    - **Exceptional Grant:** It is **granted for a special purpose** and forms **no part of the current service of any financial year.**
    - **Token Grant:** It is granted when funds to meet the proposed expenditure on a new service can be made available by reappropriation. A demand for the grant of a token sum (of Re 1) is **submitted to the vote of the Lok Sabha** and if assented, funds are made available.
        - **Reappropriation** involves transfer of funds from one head to another. It does not involve any additional expenditure.
- **Article 116** of the Constitution pertains to **Votes on account, votes of credit and exceptional grants.**
- Supplementary, additional, excess and exceptional grants and vote of credit are **regulated by the same procedure** which is **applicable in the case of a regular <u>budget.</u>**

<u>**Source:TH**</u>

Refrigeration System Pusa-FSF

Why in News

Scientists from the **<u>ICAR</u>-Indian Agricultural Research Institute (IARI)** have developed an **on-farm green energy refrigeration system (Pusa-FSF)** and a **technology for extraction of gluten from wheat dough** and its **regeneration in bajra** (pearl-millet) **and makka** (maize) flour.

Key Points

- **Pusa-FSF:**
  - **Pusa Farm Sun Fridge (Pusa-FSF)** is **a 100% solar-powered battery-less cold store** that **can preserve around 2 tonnes of freshly-harvested produce** at 3-4°C during the day and 8-12°C at nighttime.
    - It has rooftop solar panels that **generate 5 kilowatt (KW) power,** which helps in running air conditioning.
  - The panels **also power a 105-watt submersible pump** circulating about 1,000 litres of water from a tank through overhead PVC pipes.
  - At night, there is **only passive evaporative cooling,** with the water chilled during the day acting as a natural heat sink.
  - All **farmers with solar pumps are a potential market** for the Pusa-FSF. India has **an estimated four lakh-plus installed solar water pumps.**
    - An average 5-horsepower pump costing Rs. 2.5 lakh **attracts 70-90% subsidy.**
  - **Benefits:**
    - Farmers can **store and preserve their own produce.** It can **avoid distress sales and help improve prices.**
    - It will help **minimise post harvest losses.**
    - **More room to grow perishable items** such as tomatoes, fruits, other than Paddy and Maize.
- **Technology for Extraction of Gluten from Wheat Dough:**
  - **Need:** Bajra, maize, jowar (sorghum), ragi and other **millets contain comparable levels of protein and more vitamins, minerals,** crude fibre and other nutrients than wheat. But **they don't have any gluten proteins,** which results in poor dough quality.
  - **About the Technology:** The technology **imparts elasticity and structural strength to bajra and maize dough,** making their chapattis as soft as from regular wheat atta flour.
    - The proteins extracted and dried into powder have the capacity for regeneration or forming gluten networks in non-wheat dough.
    - Scientists have **developed gluten based 'Hallur' soft bajra flour,** with the help of technology.
- **Other Technological Developments in the Field of Agriculture:**
  - **Happy Seeder** - machine for in-situ management of paddy stubble (straw).
  - **Precision Agriculture Technologies** - Precision Agriculture (PA) is an approach to farm management that uses information technology to ensure that crops and soil receive exactly what they need for optimum health and productivity.

Gluten

- Gluten is a family of storage proteins — formally known as **prolamins** — that are naturally found in certain cereal grains, such as wheat, barley etc.
   The **two main proteins** in gluten are **glutenin and gliadin.**
- Gluten offers a variety of functional culinary benefits and is responsible for the **soft, chewy texture** that is characteristic of many gluten-containing, grain based foods.
- When heated, gluten proteins form an elastic network that can stretch and trap gas, allowing for optimal leavening or rising and maintenance of moisture in breads, pasta, and other similar products.
- **Celiac disease,** also spelled as coeliac disease, is the **most severe form of gluten intolerance.**

Source: IE

Ranthambore Tiger Sanctuary: Rajasthan

Why in News

Six tigers are missing in Ranthambore Tiger Sanctuary (Rajasthan).

Key Points

- **About:**
    - **Ranthambore Tiger Reserve** lies in the **eastern part of Rajasthan state in Karauli and Sawai Madhopur districts,** at the **junction of the Aravali and Vindhya hill ranges.**
    - It **comprises the Ranthambore National Park** as well as **Sawai Mansingh and Kailadevi Sanctuaries.**
    - The **Ranthambore fort,** from which the forests derive their name, is said to have a rich history of over 1000 years. It is strategically located atop a 700 feet tall hill within the park and is believed to have been **built in 944 AD by a Chauhan ruler.**
    - This isolated area with tigers in it **represents the north-western limit of the Bengal tiger's distribution range** and is **an outstanding example of Project Tiger's efforts** for conservation in the country.
       India has 2,967 tigers, a third more than in 2014, according to results of a census made public in July 2020. **Ranthambore,** according to this exercise, had **55 tigers.**

- **Features:**
  - The reserve consists of highly fragmented forest patches, ravines, river streams and agricultural land.
  - It is **connected to <u>Kuno-Palpur Landscape</u> in Madhya Pradesh**, through parts of Kailadevi Wildlife Sanctuary, the ravine habitats of Chambal and the forest patches of Sheopur.
  - **Tributaries of <u>River Chambal</u>** provide easy passage for tigers to move towards the Kuno National Park.
- **Vegetation and Wildlife:**
  - The **vegetation** includes grasslands on plateaus and dense forests along the seasonal streams.
    - The forest type is mainly **tropical dry deciduous with 'dhak' (Butea monosperma),** a species of tree capable of withstanding long periods of drought, being the commonest.
    - **This tree is also called as 'Flame of forest'** and is one of the many flowering plants that add colour to the dry summers here.
  - The park is rich in **wildlife** with tigers at the apex of the food chain in mammals.
  - Other animals found here are **<u>leopards</u>**, striped hyenas, common or hanuman langurs, **<u>rhesus macaques</u>**, jackals, jungle cats, **<u>caracals</u>**, **<u>blackbuck</u>**, Blacknaped hare and chinkara, etc.
  - The park is rich in birds with about 272 species recorded so far.
- **Other Protected Areas in Rajasthan:**
  - **<u>Sariska National Park</u>**, Alwar
  - **<u>Desert National Park</u>**, Jaisalmer
  - Keoladeo National Park, Bharatpur
  - **<u>Sajjangarh wildlife sanctuary</u>**, Udaipur
  - **National Chambal Sanctuary** (on tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh)

<u>Source: TH</u>

US India Artificial Intelligence Initiative

Why in News

Recently, **US India Artificial Intelligence (USIAI)** initiative has been launched to scale up the science and technology relationship between India and the United States.

Key Points

- **US India Artificial Intelligence (USIAI)** is an initiative of **Indo-US Science and Technology Forum (IUSSTF)** which was established in March 2000.
    - The Department of Science & Technology (DST), Government of India, and the U.S. Department of State are respective nodal departments for **IUSSTF.**
- The USIAI will focus on **AI cooperation** in critical areas that are priorities for both countries.
    - **Example:** Healthcare, smart cities, materials, agriculture, energy, and manufacturing.
- It will bring together key stakeholders from India and the United States to create synergies that address challenges and opportunities at the interface of science, technology, and society.
- This will provide an **opportunity to** discuss the **emerging AI landscape,** and address the **challenges of developing an AI workforce.**
- **Related Recent Initiative:**
    - India has launched **National AI Strategy (NITI Aayog)** and **National AI Portal (Ministry of Electronics and Information Technology)** and has also started leveraging AI across various sectors such as education, agriculture, healthcare, e-commerce, finance, telecommunications, etc.
        - Recently **MyGov Corona Helpdesk Chatbot** bagged two awards under categories (1) "Best Innovation for Covid-19 – Society" and (2) "People's Choice Covid-19 Overall Winner" at the recently held CogX 2020. CogX is a prestigious Global Leadership Summit and Festival of Artificial Intelligence & Emerging Technology held annually in London.
    - Recently, India joined the **'Global Partnership on Artificial Intelligence (GPAI)'** as a founding member to support the responsible and human-centric development and use of AI.
    - As per a recent report, India **reported a 45% increase in the use of Artificial Intelligence**, the highest among all countries, because of shift in buying behaviour and new business challenges (owing to Covid-19 pandemic).
    - **RAISE 2020 – 'Responsible AI for Social Empowerment 2020'** was jointly organised by the **NITI Aayog** and the Ministry of Electronics and Information Technology **(MeitY).**
    - **Vaishwik Bhartiya Vaigyanik (VAIBHAV) Summit** was organised in 2020 to discuss key areas like quantum technologies, artificial intelligence among others.

Artificial Intelligence

- It describes the **action of machines accomplishing** tasks that have historically **required human intelligence.**
- It includes technologies like **machine learning, pattern recognition, big data, neural networks, self algorithms etc.**

- AI is different from hardware driven robotic automation. Instead of automating manual tasks, AI performs frequent high volume computerised tasks reliably.
- AI is often misunderstood for machine learning. AI is a **broader concept** with a bunch of technologies that include machine learning and other technologies like natural language processing, inference algorithms, neutron networks etc.
- AI techniques now have become an essential part of the technology industry helping to solve many challenging problems in computer-science. From **Apple Siri to self driving cars,** AI is progressing rapidly.

<u>**Source -PIB**</u>