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## News Analysis (14 Dec, 2020)

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### National Family Health Survey-5

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#### Why in News

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Recently, the **first-phase data** of the **National Family Health Survey-5** (NFHS-5) 2019-20 has been released by the **Ministry of Health and Family Welfare**.

- NFHS is a **large-scale, multi-round survey conducted in a representative sample of households throughout India**.
- All NFHSs have been conducted under the stewardship of the Ministry of Health and Family Welfare, Government of India, with the **International Institute for Population Sciences** (IIPS) Mumbai, serving as the nodal agency.  
**Established in 1956** under the joint sponsorship of Sir Dorabji Tata Trust, the Government of India and the **United Nations** (UN), IIPS has established itself as the premier institute for **training and research in population studies for developing countries in the Asia and Pacific region**.
- **Phase 2** of the survey (covering remaining states) was **delayed due to the Covid-19 pandemic** and its results are expected to be made available in **May 2021**.

#### Key Points

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- **About the Survey:**

- The NFHS-5 captured data **during 2014-19** and its **content is similar to NFHS-4 (2015-16)** to allow comparisons over time and also **marks a shift** from it.
- It provides an **indicator for tracking 30 Sustainable Development Goals (SDGs)** that the country **aims to achieve by 2030**.
- However, **NFHS-5 includes some new topics**, such as preschool education, disability, access to a toilet facility, death registration, bathing practices during menstruation, and methods and reasons for abortion.
- In **2019**, for the **first time**, the NFHS-5 sought details on the **percentage of women and men who have ever used the Internet**.

- **Data Analysis:**

- Several states across the country have **reversed course and recorded worsening levels of child malnutrition** despite improvements in sanitation and better access to fuel and drinking water.

The latest data captures the state of health in the states before the **pandemic**.

- Several states have either witnessed **meagre improvements** or **sustained reversals** on **four key metrics** of child (under 5 years of age) malnutrition parameters.
  - These four key metrics are **child stunting, child wasting, share of children underweight** and **child mortality rate**.
  - The data from these metrics is also used in several global indices such as the **Global Hunger Index**.

- **Child Stunting:**

- The **most surprising reversals** have happened in child stunting, which reflects **chronic undernutrition**, and refers to the **percentage of children who have low height for their age**.
- Stunting, more than any other factor, is likely to have **long-lasting adverse effects on the cognitive and physical development** of a child.
- **Telangana, Gujarat, Kerala, Maharashtra, and West Bengal** saw increased levels of child stunting.
- The reversals in child stunting are “hugely troubling” as normally, stunting levels do not increase because all the things that affect child growth tend to improve as stable democracies and economies move ahead.

- **Child Wasting:**
  - It reflects **acute undernutrition** and refers to **children having low weight for their height**.
  - **India has always had a high level of child wasting.**  
Instead of reducing it, **Telangana, Kerala, Bihar, Assam and Jammu-Kashmir** witnessed an **increase** and **Maharashtra and West Bengal** have been **stagnant**.
- **Share of Children Underweight:**  
In the proportion of underweight children, big states like **Gujarat, Maharashtra, West Bengal, Telangana, Assam and Kerala** have seen an **increase**.
- **Child Mortality Rate:**
  - **Infant Mortality Rate** (the number of deaths per 1000 live births for children under the age of 1) and **Under 5 Mortality Rate** data is mostly **stagnant**.
  - **Between NFHS-3 (2005-05) and NFHS-4**, there was **progress on mortality reduction** but **NFHS-5 and NFHS-4** are about five years apart still there is **very little progress** in many states.
  - In **Maharashtra**, the under-5 mortality rate is basically the same in NFHS-4 and in **Bihar**, it **reduced by just 3%** over five years.
  - Over 60% of child mortality is explained by child malnutrition, which is the central problem and needs to be addressed.
- **Urban-rural Gender Gaps in Internet Use:**
  - There is an **urban-rural gap** as well as **gender divide** with respect to the use of the Internet in several states and union territories.  
On average, **less than 3 out of 10 women in rural India and 4 out of 10 women in urban India** ever used the Internet.
  - **General Data:** An average 42.6% of women ever used the Internet as against an average of 62.16% among the men.
  - **In Urban India:** An average of 56.81% of women ever used the Internet compared to an average of 73.76% among the men.
  - **In Rural India:** A dismal 33.94% women in rural India ever used the Internet as against 55.6% among men.  
The **percentage of women**, who ever used the Internet, **significantly dropped in rural India**.

**Source: IE**

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**Lancet Citizens' Commission for Universal Health Coverage**

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**Why in News**

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Recently, the **Lancet Citizens' Commission on Reimagining India's Health System** has been launched **online** which is a step towards achieving **Universal Health Coverage** (UHC) in India.

## Key Points

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- **Lancet Citizens' Commission on Reimagining India's Health System:**
  - **Participants:** It is a **first-of-its-kind participatory, countrywide initiative**, in collaboration with world's leading health journal **The Lancet and the Lakshmi Mittal and Family South Asia Institute**, Harvard University.
  - **Objective:** To enable **participatory public engagement** to develop a citizens' blueprint for the implementation of UHC.
  - **Mission:**
    - To **lay out the path to achieving UHC** in India in the coming decade, working with all stakeholders.
    - To formulate a **roadmap for realising a resilient health system** that offers comprehensive, accountable, accessible, inclusive, and affordable quality health care to all citizens in India.
    - To **gather insights from across India** through grassroots surveys, public consultations and online discussions.
    - To **build partnerships and work closely with academic institutions, civil society and other stakeholders** to catalyse dialogue and knowledge sharing across fields.
  - **Focus :** Will be on the **architecture** of India's health system.
  - **Principles:** The Commission will be guided by **four principles** which are:
    - UHC covers all health concerns.
    - Prevention and long-term care are key.
    - The concern is financial protection for all health costs.
    - Aspiring for a health system that can be accessed by all who enjoy the same quality.

- **Universal Health Coverage:**
  - UHC means that **all individuals and communities receive the health services** they need without suffering financial hardship. It **includes the full range of essential, quality health services from health promotion to prevention, treatment, rehabilitation and palliative care.**
  - **Goal of UHC:** As stated in the United Nations Sustainable Development Goals (SDG 3) is one of the most significant commitments to **equitable quality healthcare for all.**
  - **Benefits of UHC:**
    - **Enables everyone to access** the services that address the most significant causes of disease and death, and ensures that the quality of those services is good enough to improve the health of the people who receive them.
    - **Protects people** from the financial consequences of paying for health services out of their own pockets and reduces the risk of people getting pushed into poverty because unexpected illness requires them to use up their life savings, sell assets, or borrow – destroying their futures and often those of their children.
- **Other Related Initiatives:**
  - **Ayushman Bharat :**
    - It is a flagship initiative that attempts to move away from the sectoral and segmented approach of service delivery to a **comprehensive need-based health care service.**
    - It has been launched by the government with an **aim to move towards a provision of universal healthcare in the country.**
  - **POSHAN Abhiyaan:** It aims to ensure service delivery and interventions by use of technology, behavioural change through convergence and lays-down specific targets to be achieved across different monitoring parameters.

## Way Forward

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- Government funded programmes should **ensure that financial barriers should not stop access to needed advanced care.** As UHC evolves, **the poor and near-poor must get full cost coverage** while others may seek protection through employer funded schemes or privately purchased insurance.
- The challenge of building capacity of people in a short time needs to be addressed through more **transformational public-private partnerships (PPPs),** presenting another opportunity to develop and adopt e-learning models.

- For a sustainable UHC model, maintaining a balanced trade-off between **cost, quality and access** to healthcare services is critical. **A collaborative approach aligning patients, payers and providers**, along with **innovative partnerships**, will hasten efforts to mitigate risks, drive impact, forge stronger social returns and achieve sustainable UHC targets.

**Source:TH**

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## **El Niño & Drought**

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### **Why in News**

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In a recent study by **Indian Institute of Science's (IISc) Centre for Atmospheric and Oceanic Sciences (CAOS)**, it has been found that **El Niño** was **not the only cause for droughts** during the Summer **Monsoon** in the Indian Subcontinent.

- **El Niño** is a recurring climate event during which **abnormally warm equatorial Pacific waters pull moisture-laden clouds** away from the **Indian subcontinent**.
- It is the usual **suspect** for **failing Indian summer monsoons** between **June and September**.

### **Key Points**

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- **Findings of the Study:**

43% of the droughts that occurred during the Indian summer monsoon season in the past century may have been driven by **atmospheric disturbances** from the **North Atlantic region**.

These **droughts** that India faced occurred during years **when El Niño was absent**.
- **Cause of these Drought:**

Sudden and steep drop in rainfall in late August that was linked to an **atmospheric disturbance in the mid-latitude region over the North Atlantic Ocean**, creating a **pattern of atmospheric currents** that move over the Indian subcontinent and **“derail” the monsoon**.

- **Change in Drought Pattern:**

- **El Niño year drought:**

- The **rainfall deficit** begins **mid-June** and spreads throughout the country.

- **Normal year Drought Condition:**

- There is normal rainfall during the monsoon season but a **sudden and steep decline was observed in August.**

- **Causes for this August decline:**

- An unusual **atmospheric disturbance** in the **mid-latitudes**

- The middle latitudes are spatial regions on Earth **located between the latitudes 23° and 66° north.**

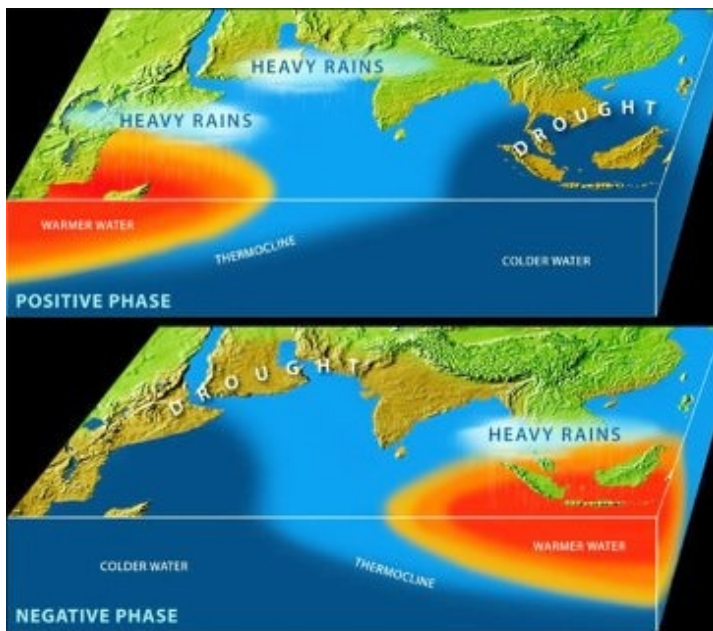
- The disturbance emerges from **winds in the upper atmosphere** interacting with a **cyclonic circulation** above abnormally **cold North Atlantic waters.**

- The resulting wave of air currents, called a **Rossby wave**, **moves from the North Atlantic** towards the **Tibetan plateau** and **hits the Indian subcontinent** around **mid-August**, **suppressing rainfall and causing drought-like conditions.**

## **Other Atmospheric Circulations that Impact Monsoon**

- **Indian Ocean Dipole:**

- The Indian Ocean Dipole (IOD) is defined by the **difference in sea surface temperature between two areas** (or poles, hence a dipole) – a western pole in the **Arabian Sea** (western Indian Ocean) and an **eastern pole** in the eastern Indian Ocean **south of Indonesia**.
- IOD develops in the equatorial region of Indian Ocean **from April to May** peaking in October.
- With a **positive IOD** winds over the Indian Ocean blow from east to west (from Bay of Bengal towards Arabian Sea). This results in the **Arabian Sea** (western Indian Ocean near African Coast) being much **warmer and eastern Indian Ocean around Indonesia becoming colder and dry**.
- In the **negative dipole** year (negative IOD), **reverse happens** making Indonesia much warmer and rainier.



- **Indian Ocean Dipole effect:**

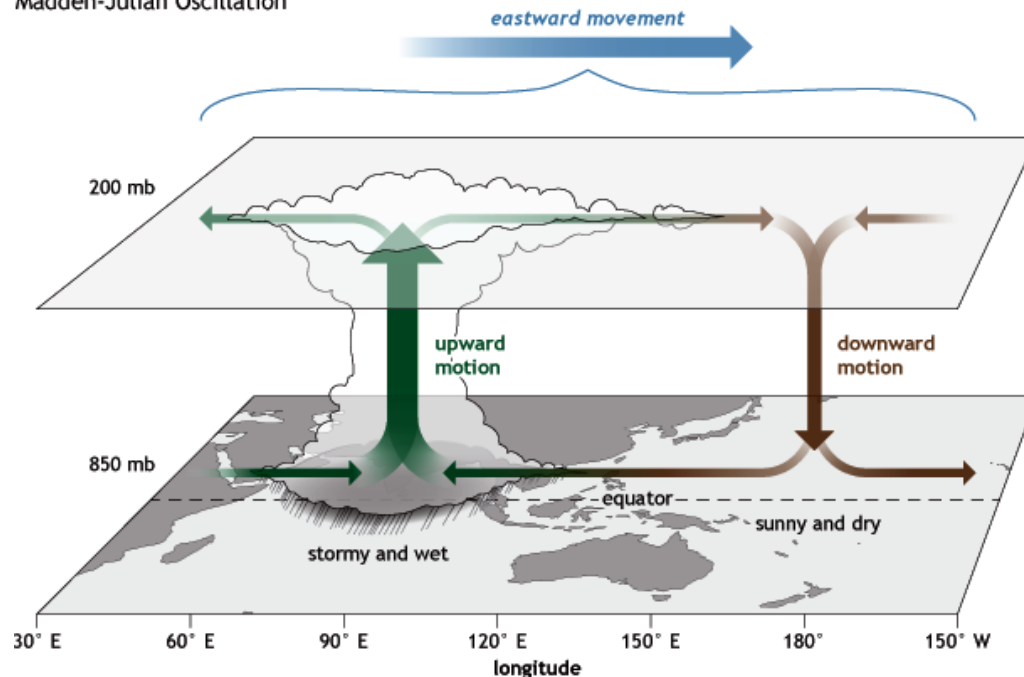
- It was demonstrated that a **positive IOD index** often negated the effect of El Nino, resulting in increased Monsoon rains in several El Nino years like the 1983, 1994 and 1997.
- Two poles of the IOD – the **eastern pole** (around Indonesia) and the **western pole** (off the African coast) were independently and cumulatively affecting the quantity of rains for the Monsoon in the Indian subcontinent.
- Impact of IOD on **Cyclogenesis** in Northern Indian Ocean:
  - Positive IOD (Arabian Sea warmer than Bay of Bengal) results in **more cyclones than usual in Arabian Sea**.
  - Negative IOD results in **stronger than usual Tropical Cyclones** in the Bay of Bengal. Cyclonic activity in Arabian Sea is **suppressed**.



- **Madden-Julian Oscillation, or MJO**

- The Madden–Julian Oscillation (MJO), is an eastward **moving band of rain clouds** that travels around the globe spanning 12,000–20,000 km across the tropical oceans returning to its initial starting point in 30 to 60 days.
- In its journey, it interacts with **surface waters** of the Indo-Pacific ocean, the **largest pool of warm water in the globe.**

Madden-Julian Oscillation



- The MJO consists of two parts, or phases: one is the **enhanced rainfall** (or convective) phase and the other is the **suppressed rainfall phase.**
- Strong MJO activity often **dissects the planet into halves:**  
One half within the **enhanced convective phase** and the other half in **the suppressed convective phase.** These two phases produce opposite changes in clouds and rainfall and this entire dipole propagates eastward.

- **Effects of MJO on global weather phenomenon:**

- It can modulate the **timing and strength of monsoons.**
- It **Influences tropical cyclone** numbers and strength in nearly all ocean basins.
- It can result in **jet stream changes** that can lead to cold air outbreaks, extreme heat events, and flooding rains over the United States and North America.

**Source:TOI**

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**Formulation of Policy for 3D Printing**

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## Why in News

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The **Ministry of Electronics and Information Technology** (MeitY) will soon come up with a **policy aimed at promoting 3D printing** on an industrial scale in view of its emerging market.

## Key Points

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- **3D Printing:**
  - **3D printing or additive manufacturing** uses computer-aided designing to make prototypes or working models of objects by laying down successive layers of materials such as plastic, resin, thermoplastic, metal, fibre or ceramic.
  - With the help of software, the **model to be printed is first developed by the computer**, which then gives instructions to the 3D printer.
  - 3D printing and a viable industry around it is mostly in the shape of **additive manufacturing**, wherein **companies make specific products for projects where there are very specific demands** such as lightweight equipment, etc.
    - One of the key applications for such products is in the medical and allied sector.
  - The **USA remains the global leader in 3D printing**, with **more than 35% market share**.
    - In **Asia**, about **50% of its market is cornered by China**, followed by **Japan** at 30%, and **South Korea** at 10%.
- **Features of the Policy:**
  - **Encourage market leaders to establish global bases for 3D manufacturing in India**, while **also discouraging imports** of printed material for domestic requirements.
  - **Objectives:**
    - Help develop a **conducive ecosystem** for design, development and deployment of 3D printing and additive manufacturing.
    - Help domestic companies to overcome technical and economic barriers so that they can build supportive and ancillary facilities for world leaders in the technology, such as the USA and China.
  - **Key Areas of Focus and Application:**
    - Auto and ancillary auto and motor spare part business, such as engines, interior and exterior parts of luxury vehicles, or landing gear, complex brackets, and turbine blades.
    - There can be some application of it in consumer electronics, printed circuit boards, clothing, toys and jewellery as well.

- **Challenges:**
  - **Lack of Standards:** Since 3D printing is a **very niche and new domain**, there are **no global qualifications and certification norms**.
  - **Hesitation in Adoption:** Another challenge is **to convince the industry and ministries to push for its adoption** in their respective sectors as any new technology, which is not understood easily, faces a tough time.
  - **Risk of Job Losses:** In the initial meetings on the subject, there was a **lot of resistance on whether this technology would eat into the jobs of highly-skilled workers** in the medical equipment or aerospace technology sectors.
  - **High Costing:** Although actual printing is cheap, **parts to build a 3D printer are very expensive** as the **equipment and manufacturing costs are very high**. In addition, there is a **concern about warranty** hence, resource companies are **hesitant to put 3D-printed parts into their machines if they are not covered for damage** in case the parts fail.
  - **Sector Specific Challenges:** Globally and even in India, the **largest consumer of 3D printing is the automotive industry** and right now it is going through a lot of changes like the introduction of **BS-VI and electric vehicles. New vehicle design development has slowed** and so has the demand for 3D printing.
- **Potential Market:**
  - According to MeitY's estimates, the **global market for additive manufacturing** is expected to reach **USD 34.8 billion by 2024**, which is growing at a compound annual growth rate of 23.2%.
  - 3D printing **may not lead to an increase in net employment**, but this technology is something which can be pushed ahead.

## Way Forward

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- Lack of investment and fewer research and development centres for 3D printing are some of the additional factors that are holding back a large scale adoption. However, a better understanding of 3D printing technology and its applications among users will definitely help increase its adoption in India.
- Indian market has a high potential ground as the adoption of 3D printing solutions is continuously rising for the past few years with increased general market awareness and there is still a lot of growth here compared to markets that are more mature such as Japan, Germany or the USA.

**Source: IE**

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# Vehicle Insurance in India

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## Why in News

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Recently, the **Insurance Information Bureau of India** released its annual report (**Motor Annual Report 2018-19**).

**Insurance Information Bureau (IIB)** was promoted by **Insurance Regulatory Development Authority of India (IRDAI)** as a single platform to meet the needs of the insurance industry, in 2009.

## Key Points

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- **Key Findings:**
  - **Uninsured Vehicles:**
    - Nearly **57% of the total vehicles on the road were uninsured** as of March 2019, up from **54% in March 2018**.
    - The **bulk of uninsured vehicles are two-wheelers**, with the numbers being as high as 66%.
      - According to the **Motor Vehicles Act, 2019**, it is **mandatory** for all vehicles to be insured with **third-party vehicle insurance policy**.
      - Third-party insurance is essentially a form of liability insurance purchased by an insured (first-party) from an insurer (second party) for protection against the claims of another (third party). The first party is responsible for their damages or losses, regardless of the cause of those damages.
  - **Reasons:**

**Weak enforcement** by traffic police in states, lack of follow-up by insurers and **rising cost of third-party covers** has resulted in a larger number of vehicle owners not renewing their motor insurance policy.

- **Concerns:**
  - About 13.2 crore vehicles on Indian roads are plying without the mandatory third-party insurance covers. **Victims of accidents caused by these vehicles will not get adequate compensation** as there would not be any one insurance company on which the liability can be pinned. The owners, too, have limited means to provide compensation.
  - Findings from the annual report on Road Accidents in India, released by the Ministry of Road Transport and Highways in 2019:
    - **The road accidents numerics:**
      - It **kills almost 1.5 lakh people annually** in India.
      - The **accidents, as well as accident-related deaths** in the period 2010-2018, **dropped drastically compared with the previous decades**, despite the very high rate of growth of automobiles.
      - The road accident **severity** (the number of persons killed per 100 accidents) has **increased by 0.6% in 2018 compared to 2017**.
    - **Major Cause:**
      - **Over-speeding** is a major cause, accounting for 64.4% of the persons killed.
      - **Two-wheelers accounted for the highest share (35.2%)** in total accidents in 2018.
  - **For insurance companies**, the low level of compliance results in a **higher claims ratio as**, on several occasions, the tribunals have held the insurers liable for compensation, asking them to recover from the insured.
- **Related Global initiatives:**
  - **Brasilia Declaration on Road Safety (2015):**
    - The declaration was signed at the second Global High-Level Conference on Road Safety held in Brazil. The first conference was held in Russia (2009).
    - Through the Brasilia Declaration, countries plan to achieve the **Sustainable Development Goal 3.6** i.e. to half the number of global deaths and injuries from road traffic accidents by 2030.
  - The **United Nations** has also declared **2010-2020 as the decade of action for Road Safety**.

## Way Forward

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- India is **one of the largest auto markets in the world** with over 20 million vehicles sold annually. It is also among the countries with the **highest number of road accidents and fatalities**. In this scenario, it is very risky and dangerous when more than half the vehicles in the country are uninsured.

- Insurance will definitely not reduce the death and accidents however it will reduce the loss and will help in post accident recovery.
- There is a **need for complementary thrust to spread awareness and improve financial literacy, particularly the concept of insurance, and its importance.**
- Another area that necessitates regulatory scrutiny is that of **application of technology** in insurance.
- The regulator needs to **exercise vigilance** on three other aspects.
  - It must ensure that **insurance is not denied to lower-income people** who make up the bulk of the population and have the most need for protection.
  - It should insist that **insurers facilitate a simple online process** for direct buying of insurance products, bypassing intermediaries.
  - It should ensure that **players do not overcharge or add hidden costs.**

Source:IE

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## **Scheme for Special Assistance to States for Capital Expenditure**

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### **Why in News**

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All the **States except Tamil Nadu** have availed benefits of the scheme for “**Special Assistance to States for Capital Expenditure**”.

The scheme was **announced by the Ministry of Finance** as a part of the **Aatmanirbhar Bharat package.**

### **Key Points**

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- **Background:** As part of the Aatmanirbhar Bharat Package, the government had announced that the **Centre will offer Rs. 12,000 crore special interest-free 50-year loan to states**, exclusively for capital expenditure.
- **Aim:** To **boost capital expenditure by the State governments** which are facing a difficult financial environment this year due to the shortfall in tax revenue arising from the **Covid-19 pandemic.**

- **Three Parts:**
  - **Part-I** of the scheme **covers the north-eastern region** (Rs. 200 crores).
  - **Part-II** is for **all other States** (Rs. 7500 crores).
  - **Part-III** of the scheme is **aimed at pushing various citizen-centric reforms** in the States.
    - Under this Part, an amount of **Rs. 2000** crores is earmarked.
    - This amount **will be available only to those States** which **carry out at least three out of the four reforms** specified by the Ministry of Finance on the reform-linked additional borrowing permissions.
    - **Four Reforms: One nation one ration card**, ease of doing business, urban local body/ utility reform and power sector reforms.
- **Status:**
  - The Ministry of Finance has **approved Rs. 9,879.61 crore** worth of capital expenditure proposals of 27 States.
    - Of this, Rs. 4,939.81 crore has been released as the first instalment.
  - The capital expenditure projects have been **approved in diverse sectors** such as health, rural development, water supply, irrigation, power, transport, education, urban development.

## Capital Expenditure

- **Meaning:**
  - Capital expenditure is the **money spent by the government** on the development of machinery, equipment, building, health facilities, education, etc.
  - It also includes the expenditure incurred **on acquiring fixed assets** like land and investment by the government that gives profits or dividend in future.
  - Along with the creation of assets, **repayment of loan** is also capital expenditure, as it reduces liability.
  - Capital spending is **associated with investment or development spending**, where expenditure has benefits extending years into the future.
- **Significance:**
  - Capital expenditure, which leads to the creation of assets are long-term in nature and allow the economy to **generate revenue for many years** by adding or improving production facilities and boosting operational efficiency.
  - It also **increases labour participation**, takes stock of the economy and **raises its capacity to produce more in future.**

- **Different from Revenue Expenditure:**
  - Unlike capital expenditure, which creates assets for the future, revenue expenditure is one that **neither creates assets nor reduces any liability** of the government.
  - Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure. It is **recurring in nature**.

**Source: PIB**

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## **National Energy Conservation Day 2020**

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### **Why in News**

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The National Energy Conservation Day is organized on **14<sup>th</sup> December every year** by the **Bureau of Energy Efficiency (BEE)** with an aim to showcase India's achievements in energy efficiency and conservation.

The **National Energy Conservation Awards** are given on the occasion.

### **Key Points**

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- **Energy Conservation:**
  - It is **any behavior that results in the use of less energy**.  
Turning the lights off when leaving the room and recycling aluminum cans are both ways of conserving energy.
  - It is **different from the term 'energy efficiency'**, which is using technology that requires less energy to perform the same function.  
Using a Light-Emitting Diode (LED) light bulb or a Compact Fluorescent Light (CFL) bulb that requires less energy than an incandescent light bulb to produce the same amount of light is an example of energy efficiency.
  - The **Energy Conservation (EC) Act was enacted in 2001** with the goal of **reducing the energy intensity of Indian economy**.  
The **Bureau of Energy Efficiency (BEE)** was set up as the **statutory body** in 2002 at the central level to **facilitate the implementation of the EC Act**.  
It functions under the **Ministry of Power**.
  - **India's energy demand is expected to double between 2013 and 2030**, to approximately 1500 million tons of oil equivalent.
- **Energy Conservation Act, 2001:** The Act provides **regulatory mandates** for:
  - Standards & labeling of equipment and appliances;
  - Energy conservation building codes for commercial buildings; and
  - Energy consumption norms for energy intensive industries.



- **National Energy Conservation Awards:**
  - These Awards are given by eminent dignitaries of the Government of India **to Industries, Buildings, Transport and Institutions sectors along with Energy Efficient Manufacturers** to recognize innovation and achievements made by them in energy conservation.
  - The awards were **given for the first time on 14<sup>th</sup> December, 1991**, which is celebrated as “**National Energy Conservation Day**” throughout the country.
- **Schemes To Promote Energy Conservation and Energy Efficiency:**

- The Ministry of Power through the BEE is implementing various policies and schemes viz. PAT Scheme, Standard and Labelling, Energy Conservation Building Codes and Demand Side Management.
  - **PAT Scheme:**
    - **Perform Achieve and Trade Scheme (PAT)** is a **market based mechanism** to enhance the cost effectiveness in improving the Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded.
    - It is a part of the **National Mission for Enhanced Energy Efficiency (NMEEE)**, which is one of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.
  - **Standards and Labeling:**
    - The scheme was **launched in 2006** and is currently invoked for equipments/appliances Room Air Conditioner (Fixed/VariableSpeed), Ceiling Fan, Colour Television, Computer, Direct Cool Refrigerator, Distribution Transformer, Domestic Gas Stove, General Purpose Industrial Motor, LED Lamps, Agricultural Pumpset, etc.
    - It **provides the consumer an informed choice** about the energy saving and thereby the cost saving potential of the relevant marketed product.
  - **Energy Conservation Building Code (ECBC):**
    - It was **developed for new commercial buildings in 2007**.
    - ECBC sets **minimum energy standards** for new commercial buildings having a connected load of 100kW (kilowatt) or contract demand of 120 KVA (kilovolt-ampere) and above.
    - BEE has also developed a **voluntary Star Rating Programme** for buildings which is based on the actual performance of a building, in terms of energy usage in the building over its area expressed in kWh/sq. m/year.
  - **Demand Side Management:**
    - DSM is the selection, planning, and implementation of measures intended to have an influence on the demand or customer-side of the electric meter.
- Furthermore, the development of **Energy Conservation Guidelines** and **State Energy Efficiency Preparedness Index** are complimented within different sectors of Industries and States for implementing the energy efficiency programmes more effectively.
- India's **first convergence project** to generate green energy for rural and agriculture consumption is set to come up in Goa.

- **Global Efforts:**
  - **International Energy Agency:**
    - It works with countries around the world to shape energy policies for a secure and sustainable future.
    - **India** is not a member country but an **association country**.
    - The IEA and Energy Efficiency Services Ltd. (EESL - Ministry of Power) co-produced a case study on the Indian Government's domestic efficient lighting programme - **UJALA** - to showcase the multiple benefits of energy efficient lighting.
  - **Sustainable Energy for All (SEforALL):**

It is an **international organization** that works in partnership with the United Nations and leaders in government, the private sector, financial institutions and civil society to drive faster action towards the achievement of **Sustainable Development Goal 7 (SDG7)** – access to affordable, reliable, sustainable and modern energy for all by 2030 – in line with the **Paris Agreement** on climate.
  - **Paris Agreement:**
    - It is a **legally binding international treaty** on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.
    - As a part of the Paris Agreement, India has committed to **reducing its energy intensity** (units of energy use per unit of GDP) by 33-35% by 2030 compared to the 2005 levels.
  - **Mission Innovation (MI):**
    - It is a **global initiative of 24 countries and the European Commission** (on behalf of the European Union) to accelerate clean energy innovation.
    - **India** is one of the **member countries**.

## Way Forward

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- The high ambitions of citizens to live and work in comfortable air conditioned spaces with appliances providing ease of living will lead to a multi fold increase in energy consumption. An approach to change the course of energy use behaviour through energy efficiency programmes is needed to **curb future energy demand**.
- It is crucial for India to push for the expansion of the **Nearly Zero Energy Buildings (NZEB) programme** to all segments of the construction sector. The objective of this programme is to develop a framework for conventional buildings to achieve low energy use per unit area.

- Also, India's power sector is slated for a revamp with multiple policy level changes through the **amendment of the Electricity Act**. One of the major initiatives as a solution to issues like low billing efficiencies leading to revenue losses, heavy transmission and distribution losses, monitoring of electricity consumption, etc. is **installation of smart meters**. The installation of smart meters at a fast pace can help India in **facilitating energy efficiency interventions at a large scale**.
- Embracing **an energy efficient lifestyle** will provide a positive impetus towards transformation of India's energy system for the better. Energy efficiency interventions are one of the most cost-effective means of achieving **a low carbon transition**.

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## Myristica Swamp Treefrog

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### Why in News

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Recently, **Myristica swamp treefrog** has been recorded for the **first time in Kerala's Thrissur district**.



### Key Points

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- **Scientific Name:** *Mercurana myristicapalustris*
- **About:**
  - These are **endemic** to the Western Ghats.
  - Rare **arboreal species** (Pertaining to moving about, living in or among trees).
  - **Active only for a few weeks** during their breeding season.

- **Unique Breeding Behaviour:**

- The breeding season, unlike for other frogs, starts in the pre monsoon season (May) and ends before the monsoon becomes fully active in June.
- Before the end of the breeding season, the female frogs along with their male counterparts **descend on the forest floor**.
- The **female digs the mud and lays eggs** in shallow burrows in mud. After breeding and egg laying, they **retreat back to the high canopies** of the tree and remain elusive till the next breeding season.

## Myristica Swamps

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- **About:**

- The **Myristica swamps are tropical freshwater swamp forests** with an abundance of **Myristica trees**.
  - **Myristica trees** are the **most primitive** of the **flowering plants** on earth.
  - The evergreen, water-tolerant trees have dense stilt roots helping them stay erect in the thick, black, wet alluvial soil.
  - The trees form a **fairly dense forest** with a **closed canopy**.
- The swamps are **typically found in valleys**, making them prone to **inundation during monsoon rains**.

- **Significance:**

- **Research & Study:** These swamps are considered as **living museums** of ancient life and could promote **better understanding of the influence of climate change** on the evolution of plants.
- **Check Vagaries of Extreme Events:** These swamps have **high watershed value**. When they are drained, filled or otherwise disturbed, their water holding capacity is lost, resulting in **floods and erosion** during the rainy season and dry streambeds the rest of the year.
- **Habitat: Provide habitat** for a rich diversity of invertebrate and vertebrate species, including amphibians, reptiles and mammals.
  - It is estimated that the wetlands contain 23% of butterflies, more than 50% of amphibians, more than 20% of reptiles and birds in the whole of Kerala.
- **Carbon Sequestration:** These have higher potential to store carbon than nearby non-swamp forests. They function as **carbon sinks** and can store carbon produced by upland agriculture, forestry and other land uses.

- **Present Status:**

- Studies have shown that the swamps, which would have occupied large swathes of the thickly- wooded Western Ghats in the past, are **now restricted to less than 200 hectares in the country.**
  - Further, the Myristica swamps of the **Western Ghats are fragmented**, with Kerala holding a major share of this habitat.
  - Leaving aside a few more patches in Karnataka and Goa, this exceptional wetland has almost disappeared from the Indian subcontinent due to the climatic alteration over the last 18,000 to 50,000 years (Late Pleistocene period).
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