

**GOVERNMENT POLICIES & INTERVENTIONS**

**India's Hunger Challenge**

- **In Context-** India lifted 135 million people out of poverty, however, malnutrition still remains an onerous challenge.

**India's Achievements**

**Poverty & Hunger:**

- From 2015-16 to 2019-21, India lifted 135 million people out of poverty.
- This is a commendable achievement based on the Multi-dimensional Poverty Index (MDPI) prepared by the NITI Aayog.
- When India got freedom more than 80 percent of people were in extreme poverty, which today hovers around 15 per cent as per MDPI and about 11 per cent based on income criterion (\$2.15 PPP).
- The UNDP has estimated that India lifted 415 million people out of poverty (MDPI) over the period 2005-06 to 2019-21.
- India seems to be on track to almost abolish poverty in the next five to 10 years.
- On hunger, at least in terms of food availability, India has done well.

**Revolutionising India:**

- **Green revolution:** The Green Revolution turned India from a “ship to mouth” economy to the largest exporter of rice. It has also enabled India to give free rice or wheat (5kg/month/person) to more than 800 million people under the PM Garib Kalyan Yojana, thus improving their economic access to basic staples.
- **White revolution:** India also experienced the White Revolution (milk) and emerged as the largest producer of milk (222 MT), with the US coming at number two with just 102 MT of milk production.
- **Gene revolution:** The gene revolution in cotton that was triggered by introduction of Bt cotton, made India the largest producer of cotton.

**Challenges**

- **Malnutrition:** Malnutrition is still a challenge, especially amongst children below the age of five.
- As per NFHS-5 (2019-21), 32 percent of children were underweight, 35 per cent stunted, and 19 per cent wasted.
- Although India made reasonably good progress in reducing infant mortality from 57 per 1,000 in 2005-06 to 35 per 1,000 in 2019-21, the progress on other indicators of malnutrition is not very satisfactory.
- **Climate change & food insecurity:** Climate change and the increasing frequency of extreme weather events, from heat waves to flash floods, pose a big challenge not only to India's food system but also to poverty alleviation – gains could reverse with these shocks.
- **Non-communicable diseases:** The rising burden of cardiovascular and other non-communicable diseases in India, particularly among the rapidly growing “middle class”, is strongly linked to diet and nutrition.

**Causes of Malnutrition**

- **Caloric deficiency:** Though the government has surplus of foodgrains, there is calorific deficiency because of improper allocation and distribution. Even the yearly allocated budget is not fully utilized.
- **Protein deficiency:** Pulses are a major panacea to address protein deficiency. However, there is a lack of budgetary allocation for inclusion of pulses in PDS. With Eggs missing from menus of Mid-day Meals in various States, an easy way to improve protein intake is lost.
- **Micronutrient deficiency (hidden hunger):** India faces a severe crisis in micronutrient deficiency. Its causes include poor diet, prevalence of disease or non-fulfilment of increased micronutrient needs during pregnancy and lactation.

**Suggestions**

- **Access to nutritious food:** It is time to elevate food intake among young children to be of primary importance, as opposed to being referred to as “complementary” in policies and guidelines related to maternal, infant and young child nutrition.
- **Access to adequate and affordable nutritious food** is equally necessary for mothers for healthy breastfeeding.
- **Need of improved assessments:** To better understand food security for all populations in India, assessments using household-level food insecurity modules developed by the Food and Agriculture Organisation can be adapted to measure the extent of food insecurity among Indian households.
- **Evidence-based policy:** Measuring the availability, accessibility and affordability of nutritious food, especially for disadvantaged and vulnerable populations such as young children, constitutes the foundation for any evidence-based policy to end hunger and improve nutritional security among Indians.
- **Pradhan Mantri Garib Kalyan Anna Yojana:** To achieve the SDG of zero hunger, and building on the Pradhan Mantri Garib Kalyan Anna Yojana, India should consider a strategic initiative led by the Prime Minister's Office aimed at eliminating food insecurity in India and ensuring affordable access to sufficient

quantity and quality of nutritionally diverse food, with a special and immediate focus on India's youngest children.

#### **Government Interventions**

- **Eat Right India Movement:** An outreach activity organized by the Food Safety and Standards Authority of India (FSSAI) for citizens to nudge them towards eating right.
- **POSHAN Abhiyan:** Launched by the Ministry of Women and Child Development in 2018, it targets to reduce stunting, undernutrition, anaemia (among young children, women and adolescent girls).
- **Pradhan Mantri Matru Vandana Yojana:** A centrally sponsored scheme executed by the Ministry of Women and Child Development, is a maternity benefit programme being implemented in all districts of the country with effect from 1st January, 2017.
- **Food Fortification:** Food Fortification or Food Enrichment is the addition of key vitamins and minerals such as iron, iodine, zinc, and Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content.
- **National Food Security Act, 2013:** It legally entitled up to 75% of the rural population and 50% of the urban population to receive subsidized food grains under the Targeted Public Distribution System.
- **Mission Indradhanush:** It targets children less than 2 years of age and pregnant women for immunization against 12 Vaccine-Preventable Diseases (VPD).
- **Integrated Child Development Services (ICDS) Scheme:** Launched in 1975, the ICDS Scheme offers a package of six services to children in the age group of 0-6 years and pregnant and lactating mothers

#### **Way ahead**

- A straightforward answer to these challenges would be to keep the focus on accelerating economic growth and making it more inclusive.
- Fixing the pre-existing schemes is another important solution to addressing India's multi-dimensional nutrition challenge.
- Getting the already existing schemes right requires greater involvement of local government and local community groups in the design and delivery of tailored nutrition interventions.

#### **PRELIM FACT**

##### **1. Dark side of the moon**

- **Context:** Ahead of the scheduled landing of the Chandrayaan-3 lander on the moon on, the Indian Space Research Organisation (ISRO) released images of the far side of the lunar surface.
- The far side is also known as the dark side of the moon as it is always hidden from earth.
- The images were captured by the Lander Hazard Detection and Avoidance Camera (LHDAC) onboard the lander.

##### **About the Dark Side of the Moon**

- The "dark side of the moon" refers to the side of the Moon that is not visible from Earth.
- It's often misunderstood as a place that never sees sunlight, but in reality, both the near side (the one facing us) and the far side (the "dark side") of the Moon experience day and night just like any other celestial body.
- The reason it is referred as the dark side is because it remained largely unseen by humans.
- The Moon's one rotation is equivalent to the Earth's 14 days.
- So we always see the same face of the Moon from the Earth.
- The far side remained hidden until the Soviet spacecraft Luna 3 captured images of it in 1959.

##### **Significance of the far side:**

##### **Potential of Frozen Water:**

- As we haven't explored that side before, there is possibility to find water near the south pole of the Moon.
- Water exists as a solid or vapour on the Moon because of the vacuum - the Moon doesn't have enough gravity to hold an atmosphere.
- The frozen water untainted by the Sun's radiation might have accumulated in cold polar regions over millions of years, leading to the accumulation of ice on or near the surface.

##### **Mystery:**

- Because it was unseen for so long, the far side became shrouded in mystery.
- People wondered if it looked drastically different from the side we knew.

##### **Scientific Interest:**

- Exploring the far side of the Moon provides an opportunity to study its geological features, impact craters, and other phenomena that might differ from what we see on the near side.

##### **Potential for Radio Telescopes:**

- Scientists have proposed placing large radio telescopes on the far side to study the early universe and cosmic phenomena more effectively, shielded from our planet's radio noise.

**Future Lunar Missions:**

- The far side could serve as a strategic base for future lunar exploration.
- It provides a unique environment for scientific study and a potential location for future lunar settlements.

**2. Tagaeri and Taromenani tribes**

- **Context:** In a historic decision, Ecuadorians voted against the oil drilling of a protected area in the Amazon that's home to two uncontested tribes: Tagaeri and Taromenani, and serves as a biodiversity hotspot.

**Key details:**

- The area is situated within Yasuni National Park, one of the world's most biodiverse regions.
- The area is inhabited by the Tagaeri and Taromenani, who live in self-isolation.
- In 1989, Yasuni was designated a world biosphere reserve by the United Nations Educational, Scientific and Cultural Organization, also known as UNESCO.
- Encompassing a surface area of over 1 million hectares, it boasts 610 species of birds, 139 species of amphibians, and 121 species of reptiles.

**The Tagaeri and the Taromenani**

- The Tagaeri and the Taromenani are the last indigenous peoples living in isolation who are officially recognized by the Ecuadorian State.

**Taromenane**

- The Taromenane are an uncontacted people living in Yasuni National Park, at the Ecuadorian Amazon Basin.
- Together with the Tagaeri they make up the two last known indigenous groups living in voluntary isolation in Ecuador.
- The clan is believed to be distantly related to the Huaorani people.
- It is estimated there are 150–300 Taromenane still maintaining a nomadic lifestyle in the rainforest.
- The Taromenane has recently been under threat from oil developments and illegal logging in the Yasuni National Park.

**Tagaeri**

- The Tagaeri are an eastern Huaorani people living in Yasuni National Park, in the Ecuadorian Amazon Basin.
- They are named after one of their members, Tagae.
- They live a hunting and foraging lifestyle and have resisted outside contact, making them one of the so-called uncontacted peoples of the world.
- It is estimated that there are perhaps only 20–30 surviving Tagaeri.

**3. Maharaja Bir Bikram Manikya Bahadur**

- **Context:** The Prime Minister of India paid tributes to Maharaja Bir Bikram Manikya Bahadur on his birth anniversary.

**Key details:**

- Maharaja Kirit Bikram Kishore Manikya Deb Barma Bahadur was the 185th and last King of Tripura.
- His formal coronation was held in 1941, but he never gained the powers of a king.
- He was the nominal king for two years until the state's merger into India in 1949.
- Since he was a minor during this time, the state was governed by a Council of Regency headed by his mother Kanchan Prava Devi.
- He was elected from Tripura East Lok Sabha seat on an Indian National Congress ticket and was elected thrice in 1967, 1977 and 1989.
- He was married to Padmavati Raje 'Akkasaheb' Scindia eldest daughter of Maharaja Jivajirao Scindia of Gwalior State.
- Later, he married Bibhu Kumari Devi, daughter to Raja Lav Shah.

**4. EXERCISE MALABAR -23**

**News:** The 27th edition of Exercise MALABAR concluded on the East Coast of Australia off Sydney recently.

**About:**

- The exercise saw participation of Ships, Submarines and aircraft from the Indian Navy, Royal Australian Navy, Japan Maritime Self Defence Force and the US Navy.
- The Indian Navy was represented by indigenously built Destroyer INS Kolkata, Frigate INS Sahyadri and P8I Maritime Patrol Aircraft.
- The exercise reaffirmed the ability of the four navies to operate together and their shared commitment to maritime security and regional stability.
- It showcased the strong cooperation, shared values and the collective ability of the four participating nations to ensure a free, open and inclusive Indo-Pacific.

**5. 19th Maritime States Development Council**

**In News**

- The Union Minister for Ports, Shipping and Waterways (MoPSW), unveiled a vision for India's maritime sector, outlining key initiatives that promise a transformative impact at the 19th Maritime States Development Council meeting.

**About**

- The Government will soon put together the Bureau of Port Security towards upgrading security across all the ports in the country.
- Government shared about the Ministry's ambitious plan to develop Hydrogen Hubs across the Central Government and State Government ports.
- All major ports have prepared their Port Master Plans for 2047, and states are also getting their Port Master Plans for 2047 ready.
- The total country's Port capacity will increase from existing around 2,600 MTPA to more than 10,000 MTPA in 2047.
- The Union Minister announced that all maritime states and Union Territories will participate in the Global Maritime India Summit 2023.
- GMIS 2023 is a premier maritime sector-focused event to bring together pivotal figures from the industry to explore opportunities, understand challenges, and stimulate investment within India's maritime sector.

**Public-Private Partnership (PPP) terminals**

- The role of private players is being progressively augmented, with Public-Private Partnership (PPP) terminals currently handling about 50% of the cargo at major ports and efforts underway to raise their share to approximately 85% in the coming decades.
- This strategic move towards privatisation is expected to enhance efficiency and facilitate the scaling of operations.
- Ambitious targets have been set to achieve a substantial quantum of 500 MTPA by 2047, underlining the government's commitment to leveraging the maritime sector as a catalyst for comprehensive national growth.
  - ✓ About Maritime State Development Council (MSDC)
  - ✓ It is an apex advisory body constituted in 1997 to develop the Maritime Sector.
  - ✓ It aims to ensure the integrated development of Major and other notified ports.

**6. Yasuni National Park**

**Context**

- Ecuadorians made a historic decision by voting against oil drilling in Yasuni National Park, a biodiversity Amazonian zone.
- Exploration for the region's oil deposits has endangered numerous local species and habitats, as well as the indigenous Waorani people's way of life.

**About Yasuni National Park**

- Yasuni National Park, a UNESCO biosphere reserve since 1989 and is home to extraordinary biodiversity.
  - The dominant ecosystem is the Humid Tropical Rainforest which forms part of the upper Amazon basin.
  - It is located in the provinces of Napo and Pastaza in north-eastern Ecuador.
  - Yasuni is home to around 670 species of birds, over 150 species of amphibians, and several large mammals such as jaguars, pumas, and tapirs.
  - It is also home to the Waorani and Kichwa peoples, who have lived in the area for generations and have a strong connection to the land.
  - The Ishpingo-Tiputini-Tambococha (ITT) oil fields in Yasuni National Park contain 40% of Ecuador's crude oil reserves.



**ANSWER WRITING**

**Q How has the development of lithium-ion batteries revolutionized the electric vehicle industry in India? (150 words)**

- Lithium-ion batteries are a type of rechargeable battery that has become widely used in various applications due to their high energy density, efficiency, and relatively low self-discharge rate. They are commonly used in portable electronics, electric vehicles (EVs), renewable energy storage systems, and other modern technologies.
- Lithium-ion batteries revolutionized the electric vehicle industry in India:
  - **Extended Driving Range:** Lithium-ion batteries offer higher energy density, enabling EVs to achieve longer driving ranges on a single charge. This has addressed one of the major concerns of potential EV buyers - "range anxiety." For example, the Tata Nixon EV, powered by a lithium-ion battery, offers a range of over 300 km on a full charge, making it suitable for everyday commuting and long-distance travel.
  - **Increased Adoption of EVs:** The availability of efficient and high-performance lithium-ion batteries has accelerated the adoption of EVs in India. According to a report by Bloomberg NEF, India's EV market witnessed a significant growth of 1.35 lakh electric vehicles in 2021, representing a 19% YoY increase.
  - **Fast Charging Capabilities:** Lithium-ion batteries enable fast charging, reducing the time required to recharge an EV. For instance, Tata Power, in collaboration with MG Motors, has established a widespread fast-charging network in India to support MG ZS EV owners.
  - **Enhanced Performance:** Lithium-ion batteries deliver better power and acceleration, improving the overall performance of EVs. The Mahindra e2oPlus, equipped with lithium-ion batteries, can accelerate from 0 to 60 km/h in just 9.5 seconds, providing a spirited driving experience for urban commuters.
  - **Reduced Greenhouse Gas Emissions:** With the transition to lithium-ion batteries in EVs, India is witnessing a reduction in greenhouse gas emissions from the transportation sector. By replacing conventional internal combustion engine vehicles with EVs, the country can lower its carbon footprint and combat air pollution. It aligns with India's commitment to the Paris Agreement's climate goals.
  - **Growing EV Manufacturing Sector:** The emergence of lithium-ion batteries as the preferred energy storage technology for EVs has spurred investments in battery manufacturing within India. Major companies like Tata Chemicals and Suzuki Motor Corporation have announced plans to set up lithium-ion battery manufacturing facilities in India, boosting the domestic EV ecosystem.

**Increased Employment Opportunities:**

The growth of the EV industry, driven by lithium-ion batteries, has created new employment opportunities in India. From manufacturing battery cells to developing charging infrastructure, the EV sector has become a significant contributor to the country's job market.

**Government initiatives:**

- **National Electric Mobility Mission Plan (NEMMP):** The NEMMP was launched in 2013 with the goal of achieving widespread adoption of electric vehicles (EVs) in India.
- **Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India):** FAME India scheme was launched to promote the adoption and manufacturing of electric and hybrid vehicles in the country. The scheme also supports the establishment of charging infrastructure and battery swapping stations.
- **Phased Manufacturing Program (PMP):** The government introduced the PMP to encourage domestic manufacturing of lithium-ion cells and batteries.
- **Production-Linked Incentive (PLI) Scheme:** In 2020, the government launched the PLI scheme to boost local manufacturing in various sectors, including advanced chemistry cell (ACC) batteries, which include lithium-ion batteries.
- **National Policy on Electronics (NPE):** The NPE, introduced in 2019, includes provisions to encourage the domestic production of electronic components, including lithium-ion batteries, and reduce the import of electronic goods.
- **Setting up Giga factories:** To strengthen domestic manufacturing capabilities, several Indian companies have announced plans to set up giga factories for lithium-ion batteries.

The Geological Survey of India (GSI) has discovered approximately 5.9 million Tonnes of inferred lithium resources in Jammu and Kashmir. Lithium, a strategic element crucial for electric vehicle (EV) batteries, has been found in significant quantities. This discovery is being hailed as a transformative development in India's shift towards sustainable and eco-friendly transportation solutions.

**MCQ**

1. Consider the following statements with respect to 'National Disaster Response Fund (NDRF)'
  1. It is a fund managed by the Central Government to meet the expenses for emergency response and compensation
  2. It is placed in the Public Account of Government of India under reserve funds not bearing interest
  3. The National Executive Committee (NEC) of the NDMA takes decisions on the

- expenses from National Disaster Response Fund  
How many of the statements given above is/are incorrect?
- a) **Only one**                      b) Only two  
c) All three                      d) None
2. Consider the following statements with respect to 'Gene-edited mustard'
1. It is India's first ever low pungent mustard that is pest and disease resistant.
  2. It is based on CRISPR/Cas9 gene editing while being non-genetically modified
- Which of the above statements is/are incorrect?
- a) 1 only                      b) 2 only  
c) Both 1 and 2                      d) **Neither 1 nor 2**
3. Consider the following statements, with respect to LUPEX mission
1. It is joint mission of India and Russia to explore the south pole of moon
  2. The mission will carry lander system and lunar Rover
- Which of the statements given above is/are correct?
- a) 1 only                      b) **2 only**  
c) Both 1 and 2                      d) Neither 1 nor 2
4. Consider the following statements
1. A 14-member committee chaired by former NITI Aayog CEO and India's G20 Sherpa Amitabh Kant, which was constituted to examine stalled real estate projects and recommend ways to complete them, submitted its report on August 21.
  2. The report has been handed over to Housing and Urban Affairs Minister.
  3. The committee concluded that the main reason for the stress in these projects was the "lack of financial viability", which had led to cost overruns and time delays.
- How many of the above statements is/are correct?
- a) Only one                      b) Only two  
c) **All three**                      d) None
5. Consider the following statements about the Dark Side of the Moon.
1. The "dark side of the moon" refers to the side of the Moon that is not visible from Earth.
  2. The reason it is referred as the dark side is because it remained largely unseen by humans.
  3. The Moon's one rotation is equivalent to the Earth's 14 days.
  4. The far side remained hidden until the Soviet spacecraft Luna 3 captured images of it in 1959.
- How many of the above statements is/are correct?
- a) Only one                      b) Only two  
c) Only three                      d) **All four**
6. Consider the following statements about Maritime State Development Council (MSDC)
1. It is an apex advisory body constituted in 1997 to develop the Maritime Sector.
  2. It aims to ensure the integrated development of Major and other notified ports.
- Which of the statements given above is/are correct?
- a) 1 only                      b) 2 only  
c) **Both 1 and 2**                      d) Neither 1 nor 2
7. Consider the following statements about Yasuni National Park.
1. Yasuni National Park, a UNESCO biosphere reserve since 1989 and is home to extraordinary biodiversity.
  2. The dominant ecosystem is the Humid Tropical Rainforest which forms part of the upper Amazon basin.
  3. It is located in the provinces of Napo and Pastaza in north eastern Ecuador.
  4. Yasuni is home to around 670 species of birds, over 150 species of amphibians, and several large mammals such as jaguars, pumas, and tapirs.
- How many of the above statements is/are correct?
- a) Only one                      b) Only two  
c) Only three                      d) **All four**
8. Consider the following statements about Chabahar Port?
1. The port of Chabahar is located in south-eastern Iran in the Gulf of Oman.
  2. It is the only Iranian port with direct access to the ocean.
  3. It's located in the Sistan-Balochistan province on the energy-rich Iran's southern coast.
  4. The Chabahar port is considered a gateway to golden opportunities for trade by India, Iran and Afghanistan with central Asian countries.
- How many of the above statements is/are correct?
- a) Only one                      b) Only two  
c) Only three                      d) **All four**
9. Luna 25 spacecraft that was recently in news was launched by
- a) National Aeronautics and Space Administration (NASA)
  - b) European Space Agency
  - c) Japan Aerospace Exploration Agency (JAXA)
  - d) **Roscosmos**
10. Deshang Plains, Hot Spring and Daulat Beg Oldie regions are located in which part of India
- a) Jammu and Kashmir
  - b) **Ladakh**
  - c) Uttarakhand
  - d) Arunachal