

HEALTH**SHAPING INDIA'S PATH TO INCLUSIVE HEALTH CARE**

Health:(WHO)

- A certain totality of health to the realms of mental and social well-being and happiness beyond physical fitness, and an absence of disease and disability.
- We cannot achieve health in its wider definition without addressing health determinants.

Health status around the globe:

- Over 140 nations recognise health as a constitutional right
- WHO Council on the Economics of Health for All reports that more than half the world's population needs complete access to essential health services.

Health equity:

- It ensures that every person has an equal opportunity to achieve their highest health potential, no matter what their circumstances.
- It recognises social, economic, and environmental factors impact on health outcomes.
- True health equity addresses the root causes of health inequities such as:
 - poverty
 - discrimination
 - limited access to high-quality education
 - healthy diet
 - clean water and fresh air
 - housing
 - For example, a child born into poverty in a rural area has no access to clean water, wholesome food, or immunisations, which lays the foundation for chronic health problems.

Global challenges:

- The COVID-19 pandemic has starkly revealed that infectious diseases target marginalized and vulnerable groups the most, thus widening the health equity gap.
- Climate change poses a serious health risk since it disproportionately impacts low-income and vulnerable people.
- The health-care provision is severely hampered by conflicts, which destroy infrastructure, uproot communities, and shut off access to vital medical services.

India's health equity challenges:

- According to the 2011 Census, urban slums make up over 17% of India's metropolitan areas, and exhibit serious health disparities.
 - Health risks are increased by overcrowding, poor sanitation, and restricted access to clean water.
 - Infectious diseases, such as tuberculosis, are 1.5 times more common in slums than in non-slum areas(Indian Council of Medical Research)
- National Family Health Survey (NFHS)-5 (2019-21) data indicates that Scheduled Castes and Scheduled Tribes experience higher child mortality and lower immunization rates.
- 59% of women in the lowest wealth quintile suffer from anemia
 - Almost double the rate in the highest quintile, demonstrating the intersection of caste, gender, and economic status in health outcomes.
- Non-communicable diseases (NCDs) account for more than 60% of all fatalities in India.
- The Public Health Foundation of India: economic effect of NCDs could surpass \$6 trillion by 2030.
- Critical shortage of doctors: WHO data indicates only 0.8 doctors per 1,000 people, which is below the advised ratio.
 - Over 75% of health-care professionals work in metropolitan regions, which only account for 27% of the population
 - The shortage is particularly severe in rural areas.
 - If other medical practitioners are considered, the ratio might be balanced.

steps need to be taken

- India's health equity issues require a comprehensive approach beyond improvements in health-care facilities to address more extensive socioeconomic determinants of health.

- To move India toward universal health coverage and a more equitable future, the government, civil society, health-care providers, and communities need to work together.
- Governments and officials may influence the state of health through funding, creative policies, and laws.
- For instance, India's Ayushman Bharat initiative provides free health coverage to the bottom 40% economically, demonstrating a commitment to reducing health disparities.
- The National Health Mission (NHM), which includes both the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM), reduces the health-care gap between rural and urban India by:
 - expanding access
 - strengthening infrastructure
 - providing essential services to vulnerable populations.
- India should turn health equality into a shared, community-driven goal by including health education in the NHM, enabling its people to seek equitable care and make educated health decisions.
- Together with the government, the public and private health-care sectors provide services to underprivileged communities, emphasizing preventive education, workforce development, and infrastructure enhancement.
- Non-governmental organizations and civic societies engage in direct community outreach to draw attention to and resolve regional health concerns.
- Their collaboration with international and governmental organizations allows them to tailor health initiatives that are culturally sensitive to the community's unique needs.
- International institutions such as WHO, the Global Fund, and Gavi support health initiatives in places with limited resources and promote sharing information and resources to enhance health-care systems, especially in countries such as India.
- Through innovation and technical growth, particularly in digital health, the commercial sector and charitable organizations advance accessibility and affordability while extending reach and efficacy.
- Research institutes and academic institutions offer crucial insights into health inequalities and the efficacy of interventions, assisting in creating evidence-based practices and policies supported by scientific studies.

Way Forward

- To guarantee that everyone may live a healthy life, attaining health equity necessitates a comprehensive strategy that goes beyond legislative reform to address the socioeconomic determinants of health.
 - Realizing each person's potential for health demands a concerted effort by governments, communities, and individuals to tear down these obstacles.
 - Organizations with a strong local presence are essential for health equity.
 - They actively participate in every phase, from planning to evaluation, to guarantee the relevance and effectiveness of health programmes.
 - They have a thorough understanding of their community's requirements.
 - Effective collaboration among many sectors, ranging from policymakers to grassroots organizations, may significantly enhance health equity and pave the path for a time when access to high-quality health care would be a shared reality rather than a privilege.
 - India has made strides in AI applications for health care: It must continue to invest in research and development, foster collaborations between academia and industry, and create an ecosystem that encourages innovation.

ENVIRONMENT

Climate engineering – Potential & Concerns

African countries have called for a moratorium on climate engineering at the recently held United Nations Environment Assembly in March 2024. Further, nations like United States have highlighted the need for scientific group to undertake studies regarding potential risks and benefits of Climate engineering.

Negative impact of climate change

- 1) Heat records are routinely broken.
- 2) Wildfire seasons have become more extreme.
- 3) There has been an increase in the strength of Hurricane.
- 4) Due to rise in sea level, small islands national and coastal areas are submerging.
- 5) Climate change can pose a threat to food and energy security. This may lead to climate-induced migration and can threaten the security of any nation.

climate engineering

1. It is a set of proposed actions to deliberately change the climate. It is also called geoengineering, sunlight reduction methods or solar climate intervention.
2. It will mimic the cooling effects of large volcanic eruptions by placing large amounts of reflective particles in the atmosphere.
3. It will make low clouds over the ocean brighter. This would reflect a small amount of sunlight back to space to cool the planet.

advantages of climate engineering

- 1) **Preventing temperature rise**-Activities like fossil fuel use and industrialization are currently emitting 37 billion tons of carbon dioxide into the atmosphere annually. However, existing carbon dioxide removal projects that includes growing trees and direct air capture devices remove only 2 billion tons of carbon dioxide. Thus, it may take a long time to achieve the target of Net Zero emissions. Climate engineering may help in the interim.
- 2) **Climate Modification** – It can allow countries with increasingly dangerous heat waves to cause deliberate cooling. For ex- Australia is currently exploring the feasibility of rapidly cooling the Great Barrier Reef to prevent its demise.

concerns associated with climate engineering

- 1) **Regional conflicts**-The climate doesn't respect national borders. So, a climate engineering project in one country may affect temperature and rainfall in neighboring countries. The countries may blame climate engineering for extreme events such as hurricanes, floods and droughts without any scientific evidence.
- 2) **Endanger interest of poor countries**– Climate change can leave the poorest regions most vulnerable to harm, and climate engineering should not accentuate that harm. Poorer countries may get negatively impacted by climate engineering solutions of rich countries.
- 3) **High Cost** – Building a fleet of airplanes to carry megatons of reflective particles into the stratosphere each year is a very costly process. It will be difficult to get funding for this scientific project.
- 4) **Limitation of climate models** – Current information about climate engineering relies heavily on climate models. However, they cannot address questions of geopolitics and conflict.

Climate engineering may provide solutions to the challenges posed by climate change. Nevertheless, there is a need for more research that may help policy makers to make informed decisions.

PRELIM FACT

1. Political parties' symbols

- The Election Commission of India (ECI) allocates symbols to political parties and candidates based on the Election Symbols (Reservation and Allotment) Order, 1968.
- Recognized parties have reserved symbols, while unrecognised parties are allotted free symbols during elections.
- Unrecognised parties can apply for a common symbol if they meet certain criteria, including securing at least 1% of votes in the previous election or having elected representatives.
- The recent denial of a common symbol to Viduthalai Chiruthaigal Katchi (VCK) and the allotment of a new symbol to Naam Tamilar Katchi (NTK) have raised questions.
- The current rules may need amendment to ensure fair treatment based on past electoral performance and representation.

2. Draft model rules for childbirth registration

- The Home Ministry has drafted Model Rules requiring parents to record their religion separately when registering the birth of a child, departing from the previous practice of recording the family's religion.
- The Registration of Births and Deaths (Amendment) Bill, 2023, allows the birth certificate to serve as a single document for various purposes such as admission to educational institutions, obtaining a driving license, and registering for Aadhaar.
- The bill also facilitates digital registration and aims to establish national and state-level databases of registered births and deaths, facilitating efficient delivery of public services and benefits.
- Additionally, it includes provisions for collecting the Aadhaar numbers of parents for birth registration.

3. Exchange traded currency derivatives

The Reserve Bank of India (RBI) has postponed the implementation of its new norms for the exchange-traded currency derivatives (ETCD) market.

- This decision follows concerns raised by market participants regarding participation in the ETCD market, which led to increased volatility in the forex market.
- The new norms, aimed to allow users to take positions in the foreign exchange derivatives market without needing to establish the existence of underlying exposure, up to a single limit of \$100 million equivalent across all currency pairs involving the rupee.
- However, the RBI emphasized that the regulatory framework for ETCDs remains consistent, guided by the Foreign Exchange Management Act (FEMA), 1999.
- Users are required to ensure compliance with the requirement of having underlying exposure, and the limit for taking positions was subsequently amended to a single limit of \$100 million combined across all exchanges.

While the postponement may not have immediate implications, it could lead to increased trading volumes on such platforms, stabilizing pressure on options premiums.

4. Plankton crash

A panel formed by the National Green Tribunal (NGT) investigated the red colouration of the sea in Puducherry and attributed it to a plankton crash.

- A specific species of phytoplankton, *Noctiluca scintillans*, was found to be ruptured, releasing red pigment into the sea.
- The panel ruled out algal bloom and contamination from a near by paper manufacturing unit, stating that the unit's operations did not coincide with the discolouration incidents.
- Instead, the panel identified high iron concentration as a potential factor favouring plankton bloom.
- Environmental parameters such as sea surface temperature, salinity, pH, and dissolved oxygen were found conducive to the proliferation of this species.
- A plankton crash is when a dramatic bloom of plankton in a pond is replaced by very few viable plankton. This can be caused by a lack of nutrients or CO₂
- Dead plankton can create large amounts of stable foam on the surface of the pond.

5. Voice Engine

Open AI has unveiled its Voice Engine, a groundbreaking text-to-audio tool capable of replicating any voice in any language.

- Users can upload a 15-second audio sample, and the engine generates audio in the same voice based on a written prompt.
- Open AI highlights the positive applications of Voice Engine, such as aiding non-readers, translating content, and assisting non-verbal individuals, concerns over its potential misuse have arisen.
- Deep fake technologies, including voice cloning, have been exploited to deceive people, especially during elections.

ANSWER WRITING

Q. How could the concept of allowing lateral entry into Indian administrative services potentially revitalize its bureaucracy? Discuss the potential challenges of this approach in detail.

The concept of lateral entry into the Indian Administrative Services (IAS) is seen as a significant step towards revitalizing India's bureaucracy. This approach aims to inject fresh perspectives, specialized knowledge, and efficiency into the administrative machinery by allowing experts from the private sector and other fields to join at senior positions within the government.

Potential Revitalization Effects

- **Specialized Knowledge:** Modern governance requires specialized skills that traditional bureaucrats, who may not always be up-to-date with the latest developments in various domains, might lack. Lateral entrants, with their domain-specific expertise, can address complex administrative challenges more effectively.
- **Addressing Personnel Shortage:** There is a notable deficit of IAS officers, with reports indicating a shortage of about 1500 officers. Lateral entry can bridge this gap, ensuring that critical positions are not left vacant and governance does not suffer.
- **Cultural Change in Bureaucracy:** The introduction of professionals from different work cultures can mitigate issues like red-tapism and encourage a performance-based culture within the government sector. This could lead to more efficient and effective governance.
- **Participatory Governance:** By allowing stakeholders from the private sector and non-profits to partake in the governance process, lateral entry fosters a more inclusive approach to policymaking and implementation.

Potential Challenges

However, this approach is not without its challenges:

- **Integration and Cohesion:** Lateral entrants might face challenges in integrating with career bureaucrats due to differences in work culture, leading to potential conflicts and inefficiencies.
- **Accountability and Transparency:** There are concerns about the accountability mechanisms for lateral entrants, especially given their contractual nature of employment compared to career bureaucrats. Ensuring transparency in their recruitment and performance evaluation is crucial.
- **Perception of Fairness:** The process could be perceived as undermining the merit-based selection of traditional civil service exams, potentially demotivating career civil servants and affecting the morale within the service.
- **Risk of Politicization:** There is a risk that the selection process for lateral entry could be influenced by political considerations, undermining the impartiality of the civil service.
- **Outsourcing Expertise vs. Decision-making:** While lateral entry brings in external expertise, it's essential to differentiate between consulting for expertise and integrating external experts into decision-making roles. The challenge is to balance these aspects without compromising the integrity and efficiency of the administrative process.

Lateral entry into the IAS represents a transformative shift intended to enhance the capacity and effectiveness of India's bureaucracy. While the potential benefits are significant, addressing the accompanying challenges is crucial for its success. Strategies such as ensuring a transparent selection process, establishing clear accountability mechanisms, and fostering an inclusive work culture can help mitigate these challenges and ensure that lateral entry contributes positively to India's governance landscape.

MCQs

- Which of the following statements accurately describes crop diversification?
 - Crop diversification refers to the practice of cultivating a single crop variety throughout the year.
 - Crop diversification involves the cultivation of multiple crops on a rotating basis within a farming system.**
 - Crop diversification primarily focuses on maximizing the yield of a single cash crop.
 - Crop diversification is only beneficial for large-scale commercial farms.
- With reference to the Citizenship (Amendment) Act, 2019, consider the following statements:

1. Under the Act, migrants from all neighbouring countries are eligible for citizenship of India.
 2. It decreases the requirement of citizenship by naturalisation to 5 years of residence for the eligible migrants.
 3. The Act does not apply to areas included in the Sixth Schedule of the Constitution.
 4. It empowers the central government for the cancellation of Overseas Citizen of India (OCI) registration.
- How many of the above statements is/are correct?
- a) Only one
 - b) Only two
 - c) Only three**
 - d) All four
3. Consider the following statement regarding the Green Credit Programme:
 1. Green Credit is the incentive provided to those engaged in activities that positively impact the environment.
 2. The Green Credit programme is an initiative under the Coalition for Disaster Resilient Infrastructure (CDRI).
 3. The generation of Green Credit under Green Credit Rules, 2023, is independent of the carbon credit under Carbon Credit Trading Scheme 2023.

How many of the above-given statements are correct?

 - a) Only one
 - b) Only two**
 - c) All three
 - d) None
 4. Which of the following statements about algal blooms is true?
 - (a) Algal blooms occur due to the sudden influx of nutrients into aquatic ecosystems.**
 - (b) Algal blooms are always beneficial for the environment.
 - (c) Algal blooms are primarily caused by a decrease in water temperature.
 - (d) Algal blooms have no impact on marine life.
 5. Consider the following statements:
 1. The World Health Organization (WHO) has opposed antibiotics for both growth promotion and preventative use in poultry.
 2. Escherichia coli (E. coli) can be spread via contaminated meat and other food products.

Which of the statement(s) given above is/are correct?

 - a) 1 only
 - b) 2 only
 - c) Both 1 and 2**
 - d) Neither 1 nor 2
 6. Voice cloning is a technology that:
 - (a) Converts text into spoken words using a computer-generated voice.
 - (b) Allows individuals to mimic famous personalities' voices without their consent.
 - (c) Replicates a person's voice by analyzing their speech patterns and characteristics.**
 - (d) Records phone conversations without the knowledge of the participants.
 7. Which of the following statements about mulching is true?
 - (a) Mulching helps retain soil moisture by reducing evaporation.**
 - (b) Mulching increases soil erosion by exposing it to wind and water.
 - (c) Mulching promotes weed growth by providing nutrients to weed seeds.
 - (d) Mulching decreases soil temperature, making it unsuitable for plant growth.
 8. Which of the following statements about hydroponics is true?
 - (a) Hydroponic systems use soil as the primary growing medium.
 - (b) Nutrient solution in hydroponics is typically made of water and soil.
 - (c) Hydroponic gardening can be practiced only indoors.
 - (d) Hydroponic systems allow for precise control over nutrient delivery to plants.**
 9. Consider the following:
 1. Forward contracts
 2. Swaps
 3. Currency futures
 4. Currency options

How many of the above are an example of an exchange-traded currency derivative?

 - (a) Only one
 - (b) Only two**
 - (c) Only three
 - (d) All four
 10. In a tropical cyclone, as you move from the edges towards the center, air pressure
 - (a) remains constant
 - (b) increases significantly
 - (c) decreases significantly**
 - (d) varies depending on the wind speed and direction