7th June, 2024

1. Health Regulations Need a Base to Top Approach
GS 2 (Governance)

Health regulations need a base to top approach

In the last week of May, an incident of a devastating fire in a private neonatal care nursing home in New Delhi shook us all. Political parties began a blame game and the media coverage was intense, going overboard and reporting incorrectly that a number of nursing homes in Delhi function without a licence. Yet, the incident seems to have been forgotten by most even as the parents grieve. Such tragedies are often followed by a question of who should be blamed, completely missing the point that these are almost always the outcome of a systemic failure – in this case, the failure of health-care regulations.

The subject of regulation has always been of interest to health programme managers but, arguably, is one of the weakest points in India's health-care system. It is not as if there are not enough health regulations in Indian States. Rather, it is a problem of excess. Some States have over 50 approvals under multiple regulations, which need to be followed and complied with by every health-care facility. Still, many officials in government, as well as others, believe that the private health sector in India has insufficient regulation.

The other challenge is unrealistic health-care quality standards. Governments at every level in India – national and States – are known to draft policies which are near perfect. One such case is the Clinical Establishments (Registration and Regulation) Act, 2010, enacted 14 years ago, but not adopted by States. This is because State governments, in discussions with stakeholders, have realised that many provisions in the Act are impossible to implement. Another example is the Indian Public Health Standards, or IPHS, drafted by the government for its own health-care facilities and proposed as essential in order to deliver quality health services. The IPHS were first released in 2007 and have been revised twice since then. Yet, in 17 years of existence, only 15% to 18% of government primary health-care facilities in India meet the government's own standards. Clearly, in the efforts to be aspirational, health-care regulations and standards in India have drifted towards unrealistic standards, and are difficult to implement.

India has a mixed health-care system

There is a binary perception that when it comes to adhering to the rules, the government health sector always does better, and that the private sector always violates them. The fact is that India has a mixed health-care system, where private health-care facilities and providers deliver nearly 70% of outpatient and 50% of hospital-based services. In most States such as Maharashtra or Kerala, the health indicators are better not because these States have outstanding government facilities but because the facilities and clinics in the private sector are fulfilling the health needs of the people. People 'vote with feet' by seeking care at these private health facilities.

Yet, when it comes to health-care regulation, there seems to be an unfairness and overzealous attempt to enforce the regulations in the private sector. In 2017, two separate but near identical incidents in two large hospitals in Delhi (a tertiary-care government hospital and a large corporate hospital), had allegedly declared newborn infants as dead; they were alive. This resulted in a temporary suspension of licence in the case of the private hospital, while in the case of the government hospital there was just the setting up of an inquiry committee. Clearly, for effective regulation and adherence, the stakeholder should not feel they are being targeted. In health-care regulation, in the current scheme of things, the burden of responsibility is more on providers and facility owners. Most private nursing homes and clinics have often flagged the issue of approvals being delayed by the authorities for months even when these facilities apply for renewal well in advance. In many examples, applications submitted well on time for renewal (two to three months before the due date), are granted approval months later. The sluggish approval process is a main concern as far as facility owners are concerned.

Affordable care is one need

The private sector is also not a homogenous entity as there is everything from single doctor clinics, small nursing homes and medium-sized hospitals to large corporate hospitals. Single doctor clinics and small nursing homes are often the first point of contact for access and utilisation of health services in India by middle-income and low-income populations, and are the real lifeline of health services. They deliver a large share of health services at a fraction of cost of that of the big corporate hospitals. Why the parents of the babies opted to go to a private nursing home despite government health facilities with free health services is an issue we must reflect on. The single doctor clinics and nursing homes play a key role in health service delivery in India and make services accessible and affordable. Clearly, there needs to be supportive and facilitatory regulations to serve the public purpose of keeping health-care costs low and affordable.

Yet, the tragic incident in Delhi is not something which should be allowed to pass without calm assessment and some concrete plans. First, ensuring quality of health services is essential and the joint responsibility of all stakeholders. However, in an overzealous attempt to ensure having a 'world class tag' or being 'swayed by the lure of medical tourism', the government should not end up making health-care regulations unrealistic. There is a need to formulate guidelines that can be practised and implemented. There is a need to harmonise multiple health regulations and simplifying the application process. Such applications need to be disposed of in a time-bound manner.

Second, in regulatory aspects, what is possible for large corporate hospitals may not be feasible for smaller clinics and nursing homes, without escalated cost. Expecting smaller facilities to meet the same standard would make it expensive for the smaller facilities – a cost that is likely to be transferred to patients, making health services unaffordable. There is a need for a differential approach for different types of facilities. Yet, there should be essential and desirable points in each category overseen by regular self-assessment and regulatory visits. If thousands of buildings in the city can have safe elevators, why cannot there be equal emphasis on fire and other safety measures in health facilities? For effective adherence and implementation, the government should consider subsidies and funding to increase adherence to regulations.

Third, representatives of doctors' associations and the types of facilities for which regulations are being formed as well as community members should be involved in the process of the formulation of such regulation.

Fourth, political loose talk and sensational media headlines might worsen the mistrust of the common man about doctors and nursing homes and may result in increased violence against health-care providers.

Focus on the primary-care givers

Fifth, and most importantly, India needs to promote single doctor clinics apart from smaller health-care facilities, and nursing homes. These are what deliver primary care and contribute to keeping the cost of health care low. Every such facility and its doctors need to be supported rather than burdened with excess regulations.

In the fire tragedy in Delhi, we should not just treat the symptoms but also aim to find and eliminate the root causes. It is a reminder of the need to have simplified and implementable regulations that have been developed with the collaboration and coordination of key stakeholders. There is a need for fairness in implementations, time-bound decisions and the disposal of applications for renewal of licences, promoting smaller health-care facilities with subsidies, and support for increased quality and safety. India's health-care system is already becoming skewed towards admission based in-patient services. It needs to promote providers and facilities that deliver out-patient care at lower costs. This would contribute to the goal of the National Health Policy, 2017 – to deliver health services that should be people-centric, accessible, available, affordable, and have quality. This requires health regulations being drafted from bottom up and not top down, and implemented in a nuanced and calibrated manner.

Dr. Chandrakant Lahariya is a practising physician and internationally acclaimed health policy specialist. He has 15-plus years of work experience with the World Health Organization in India, Africa and Headquarters in Geneva

Dr. Vinay Aggarwal is a former National President of the Indian Medical Association and a former member of the Delhi Medical Council

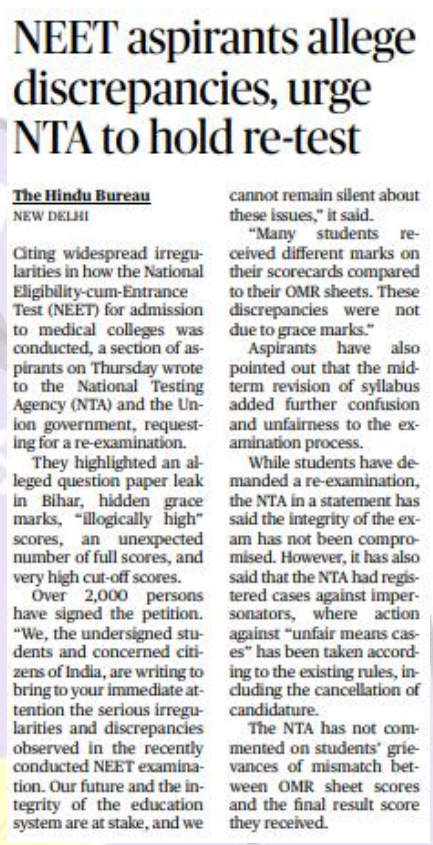
Health regulations are essential but their implementation in India needs to be nuanced and calibrated

- **Why in News:** The tragic fire incident in a private neonatal care nursing home in New Delhi in May has highlighted the systemic failure of healthcare regulations in India. This incident has sparked a discussion on the need for a comprehensive approach to health regulations.
- **Issues with Health Regulations in India:**
  - **Introduction to the Issue:**The incident has brought to light the issues with health regulations in India. Despite having numerous health regulations, the private health sector is often seen as insufficiently regulated.
  - **Excessive and Unrealistic Regulations:**Some states have over 50 approvals under multiple regulations that need to be complied with by every healthcare facility. Additionally, health-care quality standards set by the government are often unrealistic and difficult to implement.
  - **Inadequate Adoption of Regulations:**The Clinical Establishments (Registration and Regulation) Act, 2010, enacted 14 years ago, has not been adopted by states due to its impractical provisions. Similarly, only 15% to 18% of government primary healthcare facilities meet the Indian Public Health Standards (IPHS).
- **Mixed Health-Care System in India:**
  - **Public and Private Health Sectors:**India has a mixed health-care system, with private healthcare facilities and providers delivering nearly 70% of outpatient and 50% of hospital-based services. People often choose private health facilities for their healthcare needs.
  - **Regulation Enforcement in the Private Sector:**There is often an overzealous attempt to enforce regulations in the private sector. This can lead to a perception of unfairness and can discourage adherence to regulations.
  - **Delayed Approvals:**The sluggish approval process for renewals is a major concern for facility owners. Applications submitted well in advance for renewal are often granted approval months later
- **Need for Affordable Care:**
  - **Variety in the Private Sector:**The private sector is not a homogenous entity. It ranges from single doctor clinics and small nursing homes to large corporate hospitals. Single doctor clinics and small nursing homes often provide affordable care and are the first point of contact for many people.
  - **Role of Small Healthcare Facilities:**Small healthcare facilities deliver a large share of health services at a fraction of the cost of big corporate hospitals. They are often the lifeline of health services, especially for middle-income and low-income populations.
  - **Addressing the Needs of the Population:**The parents of the babies involved in the tragic incident opted for a private neonatal care nursing home, highlighting the need for affordable and accessible healthcare services.

2. Controversy Surrounding NEET UG 2024 Examinations

Recent events of importance

- **Why in the News:**
  - The results for the National Eligibility-cum-Entrance Test (NEET-UG) 2024 have been marred with allegations of irregularities and paper leak.
  - The inflated marks this year have caught the attention of medical aspirants who fear difficult admission process in medical colleges in the upcoming academic year.



NEET aspirants allege discrepancies, urge NTA to hold re-test

The Hindu Bureau
NEW DELHI

Citing widespread irregularities in how the National Eligibility-cum-Entrance Test (NEET) for admission to medical colleges was conducted, a section of aspirants on Thursday wrote to the National Testing Agency (NTA) and the Union government, requesting for a re-examination.

They highlighted an alleged question paper leak in Bihar, hidden grace marks, "illogically high" scores, an unexpected number of full scores, and very high cut-off scores.

Over 2,000 persons have signed the petition. "We, the undersigned students and concerned citizens of India, are writing to bring to your immediate attention the serious irregularities and discrepancies observed in the recently conducted NEET examination. Our future and the integrity of the education system are at stake, and we cannot remain silent about these issues," it said.

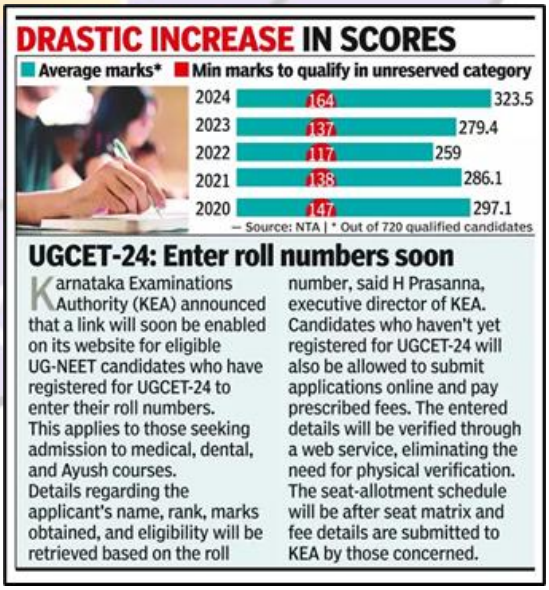
"Many students received different marks on their scorecards compared to their OMR sheets. These discrepancies were not due to grace marks."

Aspirants have also pointed out that the mid-term revision of syllabus added further confusion and unfairness to the examination process.

While students have demanded a re-examination, the NTA in a statement has said the integrity of the exam has not been compromised. However, it has also said that the NTA had registered cases against impersonators, where action against "unfair means cases" has been taken according to the existing rules, including the cancellation of candidature.

The NTA has not commented on students' grievances of mismatch between OMR sheet scores and the final result score they received.

- **About National Eligibility cum Entrance Test (NEET):**
  - The NEET (National Eligibility cum Entrance Test) is an entrance examination for students who wish to pursue undergraduate medical courses (MBBS/BDS) and postgraduate courses (MD/MS) in government or private medical colleges.
  - **Objective**: To standardize the admission process for medical and dental courses across India, ensuring a uniform evaluation of candidates' eligibility.
  - The **National Testing Agency** (NTA) conducts NEET on behalf of the Ministry of Education.
- **About National Testing Agency (NTA):**
  - The NTA is an autonomous organization in India responsible for conducting entrance examinations for higher educational institutions.
  - The NTA was established in November 2017 by the Ministry of Education to standardize and streamline the conduct of entrance exams across the country.
  - **Objective**: To improve the quality and transparency of entrance examinations, ensuring fairness and efficiency in the assessment process.
  - **Functions**:
    - **Conducting Exams**: The NTA conducts various national-level entrance examinations for admission to undergraduate and postgraduate programs.
    - **Developing Question Papers**: The NTA is responsible for developing high-quality question papers.
    - **Result Processing**: The NTA processes examination results efficiently, ensuring timely release of scores and ranks.
  - **Headquarters**: New Delhi
  - Overall, the National Testing Agency plays a crucial role in India's education system by providing a reliable, transparent, and efficient framework for conducting entrance examinations.



DRASTIC INCREASE IN SCORES

Average marks* Min marks to qualify in unreserved category

	Average marks*	Min marks to qualify in unreserved category
2024	164	323.5
2023	137	279.4
2022	117	259
2021	138	286.1
2020	147	297.1

– Source: NTA | * Out of 720 qualified candidates

UGCET-24: Enter roll numbers soon

Karnataka Examinations Authority (KEA) announced that a link will soon be enabled on its website for eligible UG-NEET candidates who have registered for UGCET-24 to enter their roll numbers. This applies to those seeking admission to medical, dental, and Ayush courses. Details regarding the applicant's name, rank, marks obtained, and eligibility will be retrieved based on the roll number, said H Prasanna, executive director of KEA. Candidates who haven't yet registered for UGCET-24 will also be allowed to submit applications online and pay prescribed fees. The entered details will be verified through a web service, eliminating the need for physical verification. The seat-allotment schedule will be after seat matrix and fee details are submitted to KEA by those concerned.

- **Controversy Surrounding NEET UG 2024 Examinations:**
  - On June 4, the National Testing Agency (NTA) released the results for the National Eligibility-cum-Entrance Test, Undergraduate (NEET UG) 2024 examination.
  - **Approximately 2.4 million candidates participated** in the NEET UG test held on May 5 across 571 cities, including 14 centers outside India.

- The exam sought to fill the **1,08,940 available MBBS seats** distributed among more than 700 medical institutions nationwide.
- The results received immediate criticism due to an unusual occurrence—**67 candidates achieved a perfect score of 720 out of 720, securing the perfect rank AIR 1**.
- Also, discrepancies emerged concerning individuals who obtained marks of 718 or 719, with skeptics deeming such scores implausible within the exam's framework.
- In response to these concerns, **two petitions have been filed in different High Courts contesting the validity of the results**.
- Also, **it was found that eight of these candidates who scored the All India Rank 1 are from the same examination center in Haryana**, with their sequence numbers being the same.
- **NTA's Response for Increase in Number of Toppers:**
  - An NTA official also noted that the question paper was prepared using a new NCERT textbook. However, some students had old NCERT textbooks.
  - Due to which **NTA had to assign five marks to all students who had marked one of the two options**.
  - Because of this reason, marks of a total of 44 students increased from 715 to 720, which resulted in an increased number of toppers.
  - NTA attributed the increase in high scores to the rise in candidates. The number of candidates who appeared in 2023 was 20,38,596, while it rose to 23,33,297 in 2024.

3. 29th edition of the Conference of Parties (COP)
GS 3 (Environment)

- **Why in news:**
  - Azerbaijan is the host of this year's United Nations Climate Change Conference (COP 29). It wants to prevent geopolitical tensions from affecting the talks.
  - Hence, the upcoming COP 29 (in November 2024) will focus on promoting "peace" and a "truce" to allow countries to concentrate on climate solutions amid ongoing conflicts.

For 2-week COP29, host Azerbaijan seeks a pause in conflicts

AMITABH SINHA
BAKU, JUNE 6

AZERBAIJAN, THE host of this year's climate change conference, is hoping to convince the warring parties in the two ongoing conflicts for a truce during the two-week long event in mid-November to focus on the issue of climate change.

The Russia-Ukraine war, which has been going on for the last two years, and the Israel-Palestinian conflict since the October 7 attack by Hamas, are happening within the extended neighbourhood of the central Asian republic of Azerbaijan.

"We are hoping to host a conference of peace. At least during the COP (Conference of Parties, as the climate talks are officially known), all cannons should stop and we should all work and focus on the climate issue, if not for our own sake then for the sake of our children and grandchildren," said Hikmet Hajiyev, foreign policy advisor to Azerbaijan President Ilhan Aliyev, in an interaction with Indian journalists.

Azerbaijan itself has been involved in a long-standing dispute with neighbour Armenia over claims on Nagarno-Karabakh region. But in a surprise agreement in December last year, the two countries expressed their intention to normalise relations and reach a peace treaty. That agreement also paved way for hosting the COP in Azerbaijan, which Armenia had been opposed to till that point.

Hajiyev said Azerbaijan would offer its own example to try and convince the other countries to cease hostilities during the COP.

"We are trying to build support for our initiative. We have spoken to our UN counterparts and several countries and have received positive responses," he said. The idea of 'COP truce' is similar to the tradition of Olympic truce which usually sees a cessation of hostilities during the summer and winter Olympic Games.

"Azerbaijan's approach (as host of COP29) is to try and impress upon everyone that the climate issue is very different. On geopolitical and security issues, countries can be on different sides of the fence, but climate affects everybody, everywhere," he said.

- **Conference of the Parties (COP)**
  - **COP is the annual United Nations (UN) climate meeting**
    - **In 1992, at the Rio Earth Summit,** 154 countries signed a multilateral treaty called the United Nations Framework Convention on Climate Change (UNFCCC).
    - It aimed to stabilise greenhouse gas concentrations at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system.
    - The treaty came into force two years later, and since then, countries which are part of the UNFCCC, meet every year at different venues.
    - Today, there are 198 'parties' or signatories of the Convention.
  - **COP was a result of a strong belief in the power of international agreements to tackle environmental problems**
    - Policymakers of that era believed in a unified commitment to deal with climate change.
    - Their belief was strengthened by the success of:
      - the 1987 Montreal Protocol, an international treaty designed to protect the ozone layer, and
      - a 1991 bilateral agreement between the US and Canada that helped combat acid rain by limiting the emission of sulphur dioxide (SO_2).

- This led to the inception of UNFCCC.

- **The first ever COP took place in Berlin, Germany, in 1995**
  - The first edition of COP entailed a discussion on how to implement the UNFCCC.
  - At the meeting, an **agreement was reached to meet annually to discuss action on climate change and emissions reductions.**
  - In the following two years, another deal was made that placed international **obligations on the set of rich and industrialised countries to cut their greenhouse gas emissions by assigned amounts.**
  - The agreement would become the **Kyoto Protocol** as it was adopted in Kyoto, Japan, during the **COP-3**.
- **Paris Agreement (COP 21)**
  - The Paris Agreement, also known as COP21, is a legally binding international treaty on climate change.
    - It was adopted by 196 parties at the UN Climate Change Conference in Paris, France in December 2015.
    - The agreement entered into force on November 4, 2016.
  - The Paris Agreement's main objectives are:
    - Limit global warming: Keep global warming below 2°C above pre-industrial levels, and pursue efforts to limit it to 1.5°C
    - Reduce greenhouse gas emissions: Significantly reduce greenhouse gas emissions by 2100
    - Support countries: Strengthen countries' ability to deal with the impacts of climate change
    - Provide financing: Provide financing to developing countries to mitigate climate change

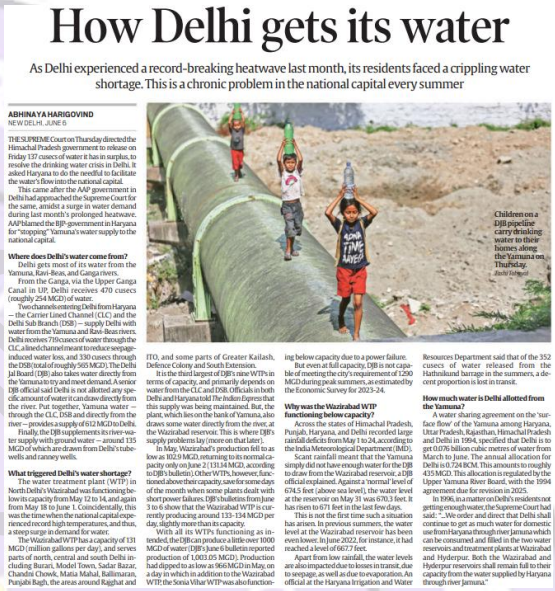
- **The Upcoming COP 29 and Truce Proposal**

- **Azerbaijan to be the host of COP 29**
  - Azerbaijan, as the host, will lead the 29th edition of the conference.
  - It will build upon the agenda set in COP 28 in Dubai. Key points include transitioning away from fossil fuels to achieve net zero by 2050.
  - Azerbaijan will aim to guide countries toward consensus on addressing the climate crisis, emphasizing the urgency of keeping global temperatures from rising more than 1.5°C above pre-industrial levels.
  - A major issue to be addressed is the **unfulfilled 2009 commitment** by **developed countries to provide $100 billion annually to developing countries for climate action.**
  - In 2024, the conference is expected to set a new annual target above $100 billion and determine whether the funds will be grants or loans.
- **Truce Proposal – need for climate unity despite geopolitical divisions**
  - Azerbaijan is aiming to shield the annual talks from geopolitical tensions by proposing a **two-week COP truce**.
  - This initiative, inspired by the Olympic truce, is intended to unite countries in a collaborative effort to address the pressing issue of climate change.
  - As per the host of COP 29, the climate crisis is a universal issue that requires an inclusive approach.
  - The current global political divide is similar to the Cold War era, making it hard to agree on climate action.
- **Challenges in Achieving Net Zero**
  - Many developing countries lack the institutional capacity and financial awareness needed to prepare effective NDCs.
    - Nationally Determined Contributions (NDCs) are climate action plans that countries create to help meet the goals of the Paris Agreement.
    - NDCs are self-defined pledges that outline how countries will reduce emissions, adapt to climate change, and secure funding to support these efforts.
    - They are short- to medium-term plans that must be updated every five years with more ambitious goals based on each country's capabilities.
  - Azerbaijan is working towards its goal of carbon neutrality by 2050, but more support and awareness are needed to achieve this target.
  - NDCs are crucial for countries to contribute to reducing greenhouse gas emissions and meeting the 1.5°C target.
  - Several countries submitted their latest NDCs by 2023, with the next submissions expected by 2028.

4. Decoding Delhi's Water Crisis: Causes, Impact and Solution

Recent events of importance

- **Why in News:**
  - The Supreme Court directed the Himachal Pradesh government to release 137 cusecs of water it has in surplus and asked Haryana to do the needful to resolve the drinking water crisis in Delhi.
  - This came after the AAP government in Delhi had approached the SC (alleging the BJP-government in Haryana for stopping Yamuna's water supply), amidst a surge in water demand during prolonged heatwave.



How Delhi gets its water

As Delhi experienced a record-breaking heatwave last month, its residents faced a crippling water shortage. This is a chronic problem in the national capital every summer

ABHINAYA HARIGOVIND
NEW DELHI, JUNE 6

THE SUPREME Court on Thursday directed the Himachal Pradesh government to release on Friday 137 cusecs of water it has in surplus, to resolve the drinking water crisis in Delhi. It asked Haryana to do the needful to facilitate the water's flow into the national capital.

This came after the AAP government in Delhi had approached the Supreme Court for the same, amidst a surge in water demand during last month's prolonged heatwave. AAP blamed the BJP-government in Haryana for "stopping" Yamuna's water supply to the national capital.

Where does Delhi's water come from?

Delhi gets most of its water from the Yamuna, Ravi-Beas, and Ganga rivers.

From the Ganga, via the Upper Ganga Canal in UP, Delhi receives 470 cusecs (roughly 254 MGD) of water.

Two channels entering Delhi from Haryana — the Carrier Lined Channel (CLC) and the Delhi Sub Branch (DSB) — supply Delhi with water from the Yamuna and Ravi-Beas rivers. Delhi receives 719 cusecs of water through the CLC, a lined channel meant to reduce seepage-induced water loss, and 330 cusecs through the DSB (total of roughly 565 MGD). The Delhi Jal Board (DJB) also takes water directly from the Yamuna to try and meet demand. A senior DJB official said Delhi is not allotted any specific amount of water it can draw directly from the river. Put together, Yamuna water — through the CLC, DSB and directly from the river — provides a supply of 612 MGD to Delhi.

Finally, the DJB supplements its river-water supply with ground water — around 135 MGD of which are drawn from Delhi's tubewells and ranney wells.

What triggered Delhi's water shortage?

The water treatment plant (WTP) in North Delhi's Wazirabad was functioning below its capacity from May 12 to 14, and again from May 18 to June 1. Coincidentally, this was the time when the national capital experienced record high temperatures, and thus, a steep surge in demand for water.

The Wazirabad WTP has a capacity of 131 MGD (million gallons per day), and serves parts of north, central and south Delhi including Burari, Model Town, Sadar Bazar, Chandni Chowk, Matia Mahal, Ballimaran, Punjabi Bagh, the areas around Raghat and ITO, and some parts of Greater Kailash, Defence Colony and South Extension.

It is the third largest of DJB's nine WTPs in terms of capacity, and primarily depends on water from the CLC and DSB. Officials in both Delhi and Haryana told *The Indian Express* that this supply was being maintained. But, the plant, which lies on the bank of Yamuna, also draws some water directly from the river, at the Wazirabad reservoir. This is where DJB's supply problems lay (more on that later).

In May, Wazirabad's production fell to as low as 102.9 MGD, returning to its normal capacity only on June 2 (131.14 MGD, according to DJB's bulletin). Other WTPs, however, functioned above their capacity, save for some days of the month when some plants dealt with short power failures. DJB's bulletins from June 3 to 6 show that the Wazirabad WTP is currently producing around 133-134 MGD per day, slightly more than its capacity.

With all its WTPs functioning as intended, the DJB can produce a little over 1100 MGD of water; DJB's June 6 bulletin reported production of 1,003.05 MGD). Production had dipped to as low as 966 MGD in May, on a day in which in addition to the Wazirabad WTP, the Sonia Vihar WTP was also functioning below capacity due to a power failure.

But even at full capacity, DJB is not capable of meeting the city's requirement of 1,290 MGD during peak summers, as estimated by the Economic Survey for 2023-24.

Why was the Wazirabad WTP functioning below capacity?

Across the states of Himachal Pradesh, Punjab, Haryana, and Delhi recorded large rainfall deficits from May 1 to 24, according to the India Meteorological Department (IMD).

Scant rainfall meant that the Yamuna simply did not have enough water for the DJB to draw from the Wazirabad reservoir, a DJB official explained. Against a 'normal' level of 674.5 feet (above sea level), the water level at the reservoir on May 31 was 670.3 feet. It has risen to 671 feet in the last few days.

This is not the first time such a situation has arisen. In previous summers, the water level at the Wazirabad reservoir has been even lower. In June 2022, for instance, it had reached a level of 667.7 feet.

Apart from low rainfall, the water levels are also impacted due to losses in transit, due to seepage, as well as due to evaporation. An official at the Haryana Irrigation and Water Resources Department said that of the 352 cusecs of water released from the Hathnikund barrage in the summers, a decent proportion is lost in transit.

How much water is Delhi allotted from the Yamuna?

A water sharing agreement on the 'surface flow' of the Yamuna among Haryana, Uttar Pradesh, Rajasthan, Himachal Pradesh and Delhi in 1994, specified that Delhi is to get 0.076 billion cubic metres of water from March to June. The annual allocation for Delhi is 0.724 BCM. This amounts to roughly 435 MGD. This allocation is regulated by the Upper Yamuna River Board, with the 1994 agreement due for revision in 2025.

In 1996, in a matter on Delhi's residents not getting enough water, the Supreme Court had said: "...We order and direct that Delhi shall continue to get as much water for domestic use from Haryana through river Jamuna which can be consumed and filled in the two water reservoirs and treatment plants at Wazirabad and Hyderpur. Both the Wazirabad and Hyderpur reservoirs shall remain full to their capacity from the water supplied by Haryana through river Jamuna."

Children on a DJB pipeline carry drinking water to their homes along the Yamuna on Thursday. *Ravi Kanojia*

- **Where is the Water in Delhi Coming From, and Water Stress in Delhi?**
  - Delhi gets most of its water from the **Yamuna, Ravi-Beas and Ganga rivers**.
    - From the **Ganga**, via the Upper Ganga Canal in UP, Delhi receives 470 cusecs/ roughly 254 million gallons per day (MGD) of water.
    - Two channels (carrier lined channel (CLC) Munak and the Delhi sub-branch (DSB) canals) entering Delhi from Haryana supply Delhi (1094 cusecs) with water from the **Yamuna and Ravi-Beas**
    - **The Delhi Jal Board (DJB)** also takes water directly from the **Yamuna** and supplements its river-water supply with **ground water** drawn from Delhi's **tubewells and wells**.
  - According to the Composite Water Management Index released by NITI Aayog in 2019, five of the world's 20 largest cities under water stress are in India, with **Delhi being second on the list.**
- **Reasons for Water Scarcity in Delhi:**
  - **Over-extraction of groundwater:** According to the Economic Survey 2023-24, Delhi has a daily water demand of 1,290 MGD, of which the DJB currently produces 1,000 MGD. The gap is met by Delhi's groundwater reserves.
  - **Pollution of water sources:**
    - **High ammonia levels** (more than 2.5 parts per million) in the Yamuna have long contributed to poor water supply in parts of Delhi.
    - Numerous drains and rivulets **discharge toxic waste** from small and medium industries into the Yamuna river, eventually affecting Delhi's clean water supply.
  - **Impact of climate change:**
    - According to the draft of the Delhi State Action Plan on Climate Change, the city is projected to incur economic losses of Rs 2.75 trillion by 2050 as a result of climate change impacts.
    - **Rising temperatures and erratic precipitation** patterns pose significant challenges to the city's water supply.
  - **Inefficient water management:**
    - The Opposition alleges that the annual water shortage during summers is solely because of the inefficient water management of the state government.
    - The Central Water Commission's inefficient role in managing the three barrages in Wazirabad, ITO, and Okhla indicates **poor coordination and transparency among Delhi, Haryana, and Uttar Pradesh governments.**
  - **Inter-state water disputes:** Water disputes between Haryana and Delhi have centred around the allocation of water from the Yamuna river. Haryana alleges that Delhi is drawing more water than allocated under various agreements.
  - **Water treatment plant (WTP) capacity:** The WTP in North Delhi's Wazirabad was functioning below its capacity because the Yamuna did not have enough water (due to deficit rainfalls) for the DJB to draw from the Wazirabad reservoir.
- **Challenges Posed by Water Scarcity:**

- **Health issues:**
  - With the reduced availability of clean water, marginalised communities living in unauthorised colonies often have to rely on unsafe water sources, leading to **waterborne diseases**.
  - Insufficient water supply also hampers the maintenance and cleanliness of public toilets. When water is scarce, sewage systems can fail, which increases the risk of diseases such as **cholera**.
- **Social and economic impact:**
  - Increased illness due to poor hygiene and sanitation leads to **higher healthcare costs** for individuals and the government.
  - Frequent illnesses **impact productivity** as people miss work or school, affecting their economic well-being and academic opportunities.
  - **The dependence on water tankers** for domestic needs can be unreliable and costly, leading to further economic strain for the marginalised communities.

- **What are the Solutions to Address Water Scarcity?**
  - **Water conservation and management:**
    - Recently, the Delhi government ordered a **crackdown on water misuse**, authorising inspection teams to fine offenders using pipes to wash cars, allowing water tanks to overflow, and using domestic water supply for construction.
    - The teams are also authorised to **disconnect illegal water connections at construction sites** or commercial establishments.
    - To stop waste discharge from entering Yamuna, the **National Green Tribunal (NGT)** and the State Pollution Control Boards need to take the initiatives.
    - **Water rationing strategies** must be announced during summer months.
  - **Technological interventions:**
    - The DJB, in collaboration with Hitachi India, is using **field sensors and smart metres** at the Pitampura water distribution network.
    - Such technological intervention could **enable remote and real-time monitoring** and control of plant operations.
  - **Infrastructure development:** The DJB can be **more commercially-oriented** and customers (households, businesses and industries) should be prepared to pay for the 'real cost' of supply. The DJB has recently increased infra charges for new water connections.
  - **Policy and governance reforms:**
    - State and city governments should consider water resource availability in the region while creating city plans and providing permits for new establishments.
    - **They must restrict any development activities that are not sustainable in terms of water management.**
  - **Community participation in rainwater harvesting:**
    - Delhi's rainwater harvesting potential amounts to a staggering 907 billion litres annually.
    - To effectively implement rooftop rainwater harvesting, various awareness campaigns can be organised at the community level.

5. Placental Mammals

GS 3 (Science and Tech)

- **Why in News:** New research from Stockholm University shows that the typical mammalian heater organ, brown fat, evolved exclusively in modern placental mammals.
- **About Placental Mammals:**
  - A placental mammal is an **animal that has a placenta.**
    - The placenta is a **vascular organ formed during gestation of female** mammals (except for monotremes and marsupials), built up of maternal and fetal tissues jointly, and which serves for the transport of nutrient substances from the mother to the fetus and to eliminate fetal waste products.
  - Placental mammals **carry their fetus in the uterus until they are born** at an advanced stage.
  - The young get their **nourishment through a placenta** before birth. The placenta delivers nutrients and oxygen to the fetus in the uterus.
  - The **placenta permits a long period of fetal growth in the uterus**. As a result, the fetus can become large and mature before birth.
  - Classified under the subclass **Eutheria**, placental mammals have 4,000 identified species.

- Fossil evidence shows that the first placental mammals evolved between about 163 million and 157 million years ago during the **Jurassic Period** (201.3 million to about 145 million years ago).
- The placentals **include all living mammals except marsupials and monotremes** (egg-laying mammals).
- Marsupials and monotremes have a less-developed, less-efficient type of placenta that limits the gestation period.

- **What are Marsupials?**
  - Marsupials are a group of mammals that are known for **giving birth to relatively undeveloped young**, which then continue to grow and develop outside the womb, typically in a pouch.
  - Marsupials have a **short-lived placenta** that nourishes their young for just a few days before they're born, the rest of their nutrition coming from the mother's teats inside the pouch.
  - Marsupials have an **extra pubic bone**, the epipubic bone, to support their pouch.
  - There are over **330 species of marsupials**. Around two-thirds of them live in **Australia**. The other third live mostly in South America.
  - **Examples: Kangaroos, Koalas, Opossums, etc.**

6. World Wealth Report 2024

Recent events of importance

- **Why in News:** The number of high-net-worth individuals (HNWI) in India increased by 12.2% in 2023 compared to 2022 as per the Capgemini Research Institute's World Wealth Report 2024.
- **About World Wealth Report 2024:**
  - It is released by the **Capgemini Research Institute.**
  - It covers **71 countries**, accounting for more than 98% of global gross national income and 99% of world stock market capitalization.
  - **Highlights:**
    - Global high-net-worth individuals (HNWI) **wealth expanded by 4.7%** in 2023, reaching $86.8 trillion. Similarly, the **HNWI population increased by 5.1%** to 22.8 million globally.
      - HNWIs are individuals with investable assets of $1 million or more, excluding their primary residence, collectibles, consumables, and consumer durables.
      - HNWIs are **segmented into three categories** based on wealth bands: Ultra-HNWIs ($30 million or more), Mid-Tier Millionaires ($5-30M) and Millionaires Next Door (USD 1-5M).
  - Among the **best performers in the APAC region were India and Australia**, which recorded HNWI wealth growth of 12.4% and 7.9%, and HNWI population growth of 12.2% and 7.8%, respectively.
  - A resilient economy and robust performance of the equity markets drove wealth growth in both of these countries.
  - **HNWI in India increased by 12.2%** in 2023 vs 2022, bringing the total number of HNWI population to 3.589 million.
  - The financial wealth of India's HNWIs increased by 12.4% in 2023 to $1,445.7 billion, compared to $ 1,286.7 billion in 2022.
  - India's unemployment rate decreased to 3.1% in 2023, down from 7% in 2022
  - India's **country's market capitalisation increased by 29.0%** in 2023, after an increase of 6% in 2022.
  - The country's **national savings as a percentage of GDP also increased to 33.4%** in 2023, compared to 29.9% in 2022.

7. Onge Tribe

GS 1 (Geography)

- **Why in News**: Andaman's Onge tribe king Totoko and queen Priya welcomed a baby boy recently, bringing the tribe's total population to 136.
- **About Onge Tribe:**
  - Onges are one of the most **primitive tribes** in India that belong to the **Negrito racial ancestry.**
  - They are inhabiting **Little Andaman Island**, the most southerly island in the Andaman archipelago.
  - They are a **semi-nomadic group** and are dependent on the ocean and the forest for sustenance.
  - Unlike other religions, they **do not believe in or follow firm worshipping practices** or sacrifices.
  - The colour of the teeth has a unique interpretation among Onges, who consider the **pearly white teeth a symbol of death**. They continue to chew the bark to impart a red colour to their teeth.
  - They **decorate their bodies** and their faces with white and ochre clay. On special occasions, they place a greater emphasis on body ornamentation.

- Until the 1940s, the Onge were the **sole permanent inhabitants** of Goubalambabey (the Onge name for Little Andaman).
  - They now share the 732 sq km island with around 17,000 settlers from **India, Bangladesh**, and the **Nicobar Islands.**
- The Onge population was also **decimated following contact with British colonists** and Indian settlers; it fell from 670 in 1900 to only 96 members by the early 2000s.
- In 1976, the Onge were settled in order to have 'the basic facilities for hygienic living and protection against elements of nature'.
- They now live in a reserve in **Dugong Creek (Little Andaman)** that is a fraction of the size of their original territory.
- The Onge tribe is also one of the **world's least prolific and infertile communities**. Infertility affects somewhat more than 40% of married couples

8. National Crisis Management Committee (NCMC)
GS 2 (Governance)

- **Why in News:** The Union Cabinet Secretary chaired a meeting of the National Crisis Management Committee (NCMC) to review preparedness to deal with heat waves and forest fires.
- **About NCMC**
  - At the national level, the Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the key committees involved in top-level decision-making regarding Disaster Management (DM).
  - It deals with major crises which have serious or national ramifications.
- **Key functions:**
  - The NCMC plays a crucial role in managing natural disasters by reviewing preparedness measures, coordinating relief efforts, and providing logistic and financial support to state governments.
  - It is responsible for ensuring that all necessary preventive and precautionary measures are taken to minimize damage and loss of life
- **Composition:**
  - Cabinet Secretary (**Chairperson**) and Secretaries of Ministries / Departments and agencies with specific Disaster management responsibilities.

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MCQ Current Affairs
7th June, 2024

1. Consider the following statements with reference to the Onge Tribe:

A. It is one of the most primitive tribes in India, inhibiting the Nicobar Islands.
B. It does not believe in or follow firm worshipping practices or sacrifices.
Which of the statements given above is/are correct?
a) A only
b) B only
c) A and B
d) Neither of two

2. Standard Missile 6 (SM-6), recently seen in the news, was developed by which one of the following countries?

a) Russia
b) Israel
c) United States of America
d) Iran

3. The World Wealth Report 2024, recently seen in the news, was released by which one of the following organisations?
a) World Bank
b) World Economic Forum
c) Europian Union
d) None of the Above

4. Which of the following is not a placental mammal?
a) Dolphin
b) Kangaroo
c) Elephant
d) Human

5. The National Crisis Management Committee (NCMC) is chaired by which one of the following authorities?
a) Cabinet Secretary of India
b) Prime Minister of India
c) Union Minister of Environment, Forest and Climate Change
d) Union Home Minister

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Answers Current Affairs
7th June, 2024

1. b
2. c
3. d
4. b
5. a

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