

**GOVERNANCE****Status of WASH in Healthcare Facilities in India: CDDEP**

A recent research from Center for Disease Dynamics, Economics and Policy (CDDEP), USA, has estimated the cost of ensuring WASH and taking related steps for infection prevention and control for one year in healthcare facilities across India.

CDDEP aims to use research to support better decision-making in health policy.

**WASH**

- WASH is an acronym that stands for the interrelated areas of Water, Sanitation and Hygiene.
- The World Health Organisation (WHO) WASH Strategy has been developed in response to Member State Resolution (WHA 64.4) and the 2030 Agenda for Sustainable Development (SDG 3: Good Health and Well Being, SDG 6: Clean Water And Sanitation).
- adopted by the UN General Assembly in July 2010.

**Key Points**

- **Inadequate Healthcare And Sanitation Facilities:** A 2019 joint global baseline report by WHO and UNICEF had pointed out that globally, one in four healthcare facilities lacked basic water servicing and one in five had no sanitation service and 42% had no hygiene facilities at point of care.
- **Economic Importance of Sanitation:** A 2012 WHO report had calculated that for every dollar invested in sanitation, there was USD 5.50 to be gained in lower health costs, more productivity and fewer premature deaths.

**Fatalities due to Improper Implementation of the WASH Strategy:**

- A WHO document on WASH in healthcare facilities points out that 8,27,000 people in low- and middle-income countries die as a result of inadequate water, sanitation and hygiene each year.
- Also, death of 2,97,000 children under five years can be prevented each year if better WASH could be provided.

**Objectives of the Study:**

- To determine the cost-effectiveness of WASH interventions to reduce healthcare-associated infections among mother and neonates across the Indian healthcare system.

**Findings:**

**Cost Estimates:** Improving WASH across the public healthcare facilities in India and maintaining this for a year would cost Rs. 2567 crores approximately in capital costs and Rs. 2095 crores in recurrent expenses.

**Costly Interventions:** Providing clean water, linen reprocessing and sanitation.

**Least Expensive Interventions:** Hand hygiene, medical device reprocessing and environmental surface cleaning.

**Healthcare Associated Infections:**

- Inadequacies in providing WASH and also lack of infection prevention and control can lead to healthcare associated infections.
- **Causative Agents:** The pathogens like *Acinetobacter baumannii*, *Enterococcus faecalis*, *Escherichia coli*, *Salmonella typhi*, *Streptococcus pneumoniae* have been found to be causative agents of healthcare associated infections because of their ability to develop resistance to antibiotics.
- **Common Healthcare Associated Infections:** Central-line-associated bloodstream infections, Catheter-associated urinary tract infections, Surgical site infections and Ventilator-associated pneumonia.

**Importance of the Study:**

- **Suggests Suitable Strategies:** Findings show that addressing gaps in WASH across the Indian healthcare system is not only within the realm of possibility in terms of affordability – when compared to other national health campaigns – but can also be combined with other national efforts to address health priorities such as antimicrobial resistance.

**Improve Healthcare Policy Framing:** The intersection between WASH, infection prevention and control and antimicrobial resistance is unique in that it offers policy makers an opportunity to address multiple overlapping problems through interventions on WASH in healthcare facilities.

**INDIAN ECONOMY****Media Platform Bill: Australia**

Australia has reached out to India among several countries, including Canada, France and the UK, in a move to stitch a global coalition against tech giants Google and Facebook amid a faceoff over compensation for sharing news content from media companies on their platforms.

Australia's proposed law, News Media and Digital Platforms Mandatory Bargaining Code Bill 2020, mandates a bargaining code that aims to force Google and Facebook to compensate media companies for using their content.

The Bill is expected to set a precedent in regulating social media across geographies.

**Key Points**

- The Australian Competition and Consumer Commission (ACCC), in its 2019 report, Digital Platforms Inquiry, noted that there was a fundamental imbalance in the power between news media and internet platforms.
- Specifically mentioning Google and Facebook, the report said these platforms had “substantial bargaining power in relation to many news media businesses.”
- It highlighted that media regulation hardly applied to platforms, though they have been increasingly playing much the same role as the media. The last two decades have also seen the tremendous rise of the platforms and sharp decline of the traditional news media.
- The Australian government, reportedly sensing how important it was to have a strong and independent media environment in a democracy, asked the ACCC to come up with a draft code, which it did in July 2020.
- After some changes, the Treasury Laws Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Bill was introduced in December 2020.

**Australia's Media Platform Bill:**

- Payment to News Outlets: Big tech and social media giants like Facebook and Google will have to pay local news outlets for using their content.
- Big Tech firms will have to negotiate how much they pay local publishers and broadcasters for content that appears on their platforms.
- Provision of Arbitration and Fine: An arbiter is mandated to adjudicate if no agreement is reached and there are also provisions of heavy fines if agreements are not done.

**The Issue Involved:**

- The media industry is already benefiting from traffic routed to them by the digital platforms, and that the proposed rules would expose the Internet companies to “unmanageable levels of financial and operational risk”.
- Journalism is a public good and a pillar of democracy. Digital platforms piggyback on its content without sharing the associated costs. The subsequent diversion of advertising revenue has undermined traditional media, particularly regional newspapers.
- Google signed a deal with a group of French publishers to make digital copyright payments for online news content.
- The fight in Australia is in fact, centred on how much control these companies would be able to retain on their payout process - operational aspects such as deciding the quantum of payments for news feed sources, and having to reveal changes in their algorithms.
- France has specifically linked payments to copyright, without putting a forcing device into the agreements.
- Australia's code, on the other hand, is almost entirely focused on the bargaining power of news outlets vis-à-vis the tech majors, and has some coercive features as well.

**The Case of India:**

- Policymakers have so far focused on the dominance of intermediaries such as Google and Facebook, which are positioned in a way that service providers cannot reach customers except through these platforms.
- According to a FICCI-EY report for 2020, there are 300 million users of online news sites, portals and aggregators in the country.
- It makes up approximately 46% of Internet users and 77% of smartphone users in India at the end of 2019.
- With 282 million unique visitors, India is the second largest online news consuming nation after China.
- In India, the news aggregators are not mandated to make payments to publishers.

- News aggregator is an online platform or a software device that collects news stories and other information as that information is published and organizes the information in a specific manner.

**Way Forward**

India presents a unique media market which reflects the country's diversity. For example, media platforms span multiple languages. Therefore, while the Australian development is of special importance to India, it need not provide an ideal template for the way forward.

**SCIENCE AND TECHNOLOGY****UK to conduct first Human Challenge Trials for COVID-19**

The UK is set to conduct the first COVID-19 human challenge trials (HCT) within a month from now.

**Conducted by:** UK government's Vaccines Taskforce, Imperial College London, the Royal Free London NHS Foundation Trust and the clinical company called hVIVO.

**Key Points**

- The trial was first announced in October 2020.
- In this study, over 90 healthy volunteers between the ages of 18-30 will be deliberately exposed to small amounts of the virus in controlled settings,
- Objective: To test treatments and vaccines.
- In this way, the participants are "challenged" by the virus.
- This is not the same as standard vaccine clinical trials.
- Significance: HCTs are able to give more precise information about the disease and its effects on humans, and also give results about the efficacy of vaccines on infected humans.

**INDIAN GEOGRAPHY****Declining Rainfall in Cherrapunji**

A recent study that looked at the rainfall pattern in the past 119 years found a decreasing trend at Cherrapunji (Meghalaya) and nearby areas.

- The village of Mawsynram in East Khasi Hills district of Meghalaya has beaten Cherrapunji to become the wettest place in the world. Mawsynram receives over 10,000 millimetres of rain in a year.
- Mawsynram is located around 81 km by road from Cherrapunji however the straight line distance between the two is 15.2 km.

**Key Points****Reduction in Rainfall:**

- The annual mean rainfall for the period 1973–2019 showed decreasing trends of about 0.42 mm per decade.
- It was statistically significant along seven stations (Agartala, Cherrapunji, Guwahati, Kailashahar, Pasighat, Shillong and Silchar).

**Reasons:**

- **Rising Temperature**
- **Increased Human Activities**

The satellite data showed that there was a reduction in the vegetation area in northeast India in the past two decades, implying that human influence also plays an important role in the changing rainfall patterns.

The traditional way of cultivation known as Jhum cultivation or shifting cultivation is now decreased and being replaced by other methods.

There is sizable deforestation in the region. The study saw the decrease in vegetation cover and increase in the areas of cropland mainly from the year 2006 onwards.

The analysis showed reductions in vegetation with 104.5 sqkm lost per year.

**Significance of Studying the North-East Region:**

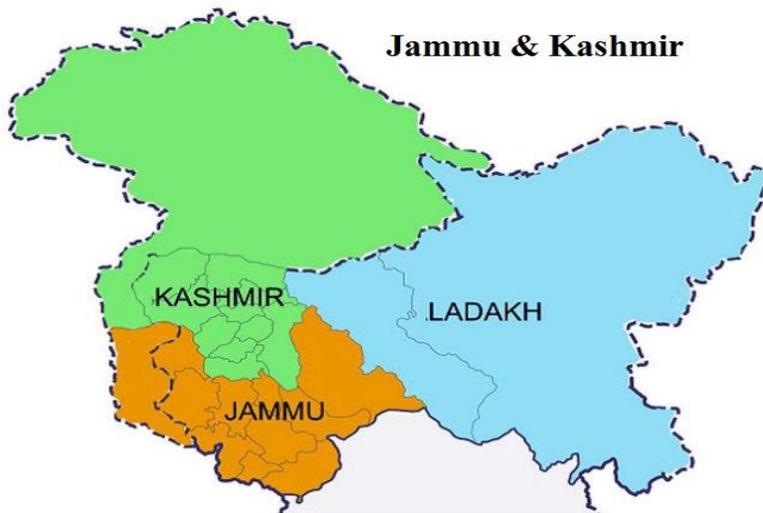
- Since north-east India is mostly hilly and is an extension of the Indo-Gangetic Plains, the region is highly sensitive to changes in regional and global climate.
- It has to be noted that the first signs of the effect of climate change will be evident for the extreme cases such as the rainfall at Cherrapunji.
- North-east India has the highest vegetation cover in India and includes 18 biodiversity hotspots of the world, indicating the importance of the region in terms of its greenery and climate-change sensitivity.

**NATIONAL DEVELOPMENTS****Process of delimitation in respect of UT of J&K**

Delimitation Commission held a meeting recently with the Associate Members from UT of J&K.  
Objective: To seek their suggestion on the process of delimitation in respect of the UT.

**Important value additions**

- Delimitation is the act of redrawing boundaries of Lok Sabha and state Assembly seats.
- Objective of delimitation: To provide equal representation to equal segments of a population; fair division of geographical areas so that one political party doesn't have an advantage over others in an election.
- Constitutional provisions: Under Article 82, the Parliament enacts a Delimitation Act after every Census.
- Delimitation is carried out by an independent Delimitation Commission.
- Delimitation Commissions have been set up four times — 1952, 1963, 1973 and 2002
- There was no delimitation after the 1981 and 1991 Censuses.



**BIODIVERSITY AND ENVIRONMENT**

**WCCB wins Asia Environmental Enforcement Award-2020**

The Wildlife Crime Control Bureau (WCCB) has received the Asia Environmental Enforcement Award-2020.

Awarded by: United Nations Environment Programme (UNEP).

**Key Points**

- WCCB got the award twice in three years.
- It has been awarded this year under the Innovation category.

**Important value additions :**

**Wildlife Crime Control Bureau (WCCB)**

It is a statutory body constituted under the WildLife (Protection) Act, 1972.

**Ministry:** Ministry of Environment and Forests.

**Mandate:** To combat organized wildlife crime in the country.

**Headquarter:** New Delhi

**Regional offices:** Delhi, Kolkata, Mumbai, Chennai and Jabalpur

- WCCB has developed an online Wildlife Crime Database Management System to get real time data to analyse trends in wildlife crimes across India.
- This system has been successfully used for carrying out operations such as Operation Save Kurma, Thunderbird, Wildnet, Lesknow, Birbil, Thunderstorm, Lesknow-II etc resulting in huge seizures of Tiger/Leopard Skin/bones, Rhino Horn, Elephant Ivory etc.

**Hyderabad emerges as Tree Cities Of The World**

Hyderabad has won a green contest among cities in India, and emerged one of the 'Tree Cities of the World'.

**Key Points**

- Awarded by: Arbor Day Foundation and the Food and Agriculture Organization (FAO).
- Hyderabad has maintained urban forestry under its Haritha Haram programme and its Urban Forest Parks plan.

- The city was evaluated on five metrics: ‘Establish Responsibility’, ‘Set the Rules’, ‘Know What You Have’, ‘Allocate the Resources’, and ‘Celebrate the Achievements’.

**IMPORTANT FACTS FOR PRELIM****Silver Antimony Telluride: A Material to Tap Waste Heat**

Scientists at the Bengaluru-based Jawaharlal Nehru Centre for Advanced Scientific Research, have found a new material, Silver Antimony Telluride (AgSbTe<sub>2</sub>), that can help in tapping waste heat produced by all kinds of domestic and industrial appliances, and use it to accomplish other useful work.

- Basically, the material will exploit the benefits of thermo-electric effect. The thermo-electric effect involves the process by which heat is transformed to electrical energy.

**Key Points**

- Traditionally, the thermo-electric effect has been demonstrated and utilised by using two different metals joined together, and by mechanically maintaining two different temperatures at the ends. But such materials do not offer efficient or economical solutions.
- Further, most materials that conduct electricity, also happen to be good conductors of heat. That means that there would not be any significant temperature difference between the two ends of the material for very long.
- To date, the most efficient thermoelectric materials use lead as a major constituent element, but lead has very adverse environmental impacts such as air pollution and also causes human health issues.

**About Silver Antimony Telluride:**

- It is a nanomaterial compound synthesised from Silver, Copper and Tellurium.
- A crystalline solid, it has free electrons that help in conduction of electricity but its lattices (arrangement of atoms) are rather inflexible, and vibrate quite slowly thereby inhibiting the propagation of heat.
- Thus, it is a good conductor of electricity but a bad conductor of heat, a property important for Thermo-electric effect.
- There are a variety of potential applications. Industrial processes and power plants, along with all kinds of domestic appliances, produce ample amounts of waste heat that can be utilised to do significant amounts of work.
- The heat from the laptop, for example, can be used to charge a mobile phone. Or, that from the phone can be used to charge a small watch.

**Challenge:**

The energy conversion is not a very efficient process. Typically, not more than 15 to 20% of the waste heat can be utilised.

**DAILY ANSWER WRITING PRACTICE**

**Qns. How far do you think cooperation, competition and confrontation have shaped the nature of federation in India? Cite some recent examples to validate your answer. (UPSC GS-2 Mains 2020)**

Ans:

A federal government is one in which powers are divided between the national government and the regional governments by the Constitution itself.

The Constitution of India provides for a federal system of government. However, the Indian model of federalism is significantly different from that of the American model (referred to as the epitome of federal polity).

Indian federalism has a strong unitary bias, but due to unique socio-economic and political conditions, it has evolved to assume the various features of cooperative, competitive, and confrontational federalism.

**Cooperative Federalism:** It envisages that the Centre and states share a horizontal relationship, where they “cooperate” in the formulation and implementation of national policies. This can be reflected in the recent steps taken by the Central Government.

- With the rollout of the GST and the formation of the GST Council, both the Centre and states government are having a say in implementing the one country-one tax system.
- The union government has abolished the Planning Commission and replaced it with NITI Aayog. One of the mandates of the NITI Aayog is to develop competitive federalism.

**Competitive Federalism:** It envisages the competition between the states.

- The SDG India Index, Aspirational Districts Programme, Swachh Bharat Ranking, Ease of Doing Business Ranking incorporates a sense of competition amongst the states for funds from the central government.

**Confrontational Federalism:** It is a result of central government transgressing into the powers of the state government.

- The unilateral revocation of the special status conferred on Jammu and Kashmir (J&K) under Article 370 of the Constitution has been criticized by many experts as against the spirit of federalism.
- Many constitutional experts have criticized the central government's decision of using a concurrent List to make laws on state list subjects. For example,
- The union government has passed three farm laws despite agriculture being the state list subject. This has led to massive farmers' protests.
- Under the recent NIA amendment Act, the central government may direct the NIA to investigate such cases as if the offense has been committed in India.
- The role of the governor as an agent of the central government (in Maharashtra & Karnataka) whereby governors act in a partisan way, generally against the state government whose views are not in concurrence with the party in power at union level.
- Also, there are many river-water sharing disputes amongst the states. For example Cauvery river disputes, Mahadayi river dispute.

### Conclusion

In *SR Bommai vs Union of India* (1994), the Supreme Court held federalism a part of the basic structure of the Constitution. However, due to the strong unitary bias and particularly the way it has evolved over the years, many constitutional experts describe Indian federalism as, "federation without federalism", "a Union of Unequal States" or "Quasi-Federal In Nature".

### DAILY QUIZ

1. Tholpavakoothu is a form of shadow puppetry that is practiced in which of the following state?

- a) Odisha
- b) Andhra Pradesh
- c) Kerala**
- d) Karnataka

2. Which of the following is incorrect regarding India-Russia relation?

- a) India and the Soviet Union signed the Treaty of Peace and Friendship in 1971.
- b) Russia has built Kudankulam nuclear reactor, jointly with India.
- c) Soviet Union launched India's first two satellites – Aryabhata and Bhaskara.
- d) India's total defence import from Russia has been constant, and hasn't changed much.**

3. Consider the following statement regarding Wildlife trade –

1. TRAFFIC, a wildlife monitoring network is a joint programme of World Wildlife Fund and UNFCCC.
2. TRAFFIC is implementing body of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Which of the following options is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2**

4. Consider the following statement regarding missiles of India –

1. HELINA and Dhruvastra are anti-tank guided missiles.
2. HELINA is the Air force variant while, Dhruvastra is Army variant.

Which of the above statements is/are correct?

- a) 1 only**
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

5. Who among the following heads the Cabinet Committee on Security?

- a) National Security Advisor
- b) Home Minister
- c) Defence Minister
- d) Prime Minister**