

HEALTH

➤ **India's bid to beat cervical cancer**

➤ **CONTEXT:** The government has announced that it will roll out vaccines for the prevention of cervical cancer to girls aged between 9 and 14 years through schools. The National Technical Advisory Group for Immunisation (NTAGI) had recommended the introduction of the Human Papillomavirus (HPV) vaccine in the Universal Immunisation Programme (UIP).

• The UIP is one of the largest public health programmes which offers free vaccines for at least 12 diseases, and has successfully eradicated diseases like polio and maternal and neonatal tetanus.

➤ **Why is it important to launch the HPV vaccine?**

• Cervical cancer is preventable and curable if it is detected early and managed effectively.

• It is the second most common cancer in women in India, and the cause of a large number of deaths annually.

• It is caused by infection with the human papillomavirus, and there are vaccines to protect against cancerous HPV.

• A recent study shows that more than 58% of all cases of cervical cancer and deaths globally were estimated in Asia with India accounting for 21% of cases and 23% of deaths, followed by China (18% and 17%).

• According to the paper, globally, there were an estimated 6,04,127 cervical cancer cases in 2020, with an incidence rate of 13.3 new cases per 1,00,000 women a year. In India, the incidence rate is 18 per 1,00,000 women.

• The WHO has specified that countries must maintain an incidence rate of fewer than 4 new cases per 1,00,000 women a year by 2030. To achieve that goal, one of the most important things required is that 90% of girls will have to be vaccinated with the HPV vaccine by the age of 15.

➤ **When will it be rolled out?**

• The indigenous HPV vaccine, called CERVAVAC, is likely to be rolled out by mid-2023. The vaccine has got the approval of the Drugs Controller General of India and was cleared by the government advisory panel, NTAGI, for use in the UIP programme.

• A one-time catch-up vaccine will be given to 9-14 year old adolescent girls, before it is introduced at nine years. States and Union Territories have been asked to issue directives to appropriate authorities for organising HPV vaccination centres in schools.

➤ **What happens to girls who don't go to school?**

• The government has clarified that girls who do not attend schools will be given the vaccines by community outreach and mobile health teams.

• Together with vaccination, screening programmes need to be conducted regularly to detect early signs of the disease that will allow time for treatment.

• The Ayushman Bharat Health and Wellness centres, announced in 2018, are already screening for common cancers like oral, breast and cervical, with over 5 crore women being screened for cervical cancer till November 2022. Screening has to be increased exponentially.

➤ **What are the challenges?**

• According to The Lancet study, the burden of cervical cancer remains high in Asia and Africa.

• The study identified substantial geographical and socioeconomic inequalities in cervical cancer globally, with a clear gradient of increasing rates for countries with lower levels of human development.

• In 2022, India ranked 132 out of 191 countries on the Human Development Index. However, According to health experts the fact that India's fertility rate is declining due to a variety of factors, including improved literary rate, increase in the age of marriage and so forth, should prompt everyone in the ecosystem, from the government, doctors to ground level health workers to launch campaigns on cervical cancer awareness, push vaccinations and screening for all girls.

➤ **What lies ahead?**

• Once the vaccine is launched through the UIP, which is a well-oiled network in India, it should reach the maximum number of the targeted population.

• The surveillance systems and infrastructure used for COVID-19 vaccinations may also be customised to improve HPV vaccination, monitor national cervical screening programmes and improve health system capacity to deliver more efficient preventive services.

POLITY

❖ **What is the CAG audit report on Assam's NRC?**

➤ **CONTEXT:** A recent Comptroller and Auditor-General of India (CAG) report on the update exercise of the National Register of Citizens (NRC) in Assam has flagged serious irregularities, including "haphazard development" of software for the exercise, making it prone to data tampering,

and flagged undue profits worth crores amassed by the system integrator (SI) by violating the Minimum Wages Act.

- The auditor flagged concerns in a compliance report of 'logistical arrangements for NRC update project in Assam' tabled in the Assam Assembly on December 24, 2022.
- **What is the NRC exercise?**
- An NRC was first created in 1951 in Assam to identify those born in India and migrants from erstwhile East Pakistan, now Bangladesh.
- In 2013, the Supreme Court issued directions to the Centre and State to initiate an exercise in Assam to update the 1951 register. The order was based on a petition filed by an NGO named Assam Public Works.
- The first draft was released in 2018. The final list, published in 2019, included those who could establish their Indian citizenship by being residents or descendants of people living in Assam before March 25, 1971 — the cut-off date for deportation of foreigners as per the Assam Accord of August 1985.
- As many as 19.06 lakh people out of 3.3 crore applicants were excluded due to a lack of adequate documents to prove their citizenship. Several parties dismissed the final list as "faulty". Three years later, the process is on pause as the Registrar General of India (RGI) is yet to notify the final list.
- **What are the CAG's concerns?**
- At the time, the process to update the NRC was started in December 2014 with a deadline for completion in February 2015 and the project cost was pegged at ₹288.18 crore. There was, however, a five-fold increase in the cost by March 2022 due to additional time to complete it and changes in the update software. "The final draft of the document was, however, published in August 2019 and the project cost escalated to Rs 1,602.66 crore (expenditure of Rs 1,579.78 crore was reported). A test check of records revealed irregularities in the utilisation of funds including "excess and inadmissible payment to vendors".
- As for irregularities, the CAG found that the amount of wages paid to the outsourced staff was 45.59%-64.27% less than what was approved by the NRC coordination committee. It was this difference in wages that allowed the undue benefit of ₹155.83 crore to the system integrator beyond the 10% "reasonable profit margin. Information technology firm Wipro Limited was entrusted with one of the prime software installation companies by the NRC Directorate.
- The CAG noted that secure and reliable software was required for the SC-directed exercise, but as many as 215 software utilities were added to the core software. According to the report this was done without following the due process of software development and vendor selection via tendering. The CAG stated that the intended objective of preparing a valid and error-free NRC was not met despite incurring excess expenditure.
- **What has the CAG recommended?**
- CAG sought penal measures against Wipro Limited for violating the provisions of the Minimum Wages Act and for paying data operators less than minimum wages.
- Secondly, the report recommended action against the State Coordinator of National Registration (SCNR) for "excess, irregular and inadmissible payments".
- The CAG also recommended fixing accountability of the SCNR as the principal employer for "not ensuring compliance with the Minimum Wage Act".

PRELIMS

1. Amrit Bharat Station Scheme

- **CONTEXT: Ministry of Railways has formulated a new policy for modernization of stations named "Amrit Bharat Station" scheme.**
- Amrit Bharat Station scheme envisages development of stations on a continuous basis with a long term vision. It is based on Master Planning for long term and implementation of the elements of Master Plan as per the needs and patronage of the station.
- **objectives:**
- The scheme aims at preparation of Master Plans of the Railway stations and implementation of the Master Plan in phases to enhance the facilities including and beyond the Minimum Essential Amenities (MEA) and aiming for creation of Roof Plazas and city centres at the station in long run.
- The scheme shall aim to meet the needs of the stakeholders, station usage studies as far as possible based on availability of funds and inter-se priority.
- The scheme shall cater for introduction of new amenities as well as upgradation and replacement of existing amenities.
- This scheme will also cover the stations where detailed techno-economic feasibility studies have been conducted or are being conducted but the work for construction of Roof Plazas has not been taken up yet, ensuring the phasing of Master Plan being suitably implemented and relocation of structures and utilities being given more emphasis in the phasing plans.

➤ **About**

- Under this scheme, the small stations would be identified not just for their footfalls but also based on the cities they cater to.
- It aims at preparing master plans of railway stations and implementing those in phases to enhance facilities including and beyond the minimum essential amenities and aim for the creation of roof plazas and city centres at stations.
- The aim is also to identify developing cities with potential and envisage railway stations as city centres that would link not just various parts of the city but also between different cities in the future.
- The plan is to map everything connected to it, bridges and different modes of transport.
- The idea is to start modernising stations in a cost-effective manner.
- According to need, the divisional railway managers (DRMs) will take a call on modernisation works in a phased manner.
- A special fund will also be earmarked with the DRMs for this purpose.
- The scheme's target is the introduction of new amenities as well as to upgrade and replace existing facilities.
- These stations will be redeveloped under what is being internally called the "Khurda model of redevelopment".
- Khurda station in Odisha was modernised for Rs 4 crore with all contemporary amenities for passengers.
- DRMs were taken on a tour of the Khurda station to get a feel of what can be done under the new scheme, the official said.
- The new scheme envisages cost-efficient improvement to facades and makes provisions for wide, well-lit and aesthetically pleasing entrance porches.
- The scheme seeks to relocate redundant/old buildings in a cost-efficient manner so that the space is released for higher priority passenger-related activities and so that future development may be carried out smoothly.
- The station should also have a second entry station building and high-level platforms with a length of 600m.
- This is apart from the ambitious plan to revamp 200 big stations under a separate redevelopment programme.

2. **Karnataka passes Bill for new traffic authority**

➤ **CONTEXT: The Karnataka Legislative Assembly recently passed The Bengaluru Metropolitan Land Transport Authority (BMLTA) Bill, 2022, which had been tabled in the monsoon session earlier 2022.**

- The legislation will be applicable to the Urban Mobility Region of Bengaluru and is aimed at the "regulation of development, operation, maintenance, monitoring, (and) supervision of urban mobility" within Bengaluru.

➤ **Why the Bill?**

- Traffic congestion in Bengaluru is a major worry for the state government, as it feels that the traffic woes can deter investors. There have also been complaints of a lack of coordination between various transport and civic bodies, due to which public transport projects have been delayed.
- Moreover, the National Urban Transport Policy had also laid down a framework for the integration of various departments to enable holistic transport planning in cities such as Bengaluru.

➤ **What does the Bill aim to achieve?**

- The enactment of the Bill will ensure a Comprehensive Mobility Plan for the gridlocked city, by adopting sustainable urban transport models. Integration of land use and transport planning are also key elements.
- The legislation also provides for measures such as "congestion parking, parking regulations, tolling, special purpose lanes etc. to regulate travel demand in the Urban Mobility Region."
- It addresses the "overlap in responsibilities and functions" of different institutions and departments related to transport in the city. Such overlap, according to the Bill, had impeded the process of planning and implementation of major transport schemes.

➤ **Who are the members of BMLTA?**

- BMLTA will consist of 36 members with the Chief Minister of Karnataka as its ex-officio chairman, along with representatives from agencies such as BBMP, Bangalore Development Authority, Bangalore Metropolitan Region Development Authority, Bengaluru City Police, South Western Railways and National Highway Authority of India.
- Based on the suggestions made in the Assembly, an MLA elected from Bengaluru, who is a minister in the state Cabinet, will be its member. It will also consist of three experts in the field of urban mobility, corporate governance or Law, Finance or Transport economics, two representatives from civil society organisations working in urban mobility, three representatives from institutions and associations representing the private sector and professional bodies, and two representatives from academic institutions.

➤ **What can BMLTA do?**

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- BMLTA can establish an “appropriate framework for engagement of the private sector in planning, development and management of mobility service delivery and effective contract execution by the Urban Transport Agencies, Traffic Management Agencies and Infrastructure Development Agencies.”
- Recommending policy measures, issuance of permits, registration of vehicles, operation of mobility services, handling of goods, management of traffic flow and other issues fall under the ambit of BMLTA.
- The agency will also prepare a parking policy, non-motorised transport policy, transit-oriented development policy, multi-modal integration policy and freight transport policy.
- BMLTA will also have to prepare a traffic management plan “at least once a year”, with a detailed traffic flow plan for road networks, movement of a certain type of vehicles such as freight and construction vehicles, traffic calming measures including a partial or full closure of streets, traffic management plans for special occasions, incident management plan, emergency evacuation plans etc.

➤ **Are there any penalties?**

- Any person failing to comply with the rules, regulations, orders or directions of BMLTA can be punished with a fine of up to Rs 1 lakh, which will extend to Rs 2 lakh for a second violation.
- In the case of continuing violation or non-compliance, the accused can be penalised with an additional fine which may extend up to Rs 5,000 per day during which the violation continues. Officials of various state government departments and agencies can also be punished under the provisions of the law.

3. Naegleria fowleri

➤ **CONTEXT: Recently South Korea reported its first case of infection from Naegleria fowleri or “brain-eating amoeba”. The authorities said a 50-year-old Korean national, who had recently returned from Thailand, died 10 days after showing symptoms of the rare yet fatal infection. Health authorities ran a host of tests to determine the exact cause of his death, which was found to be an infection caused by Naegleria fowleri.**

➤ **What is Naegleria fowleri?**

- Naegleria is an amoeba, a single-celled organism, and only one of its species, called Naegleria fowleri, can infect humans. It was first discovered in Australia in 1965 and is commonly found in warm freshwater bodies, such as hot springs, rivers and lakes.

➤ **How does it infect humans?**

- The amoeba enters the human body through the nose and then travels up to the brain. This can usually happen when someone goes for a swim, or dive or even when they dip their head in a freshwater body. In some cases, it was found that people got infected when they cleaned their nostrils with contaminated water. Scientists haven’t found any evidence of the spreading of Naegleria fowleri through water vapour or aerosol droplets.
- Once Naegleria fowleri goes to the brain, it destroys brain tissues and causes a dangerous infection known as primary amebic meningoencephalitis (PAM).

➤ **What are the symptoms of PAM?**

- The first signs of PAM start showing within one to 12 days after the infection.
- In the initial stages, they might be similar to symptoms of meningitis, which are headache, nausea and fever.
- In the later stages, one can suffer from a stiff neck, seizures, hallucinations, and even coma.
- The US public health agency also observed that the infection spreads rapidly and on average causes death within about five days.
- The fatality of PAM is as such that only four people have survived out of 154 known infected individuals in the United States from 1962 to 2021.

➤ **What is the treatment for the infection?**

- As the Naegleria fowleri infection is rare and progresses quickly, scientists haven’t been able to identify any effective treatments yet.
- At present, doctors treat it with a combination of drugs, including amphotericin B, azithromycin, fluconazole, rifampin, miltefosine, and dexamethasone.

➤ **Can climate change increase the spread of the infection?**

- With the rising global temperatures, the chances of getting Naegleria fowleri infection will go up as the amoeba mainly thrives in warm freshwater bodies. The organism best grows in high temperatures up to 46°C and sometimes can survive at even higher temperatures.
- Various recent studies have found that excess atmospheric carbon dioxide has led to an increase in the temperature of lakes and rivers. “These conditions provide a more favourable environment for the amoeba to grow. Heat waves, when air and water temperatures may be higher than usual, may also allow the amoeba to thrive.

- Initially the infections in the US were mostly reported in southern states, however, in recent years, they have been seen in northern states too.
- So far, Naegleria fowleri has been found in all continents and declared as the cause of PAM in over 16 countries, including India.

ANSWER WRITING

Q. Discuss global warming and mention its effects on the global climate. Explain the control measures to bring down the level of greenhouse gases which cause global warming, in the light of the Kyoto Protocol, 1997.

Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere.

Effects on Global Climate

- Early snowmelts, disappearing glaciers, and severe droughts are causing more water shortages.
- Rising sea levels lead to more coastal flooding.
- Heatwaves, heavy downpour, and increased flooding levels create trouble for farms, forests, and cities.
- Disruption of coral reefs and alpine meadows could cause many plant and animal species to extinction.
- Allergies, asthma, and infectious diseases will become more common due to higher levels of air pollution.
- Control measures to bring down the level of greenhouse gases which cause global warming
 - The Kyoto Protocol was an international treaty that commits state policies to reduce greenhouse gas emissions. It was adopted in 1997 and entered into force in 2005.
 - The Kyoto protocol targets emission of six gases which includes Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (NO₂), Sulphur hexafluoride (SF₆), group of hydrocarbons (HCFs), and groups of per fluorocarbons (PFCs).
 - There are various mechanism to reduce levels of greenhouse gases under the Kyoto Protocol:
 - ✓ The clean development mechanism allows the country with emission-reduction commitment under the Kyoto Protocol to implement projects in developing countries.
 - ✓ Carbon credit is a tradable certificate which is equal to one tonne of carbon dioxide. It attempts to limit the growth of concentration of greenhouse gases. Carbon credits can be acquired through afforestation, carbon sequestration, methane capture, etc.
 - ✓ Joint implementation allows country with an emission reduction commitment under Kyoto Protocol to earn emission reduction units from emission reduction projects.
 - ✓ Emission trading allows countries to sell unused emission units to other countries which have exceeded their targets.

The Kyoto Protocol is based on the principle of common but differentiated responsibilities and is only global treaty with binding limits on greenhouse gases emissions.

MCQs

1. Consider the following statements with respect to "Naegleria fowleri" which was in news recently
1. It is a thermophilic organism.
 2. It is mostly found in warm salt water surfaces.
 3. It can be found in untreated geothermal drinking water sources.
 4. Naegleria fowleri infection spread from one person to another.
- Which of the above statement/s is are correct?
- a) 1 and 2 only b) 2 and 3 only c) 3 and 4 only **d) 1 and 3 only**
2. Karnataka Legislative Assembly recently passed The Bengaluru Metropolitan Land Transport Authority (BMLTA) Bill, 2022, with reference to this consider the following
1. For the first time the bill aim to establish a body called Bengaluru Metropolitan Land Transport Authority (BMLTA) to regulate and coordinate urban mobility initiatives in the Bengaluru Metropolitan Area
 2. The BMLTA bill seeks to supplement the National Urban Transport Policy (NUTP), which establishes a framework for the integration of various functions of institutions and departments to allow comprehensive transport planning
- Which of the above statement/s is/are correct?
- a) 1 only **b) 2 only** c) Both 1 and 2 d) Neither 1 nor 2
3. With reference to Amrit Bharat Station Scheme consider the followings
1. The railway is planning to modernise 1,000 small yet important stations under the new "Amrit Bharat Station Scheme".
 2. These stations will be redeveloped under what is being internally called the "Khurda model of redevelopment"
 3. It brown field project

- Which of the above statement/s is/are correct?
a) 1 and 3 only b) 2 only c) 2 and 3 only **d) 1,2 and 3**
4. Consider the following statements with respect to National Population Register (NPR)
1. It is a list of usual residents of the country.
 2. Unlike the National Registrar of Citizen (NRC), the NPR is not a citizenship enumeration drive.
 3. A usual resident of the country is one who has been residing in a local area for at least the last six months, or intends to stay in a particular location for the next six months.
 4. It is similar to NRC.
- Which of the statement/s given above is/are correct?
a) 1 only **b) 1,2 and 3 only** c) 1,3 and 4 only d) 1, 2 and 4
5. Recently Election Commission of India initiates delimitation of Assembly and Parliamentary Constituencies in the State of Assam, with reference to this consider the following statements
1. Election Commission of India can initiate delimitation exercise of Assembly and Parliamentary Constituencies in the all north eastern states including state of Assam as per Section 8A of the Representation of the People Act, 1951
 2. As mandated under Article 170 of the Constitution, census figures 2001 shall be used for the purpose of readjustment of Parliamentary and Assembly Constituencies in the State.
- Which of the above statement/s is are not correct?
a) 1 only b) 2 only c) Both 1 and 2 d) Neither 1 nor 2
6. Consider the following statements with reference to H9N2 vaccine in India
1. Recently scientists from ICAR-NIHSAD, Bhopal developed an Inactivated low pathogenic avian influenza (H9N2) vaccine for chickens.
 2. It is India's first indigenous vaccine for H9N2 virus.
- Which of the above statement/s is/are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2
7. With reference to the Asian Development Bank (ADB), consider the following statements:
1. Asian Development Outlook, reports published by ADB.
 2. Japan is one of the largest shareholders of the bank.
 3. ADB does not have any members from outside Asia.
- Which of the statements given above is/are not correct?
a) 1 and 2 only
b) 2 only
c) 2 and 3 only
d) 3 only
8. Recently central government and signed a peace pact with Zeliangrong United Front (ZUF) rebel group, the said rebel group mostly operated from which of the following state?
a) Assam
b) Arunachal Pradesh
c) Manipur
d) Kerala
9. Recently Ministry of Power signed a memorandum of understanding with which of the following organisation for implementation of Early warning system for vulnerable hydro projects/power stations
a) DRDO
b) ISRO
c) India Meteorological Department
d) Department of Science and Technology
10. The term 'Input Tax Credit ' is often mentioned in news, is related to which of the following?
a) Goods and Services Tax
b) Income Tax
c) Toll Tax
d) Corporate Tax