

GOVERNANCE**World Polio Day 2020**

Every year, 24th October is observed as World Polio Day in order to call on countries to stay vigilant in their fight against the disease.

It was established to commemorate the birth of Jonas Salk, who developed an Inactivated (killed) Polio Vaccine (IPV).

Key Points

In the last three decades, the Global Polio Eradication Initiative (GPEI), led by national governments and the World Health Organisation (WHO), has been monitoring the disease situation globally.

As per the WHO, since 1980, the cases of wild poliovirus have decreased by over 99.9% as a result of vaccination efforts made around the world.

Polio Eradication:

For a country to be declared polio-free, the wild transmission of all three kinds of Polioviruses has to be stopped. For eradication, cases of both wild and vaccine-derived polio infection have to be reduced to zero.

Eradication of a disease refers to the complete and permanent worldwide reduction to zero new cases through deliberate efforts. If a disease has been eradicated, no further control measures are required.

However, elimination of a disease refers to reduction to zero or a very low defined target rate of new cases in a defined geographical area. It requires continued measures to prevent re-establishment of disease transmission.

Recent Outbreaks:

In 2019, polio outbreaks were recorded in the Philippines, Malaysia, Ghana, Myanmar, China, Cameroon, Indonesia and Iran, which were mostly vaccine-derived in which a rare strain of the virus genetically mutated from the strain in the vaccine.

According to the WHO, if the oral vaccine-virus is excreted and allowed to circulate in an unimmunised or under-immunised population for at least 12 months, it can mutate to cause infections.

Afghanistan and Pakistan are the two countries that are the last stronghold of the wild poliovirus.

Polio in India:

India received polio-free certification by the WHO in 2014, after three years of zero cases.

This achievement has been spurred by the successful pulse polio campaign in which all children were administered polio drops.

The last case due to wild poliovirus in the country was detected on 13th January 2011.

Polio**About:**

Polio is a crippling and potentially deadly viral infectious disease that affects the nervous system.

There are three individual and immunologically distinct wild poliovirus strains:

- Wild Poliovirus type 1 (WPV1)
- Wild Poliovirus type 2 (WPV2)
- Wild Poliovirus type 3 (WPV3)

Symptomatically, all three strains are identical, in that they cause irreversible paralysis or even death.

However, there are genetic and virological differences, which make these three strains separate viruses which must each be eradicated individually.

- WPV2 and WPV3 have been eradicated globally but WPV1 remains in circulation in Afghanistan and Pakistan.
- WPV2 was eradicated in 1999.

World Polio Day 2019 marked a milestone in polio eradication as the independent Global Commission for the Certification of Poliomyelitis Eradication (GCC) declared WPV3 to be globally eradicated.

Spread:

The virus is transmitted by person-to-person mainly through the faecal-oral route or, less frequently, by a common vehicle (for example, through contaminated water or food).

It largely affects children under 5 years of age.

The virus multiplies in the intestine, from where it can invade the nervous system and can cause paralysis.

Symptoms:

Most people with polio do not feel sick. Some people have only minor symptoms, such as fever, tiredness, nausea, headache, nasal congestion, sore throat, cough, stiffness in the neck and back, and pain in the arms and legs.

In rare cases, polio infection causes permanent loss of muscle function (paralysis).

Polio can be fatal if the muscles used for breathing are paralysed or if there is an infection of the brain.

Prevention and Cure:

There is no cure, but it can be prevented through immunisation.

Vaccines:

Oral Polio Vaccine (OPV): It is given orally as a birth dose for institutional deliveries, then primary three doses at 6, 10 and 14 weeks and one booster dose at 16-24 months of age.

Injectable Polio Vaccine (IPV): It is introduced as an additional dose along with the 3rd dose of DPT (Diphtheria, Pertussis and Tetanus) under the Universal Immunisation Programme (UIP).

INDIAN ECONOMY**India - Australia Circular Economy Hackathon**

Atal Innovation Mission (AIM- an initiative set up by NITI Aayog), in association with Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), will organise a two-day hackathon on circular economy, 'India-Australia Circular Economy Hackathon (I-ACE)', in December 2020.

The idea of I-ACE was conceived during a virtual summit on 4th June, 2020, between the Indian and Australian prime ministers, exploring innovative ways to boost the circular economy in India and Australia.

Key Points

Focus: I-ACE will focus on identification and development of innovative technology solutions by students, startups and MSMEs of both nations.

Key Themes:

- Innovation in packaging, reducing packaging waste.
- Innovation in food supply chains, avoiding waste.
- Creating opportunities for plastic waste reduction.
- Recycling critical energy metals and e-waste.
- Selection of Winners: Shortlisted students and startups/MSMEs will be called for the hackathon, where two winners (one student and one startup/MSME) per theme from each country will be announced at an award ceremony.
- Cash Prize: Winning teams from both the countries will get cash prizes. The winning Indian student and startup/MSME will be awarded a prize of Rs. 2 lakh and Rs 5 lakh, respectively, coupled with post-hackathon product development opportunities.

Circular Economy

- Meaning: It is an economy where products are designed for durability, reuse and recyclability and thus almost everything gets reused, remanufactured, and recycled into a raw material or used as a source of energy.
- Efficient Use of Resources: It includes 3 R's (Reduce, Reuse and Recycle), Refurbishment, Recover, and Repairing of materials.
- Example: If a person is planning to discard his/her mobile, it can be given to someone else (i.e. giving the mobile second life-Reuse), rather than throwing it just like that.
- Once the mobile reaches its end of life, it can be ensured that everything embedded in it, aluminum, copper, plastic etc. should be brought back to production cycle so that the circle of the economy gets completed.
- Response to the Linear Process: Many countries follow a linear process in which raw materials are taken from the environment, turned into new products which are then disposed of after use.

Benefits:**For Industry:**

- Fulfills the need for raw materials: The output produced by industries in a circular economy comes back to the industries in the form of input, for example, when parts of a mobile will be segregated, copper and aluminum will become raw materials for some industries.
- Efficient utilization of resources: This helps industries in earning cash profits equivalent to 3-5% of their turnover. Ultimately, QCDF (Quality, Cost, Delivery, and Flexibility) and sustainability level of industries get improved.

For Environment:

Problem of disposal of waste gets solved as in a circular economy, waste is converted into raw materials. Also solves the problem of air pollution, water pollution, and land pollution.

For Consumers:

- Cost-Effective: The products in the circular economy are more cost effective for consumers as they tend to be more efficient, besides having a longer shelf life.

- Efficient Products: Increased Efficiency leads to a reduction in the cost of maintenance as well as that of disposal, which otherwise a consumer has to incur in a huge amount.
- Global Response: Germany and Japan have used it as a binding principle for reorganizing its economy, whereas China even has a law on it (Circular Economy Promotion Law).
- Further, the Sustainable Development Goals, adopted by the United Nations Member States in 2015, include many related ambitions.

Circular Economy and India

- India is already on its path to the circular economy. Initiatives of the National Productivity Council (NPC) and government show that.
- NPC is an autonomous organisation under the Ministry of Commerce & Industry. Productivity Week 2019 Theme was ‘Circular Economy for Productivity and Sustainability’.
- ‘Digital India’ Program contains a significant component of the recycling of electronic wastes. Swachh Bharat Mission is also about making wealth out of wastes.
- India has a huge potential for reuse and recycling as only around 20% of the total waste generated goes into the recycling process.
- Manufacturing Sector, especially MSMEs can help a lot in transformation towards a circular economy. The sector should ‘DECIDE’ i.e.
- Designing processes for refurbishment and easy cycling.
- Educating masses on Circular Economy and its benefits.
- Collaborative Models for smooth implementation of Circular Economy.
- Innovating Products for circularity.
- Digitization for transparency, virtualization, dematerialization, and feedback driven intelligence for saving resources.
- Energy-Efficient for environmental sustainability.

Way Forward

India and Australia have had a strong and productive bilateral partnership since a decade and their collaborations across a broad range of areas have yielded significant results.

Circular Economy can lead to the emergence of more sustainable production and consumption patterns, thus providing opportunities for developed and developing countries to achieve economic growth and inclusive and sustainable industrial development (ISID) in line with the 2030 Agenda for Sustainable Development.

The transition towards a circular economy requires systematic innovations including new innovative financing models, partnerships, business models and close integration of industry 4.0 principles.

INTERNATIONAL AFFAIRS

Sudan and Israel to Normalise Relations

Recently, in a deal brokered by the USA, Sudan and Israel have agreed to normalise relations to end decades of hostility.



Note: Israel has diplomatic relations with more than 160 countries.
Sources: Israel Ministry of Foreign Affairs, WSJ and news reports

Key Points

Sudan, which was technically at war with Israel since its foundation in 1948, has now become the third country to forge diplomatic relations with it, in recent times.

Earlier, the USA brokered diplomatic pacts between Israel and the UAE and Bahrain as well, to normalise their relations.

Implications:

The deal would deepen Sudan's engagement with the West.

- The deal follows USA's conditional agreement to remove Sudan from its blacklist of countries accused of sponsoring terrorism.
- Sudan was added to the list in 1993 after it was accused of harbouring groups such as Hezbollah and Palestinian militant outfits which the USA deems as terrorists.
- As a result, Sudan was cut off from the global economy and was starved of foreign investment which faced another blow in 2011 when South Sudan was formed taking away its major oil resources.
- With its name removed from the list, Sudan will no longer stay deprived of foreign investments.
- Under the deal, Sudan has agreed to pay USD 335 million in compensation to victims of the Al-Qaeda bombings of USA embassies in Kenya and Tanzania in 1998.
- It delivers a foreign policy achievement for Trump just days before the USA election.
- It boosts Israel's motive which has made it a priority to forge ties with formerly hostile countries in Africa and the Arab world in the absence of any progress with the Palestinians.
- In the initial phase, there will be no exchange of ambassadors or a mutual establishment of embassies.
- After the six-day war of 1967 war, Arab powers met in Khartoum (Sudan's capital) to pledge three "noes" viz. no peace with Israel, no recognition of Israel, and no negotiations with Israel. Therefore, the deal holds a symbolic significance for Israel.
- Unlike the UAE and Bahrain, which have never fought with Israel, Sudan sent forces to fight in the war around Israel's creation in 1948 and during the war of 1967. In the 1970s, Israel backed Sudanese insurgents fighting the Khartoum government.
- With this agreement, Israel will complete the creation of a safety cordon in the Red Sea, which currently includes Egypt, Jordan, South Sudan and Saudi Arabia.
- The deal is also aimed at unifying Arab countries against their common adversary, Iran.
- Though Sudan has been largely marginal to Middle Eastern politics in recent decades, the normalisation has significant symbolic value.

Global Reaction:

Allies of the USA, including Germany, Egypt, the UAE, Bahrain, have welcomed the deal as a boost to stability in West Asia.

Meanwhile, Palestinian leaders have strongly condemned the deal, echoing their rejection of all of the Israel's normalisation accords.

SCIENCE AND TECHNOLOGY**PLACID Trials**

Recently, the PLACID Trial, a multicentre randomized controlled trial, has shown that the use of convalescent plasma (CP) as a therapeutic for Covid-19 patients showed no positive effects and did not improve the outcome of the patients.

The randomised controlled trial (RCT) is a trial in which subjects are randomly assigned to one of two groups: one (the experimental group) receiving the intervention that is being tested, and the other (the comparison group or control) receiving an alternative (conventional) treatment.

Key Points**Convalescent Plasma Therapy:**

- Convalescent Plasma, extracted from the blood of patients recovering from an infection, is a source of antibodies against the infection.
- The therapy uses blood from people who have recovered from an illness to help others recover.
- Blood donated by people who have recovered from Covid-19 has antibodies to the virus that causes it. The donated blood is processed to remove blood cells, leaving behind liquid (plasma) and antibodies. These can be given to people with Covid-19 to boost their ability to fight the virus.

- The plasma donor would have to be a documented case of Covid-19 and healthy for 28 days since the last symptoms.

PLACID Trial:

- It was conducted by the Indian Council of Medical Research (ICMR) and its aim was to investigate CPT's effectiveness for the treatment of Covid-19.
- It is the first and largest randomised control trial to be completed in the world.

Findings:

- The trial results indicate that there was no difference in the 28-day mortality (estimates of deaths in the 28 days after entering the hospital for a specific condition) or progression of Covid-19 from moderate to severe in patients treated with CP along with basic standard care compared to basic standard care alone.
- While the use of CP seemed to improve the resolution of shortness of breath and fatigue in patients with moderate Covid-19, this did not translate into a reduction in 28-day mortality or progression to severe disease.

Impact of the Findings:

- The ICMR is now considering removing the option of CPT from the national guidelines.
- CPT as a treatment for Covid-19 in India has led to questionable practices such as calls for donors on social media, and the sale of convalescent plasma on the black market.
- Although CP is a safe form of treatment when transfused in accordance with the regulations, it involves resource-intensive processes such as plasmapheresis (separating plasma from the blood cells), plasma storage, and measurement of neutralising antibodies and a limited number of institutes have the capacity to undertake these procedures in a quality-assured manner.
- However, experts have held that guidelines are not necessarily binding and it is too early to dismiss convalescent plasma therapy.

Way Forward

- Covid-19 is a new virus and global evidence is still emerging on the best therapeutic options so it is too early to take a firm step.
- For example, remdesivir has been sanctioned as a drug of choice by the USA drug regulator, while the World Health Organization's Solidarity Trial has found it had little or no effect on 28-day Covid mortality.
- Care for Covid-19 is individualised care and the use of the right drugs in the right patient does work. Some of the therapies can be continued on compassionate grounds and the results of one or two trials should not lead to the elimination of an entire treatment or therapy.

IMPORTANT FACTS FOR PRELIM**Kochi-Muziris Biennale**

In the wake of the pandemic, the 5th edition of the Kochi-Muziris Biennale has been postponed to 1st November 2021, which was earlier set to be inaugurated on 12th December 2020.

Key Points

- The Kochi-Muziris Biennale is an art exhibition and festival that is the largest of its kind in South Asia and is organised by the Kochi Biennale Foundation at Kochi, Kerala.
- The Foundation is a non-profit charitable trust engaged in promoting art and culture and educational activities in India.
- It works throughout the year to strengthen contemporary art infrastructure and to broaden public access to art across India through a diverse range of programmes.
- In mythology, Muziris was a port city, among the earliest of its kind in the world and when Kerala established itself as a major center for spice, the ancient port of Muziris emerged as its hub.
- Currently, the Muziris Heritage Project is one of the biggest conservation projects in India, where the state and the central governments have come together to conserve a rich culture that is as old as 3000 years or more.
- The biennale exhibits artworks across a variety of mediums including film, installation, painting, sculpture, new media and performance art and also offers seminars, screenings, music, workshops and educational activities for school children and students.

DAILY ANSWER WRITING PRACTICE

Qns. . "Liberalising the entry of new operators in the public transport may be the path for improving services and facilitating growth of the sector." In the light of the given statement critically analyse the idea of privatisation of railways (250 words)

Ans.

Recently, the Indian Railways initiated the process to allow private firms to operate passenger trains on its network through 151 new trains. While these trains will form a minuscule portion of the entire railway network, this marks the beginning of private sector participation in passenger train operations.

The privatization of Indian railways has been recommended for many decades, by the erstwhile Planning Commission of India and now by Niti Aayog.

Pros of Privatization of Indian Railways

- **Improved Infrastructure:** NITI Aayog's strategy for New India @75 envisages many targets in railway infrastructure such as increasing the speed of infrastructure creation from the present 7 km/day to 19 km/day, 100% electrification of broad gauge track by 2022-23.
- Given this, a strong argument in favour of privatization is that it will lead to better infrastructure which in turn would lead to improved safety, reduction in travel time, etc.
- **Improved Quality of Services:** Indian Railway services are marred by issues like lack of punctuality, mismanagement in the form of stinking washrooms, lack of water supply and dirty platforms.
- Privatisation may solve these issues, as the move would foster competition and hence lead to overall betterment in the quality of services.
- **Technology Infusion:** The privatization will also help in accommodating the latest technology in railways coaches, safety and travelling experience. Thereby, it may help Indian Railways to become a world-class network.

Cons Related to Privatization of Indian Railways

- **Coverage Limited to Lucrative Sectors:** An advantage of Indian Railways being government-owned is that it provides nation-wide connectivity to bring regional development. This would not be possible with privatisation since routes which are less popular may be neglected, thus having a negative impact on connectivity.
- It may also render some parts of the country virtually inaccessible and omit them from the process of development. For example, regions with rugged terrain and low population density like Himalayan states and North eastern states.
- **Increased Fares:** Given that a private enterprise runs on profit, thus it may be assumed that the easiest way of accruing profits in Indian Railways would be to hike fares. This would render the service out of reach for lower income groups.
- Also, this would defeat the purpose of the Indian railways which is meant to serve the entire population of the country irrespective of the level of income.
- **Issue of Cross-Subsidisation:** Indian Railways tend to cross-subsidise passenger fares through freight revenue. This translates to below cost pricing, which will make it difficult for private players to compete.
- **Conflict of Interest:** Currently, the Ministry of Railways is effectively the policy maker, regulator and service provider.
- This, as the Bibek Debroy committee pointed out, is a clear conflict of interest and would undermine the fair competition between private and government railway operations and impede the efficient privatisation process of Indian Railways.
- **Social Welfare Concerns:** As the Indian Railways plays a vital role in transportation of goods in the country, it provides a low cost of transportation of many final and intermediate goods.
- Thus, the privatization of the system motivated by profit making, will have an inflationary effect and thereby affect the common people.

Conclusion

Recommendations of the Bibek Debroy committee such as expansion of Indian Railways manufacturing company, Corporatization of core functions of railways, etc. can be implemented.

The need of the hour is to find a balanced solution that would incorporate the pros of both private and government enterprises and enhance the image of Indian Railways as it continues to serve the world's largest democracy.

DAILY QUIZ

1. Consider the following statements about Sudan and Israel:

1. Sudan is a peninsular country with Red Sea to West and Israel to its south-east
2. Sudan is the third country after Bahrain and UAE to forge diplomatic relations with Israel in recent times.

Which of the statements given above is/are correct?

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

2. With reference to Polio, consider the following statements:

1. Polio is a crippling and potentially deadly viral infectious disease that affects the skeletal system.
2. The virus is transmitted by person-to-person mainly through the faecal-oral route.
3. India received polio-free certification by the WHO in 2020.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only**
- c) 1 and 3 only
- d) 1, 2 and 3

3. With reference to the Circular Economy, consider the following statements:

1. It is an economy where almost everything of a product gets reused, remanufactured, and recycled.
2. Circular economy initiatives in India are undertaken by the National Productivity Council (NPC).

Which of the statements given above is/are correct?

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

4. With reference to Indian Tsunami Early Warning System, consider the following statements:

1. It is based in Chennai.
2. It was established by the Ministry of Earth Sciences.
3. It also provides the services for Indian Ocean Rim countries.

Which of the statements given above is/are correct?

- a) 3 only**
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

5. Consider the following statements:

1. The impeachment process is used for the removal of judges of the Supreme Court only.
2. Article 121 bars any discussions in Parliament with respect to the conduct of any judge of the Supreme Court or of the High Court.

Which of the statements given above is/are correct?

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