

GOVERNANCE**Sutra Model**

Many scientists are blaming the government-backed model, called SUTRA (Susceptible, Undetected, Tested (positive), and Removed Approach), for having a larger role in creating the perception that a second wave of Covid was unlikely in India.

Key Points**About:**

- Scientists from the IITs of Kanpur and Hyderabad have applied the SUTRA Model to predict the Covid graph in India.
- It first came into public attention when one of its expert members announced in October 2020 that India was “past its peak”.
- The model uses three main parameters to predict the course of the pandemic which are :
 1. **Beta:** Also called contact rate, which measures how many people an infected person infects per day. It is related to the R0 value, which is the number of people an infected person spreads the virus to over the course of their infection.
 2. **Reach:** It is a measure of the exposure level of the population to the pandemic.
 3. **Epsilon:** It is the ratio of detected and undetected cases.

Problems with SUTRA:

- **Variability:** There have been many instances of the SUTRA forecasts being far out of bounds of the actual caseload and the predictions of the SUTRA model are too variable to guide government policy.
- **Too Many Parameters:** The SUTRA model was problematic as it relied on too many parameters, and recalibrated those parameters whenever its predictions “broke down”.
- The more parameters you have, the more you are in danger of ‘overfitting’. You can fit any curve over a short time window with 3 or 4 parameters.
- **Ignores Behaviour of the Virus:** The SUTRA model’s omission of the importance of the behaviour of the virus; the fact that some people were bigger transmitters of the virus than others (say a barber or a receptionist more than someone who worked from home); a lack of accounting for social or geographic heterogeneity and not stratifying the population by age as it didn’t account for contacts between different age groups also undermined its validity.
- **Ignores the Reason For Change:** New variants showed up in the SUTRA model as an increase in value of parameters called ‘beta’ (that estimated contact rate). As far as the model is concerned, it is observing changes in parameter values. It does not care about what is the reason behind the change.

2.COVID-19:India’s Leading Cause of Death

According to the most recent estimates by the Institute for Health Metrics and Evaluation (IHME), the Covid-19 pandemic has emerged the biggest cause of death in India.

Key Points**Death due to Covid-19 Pandemic:**

- India has recorded more than 19 million cases of coronavirus-second only to the US and has confirmed more than 2,15,000 deaths. The human toll of the pandemic is more than double the number of humans killed in over 320 natural disasters during the recent two decades (2000-2019).

Other Top Causes of Deaths in India:

- Ischemic heart disease (second), Chronic obstructive pulmonary disease (third), Strokes (fourth), Diarrhoeal diseases (fifth).

Reasons for Covid-19 being the Leading Cause of Death:

- The 'double mutant' B.1.617 Indian variant of SARS-CoV-2 has heightened risk.
- Lives have been lost due to the lack of preparedness of governments, India's poor health infrastructure, lack of medical oxygen and even medicines.
- The Centre and state governments have been accused and held responsible by the Supreme Court and High Court for undermining the scale of crisis and failure to manage it.
- Experts have also been unhappy with India's Covid-19 vaccine procurement and pricing policy. States have to await their quota of vaccines.

INTERNATIONAL RELATION**India-UK Virtual Summit**

Recently, the Prime Ministers of India and the United Kingdom (UK) held a bilateral virtual summit.

Key Points**Adopted 'Roadmap 2030':**

- It will elevate bilateral ties to a "Comprehensive Strategic Partnership".
- It will provide a framework for UK-India relations across health, climate, trade, education, science and technology, and defence. This will expand the UK-India health partnership to enhance global health security and pandemic resilience. This includes firming up international supply chains to ensure critical medicines, vaccines and other medical products reach those who need them most. Agreed to expand the existing UK-India vaccines partnership.

Launched Enhanced Trade Partnership:

- It envisages facilitating market access in specific sectors. It will see Britain open up its fisheries sector to more Indian players, facilitate more opportunities for nurses, recognise Indian seafarers' certificates and enter into a joint dialogue on a social security agreement.
- In return, India lifted restrictions to enable British fruit producers to export their produce to the country and improved access for medical devices.
- They will also work towards reciprocal opening up of legal services.
- Announced their intent to negotiate a comprehensive Free Trade Agreement (FTA), including consideration of an interim trade agreement to deliver early gains.
- Set an ambitious target of more than doubling bilateral trade by 2030.

Announcement of a new India-UK 'Global Innovation Partnership':

- The UK is India's second largest partner in research and innovation collaborations.
- The new partnership aims to support the transfer of inclusive Indian innovations to select developing countries, starting with Africa.

Security & Defence:

- **Cooperation on Maritime Domain Awareness:** This includes new agreements on maritime information sharing, an invitation to the UK to join India's Information Fusion Centre in Gurgaon and an ambitious exercise programme which includes joint trilateral exercises.
- **UK's Carrier Strike Group:** The UK's Carrier Strike Group will visit India later this year to boost ties with Indian navies and air forces, undertaking joint training exercises to enable future cooperation on operations in the Western Indian Ocean (UK's Indo-Pacific Tilt).
- **Light Combat Aircraft Mark 2:** To support India's indigenous development of the Light Combat Aircraft Mark 2.
- **Potential Collaborations:** Discussed the potential for further industrial collaboration in areas such as maritime propulsion, space and cyber, marking the start of a promising new era of UK-India research, capability and industrial collaboration on Indian combat air and beyond.

Migration:

- Enhance their migration relationship, to make it easier for British and Indian nationals to live and work in each other's countries.

- Welcomed the signing of the India-UK Migration and Mobility Partnership (MMP) that is aimed at reducing illegal immigration into the UK. The issue of illegal immigration had been a sticking point between both sides for years. However it is understood that MMP will help genuine immigrants and students and will reduce immigration-related crimes.

Climate Change:

Agreed to work together to ensure an ambitious outcome at Conference of the Parties (COP) 26 and expand the UK-India partnership on tackling climate change, including by accelerating the development of clean energy and transport and new technology, protecting nature and biodiversity and helping developing countries adapt to the impact of climate change.

Bilateral Military Exercises:

- Air Force Exercise 'Indradhanush'
- Navy Exercise Konkan.
- Army Exercise 'Ajeya Warrior'

BIODIVERSITY & DIVERSITY**Asiatic Lions**

Recently, eight Asiatic lions at Hyderabad's Nehru Zoological Park have tested positive for the deadly coronavirus. It is the first known case of the human infecting the felines and making them sick in India.

Key Points**About:**

- The Asiatic Lion (also known as the Persian Lion or Indian Lion) is a member of the Panthera Leo Leo subspecies that is restricted to India.
- Its previous habitats consisted of West Asia and the Middle East before it became extinct in these regions.
- Asiatic lions are slightly smaller than African lions.
- The most striking morphological character, which is always seen in Asiatic lions, and rarely in African lions, is a longitudinal fold of skin running along its belly.

Distribution:

- Asiatic lions were once distributed to the state of West Bengal in east and Rewa in Madhya Pradesh, in central India.
- At present Gir National Park and Wildlife Sanctuary is the only abode of the Asiatic lion.
- In 2020, the Gujarat Forest Department announced an increase in the population of Asiatic lions in the Gir forest region.

Threats:

- Its vulnerability to unpredictable events such as a plague or a natural disaster, poaching and locals near the Gir National Park killing the lions in retaliation for attacks on livestock.

IUCN Red List: Endangered CITES: Appendix I

Conservation Efforts:

- The "Asiatic Lion Conservation Project" has been launched by the Union Ministry of Environment, Forests and Climate Change (MoEFCC).
- It has been approved for three financial years from 2018 to 2021.
- It envisages scientific management with the involvement of communities in coordination with multi-sectoral agencies for disease control and veterinary care for overall conservation of Asiatic lions.

IMPORTANT FACTS FOR PRELIM**1. Purchasing Managers' Index**

The seasonally adjusted IHS Markit India Manufacturing Purchasing Managers' Index (PMI) was at 55.5 in April 2021, little changed from March's reading of 55.4.

Key Points

- It is a survey-based measure that asks the respondents about changes in their perception about key business variables as compared with the previous month.
- The purpose of the PMI is to provide information about current and future business conditions to company decision makers, analysts, and investors.
- It is calculated separately for the manufacturing and services sectors and then a composite index is also constructed. The PMI is a number from 0 to 100. A print above 50 means expansion, while a score below that denotes contraction. A reading at 50 indicates no change.
- If PMI of the previous month is higher than the PMI of the current month, it represents that the economy is contracting.
- It is usually released at the start of every month. It is, therefore, considered a good leading indicator of economic activity.
- PMI is compiled by IHS Markit for more than 40 economies worldwide. IHS Markit is a global leader in information, analytics and solutions for the major industries and markets that drive economies worldwide.
- As the official data on industrial output, manufacturing and Gross Domestic Product (GDP) growth comes much later, PMI helps to make informed decisions at an earlier stage.
- It is different from the Index of Industrial Production (IIP), which also gauges the level of activity in the economy. IIP covers the broader industrial sector compared to PMI. However, PMI is more dynamic compared to a standard industrial production index.

2. Used Cooking Oil (UCO) Based Bio-Diesel

Union Minister of Petroleum & Natural Gas flagged off the first supply of UCO (Used Cooking Oil) based Biodiesel blended Diesel under the EOI Scheme from Indian Oil's Tikrikalan Terminal, Delhi.

Key Point:

- To create an eco-system for collection and conversion of UCO into Biodiesel, Minister of Petroleum and Natural Gas had initiated Expressions of Interest (EOI) for "Procurement of Biodiesel produced from Used Cooking Oil" on the occasion of World Biofuel Day on 10th August 2019.
- It is a landmark in India's pursuance of Biofuels which will have a positive impact on the environment.

Important value additions :

- Biodiesel is an alternative fuel, similar to conventional or 'fossil' diesel.
- It can be produced from vegetable oils, animal fats, tallow and waste cooking oil.
- A significant advantage of Biodiesel is its carbon-neutrality, i.e. the oilseed absorbs the same amount of CO₂ as is released when the fuel is combusted in a vehicle.
- Also, Biodiesel is rapidly biodegradable and completely non-toxic.

3. Moorhen Yoga Mat

- A biodegradable and compostable yoga mat was recently developed from water hyacinth from the fishing community in Assam.
- The mat is called 'Moorhen Yoga Mat'
- It will soon be introduced to the world market as a unique product.
- The intervention was triggered through an initiative by North East Centre for Technology Application and Reach (NECTAR), an autonomous body under Department of Science & Technology (DST) to involve the entire women community associated with a collective called 'Simang' meaning dream, led by the 6 girls to create wealth from water hyacinth plants.

- Water hyacinth is considered as a nuisance since it does not benefit the fishing community and harms their occupation.

Deepor Beel: Deepor Beel is a permanent freshwater lake in Assam. It is recognised as a Ramsar Site and a bird wildlife sanctuary.

DAILY ANSWER WRITING PRACTICE

Q. Quadrilateral Security Dialogue (QUAD)' is the transforming itself into a trade bloc from a military alliance, in present times. Discuss.

Ans:

Introduction

Quadrilateral Security Dialogue (Quad) is the informal strategic dialogue between India, the USA, Japan, and Australia. The Quad was established, primarily as a strategic bloc, to counter China's aggressive stance in the South China Sea. However, Quad's shared objective to support a "free, open and prosperous" Indo-Pacific region, could also form the basis of a trade agreement and turn it into a major trade bloc.

Body

Transformation of Quad Into A Trade Bloc:

- **Complex Interdependence:** In the world of complex interdependence whereby nations have trade dependency over each other or collective responsibility of global commons, a military bloc reminiscent of the cold war era seems quite outdated. In this context, it is more plausible that Quad member countries envision themselves from a geo-economic prism. Also, a military bloc may bring all great powers (US, China, India, Russia) to the brink of a war, which is not in the interest of these countries and global peace.
- **Inclusive Indo-Pacific Region:** Quad member countries agreed that a free, open, prosperous, and inclusive Indo-Pacific region will serve the long-term interests of all countries in the region and of the world at large. Quad also envisages addressing the common challenges of terrorism and proliferation linkages impacting the region, as well as on enhancing connectivity.
- **Blue Dot Network:** It is a multi-stakeholder initiative (led by the US along with Japan and Australia) to bring together governments, the private sector, and civil society to promote high-quality, trusted standards for global infrastructure development. It could directly counter China's Belt and Road Initiative (BRI).
- **Tackling Global Challenges:** Challenges emanating from Covid-19 highlighted the need for improving the resilience of supply chains and self-sufficiency also. In this context, the transformation of Quad into a trade bloc can help tackle future global challenges more effectively.

Way Forward

- **Need For Clear Vision:** The Quad nations need to better explain the Indo-Pacific Vision in an overarching framework with the objective of advancing everyone's economic and security interests. This will reassure the littoral States that the Quad will be a factor for the regional benefit, and a far cry from Chinese allegations that it is some sort of a military alliance.
- **Integration of Projects:** The connectivity projects of Quad member countries (the US' Indo-pacific economic corridor, Japan's Asia-Africa Economic Corridor, India's Project Mausam) should be integrated to be more proactive in pushing ahead the vision of connectivity.
- **Expanding Quad:** The Quad should focus on building a robust regional consultation mechanism and coordinate with ASEAN nations on issues of regional importance.

Conclusion

- If ever a Quad trade agreement were to become a reality, a reduction in trade costs would go a long way towards fulfilling the economic potential of the alliance. However, there is a need to put the military component and the economic component together. This will help Quad to emerge as a very strong alliance as without military muscle all other fields cannot be excelled.

DAILY QUIZ

Q.1 Consider the following statements about Aditya- L1 mission:

1. It is India's first solar mission.
2. It will be launched using the Launch Vehicle Mark 3 (LVM3)
3. It will have more than 50 payloads (instruments) on board.

Which of the given above statements is/are correct?

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

Q.2 What is "Python-5", sometimes seen in the news?

- (a) An Israeli radar system
- (b) India's indigenous anti-missile programme
- (c) An American anti-missile system
- (d) **None of the above**

Q.3 Consider the following statements:

1. All natural earthquakes take place in the lithosphere.
2. An earthquake's point of initial rupture is called its hypocenter.
3. According to the present zoning map, Assam state fall in 'Zone 5'.

Which of the given above statements is/are correct?

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

Q.4 Consider the following statements:

1. The Legislative Assembly of Delhi was first constituted in the year of 1993, after the Constitution (Sixty-ninth Amendment) Act, 1991.
2. As per article 239AA of Indian Constitution, the number of ministers cannot exceed ten percent of Delhi assembly seats.
3. The Lieutenant Governor of Delhi is appointed by the President of India.

Which of the given above statements is/are correct?

- (a) 1 and 3 only
- (b) 1 and 2 only
- (c) **2 and 3 only**

(d) 1, 2 and 3

Q. 5 The Karen conflict was in news recently, it has been described as one of the world's "longest running civil wars", this armed conflict is associated with which of the following country?

(a) Thailand

(b) Israel

(c) China

(d) Myanmar



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