VAJIRAM & RAVI
Institute for IAS Examination

The Analyst

CURRENT AFFAIRS Handout

27 April 2025

The Analyst Handout
27th April 2025

"Digital Swaraj": Scripting India's AI Era

CONTEXT: Bengaluru-based Sarvam AI will be the first company to receive government support to build an indigenous AI LLM. It will have access to a pool of GPUs acquired under the government's IndiaAI Mission

'Artificial' Intelligence

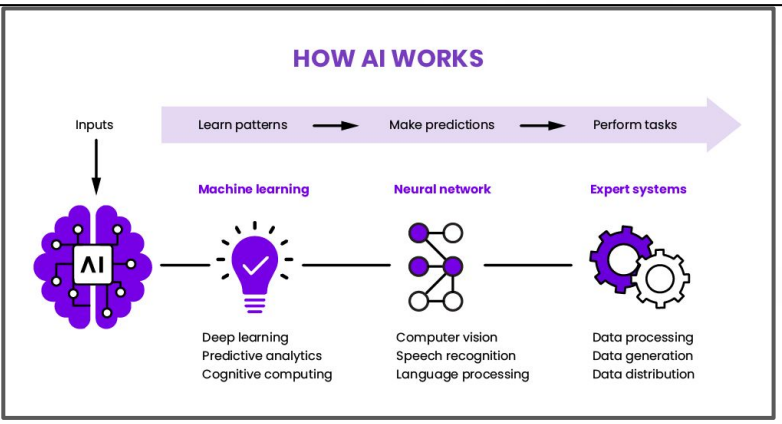
- Simulation of Human Intelligence
- Algorithms & Computational Models
- Core - Data - Machines
- **PROCESS - Two Techniques**
  - Machine Learning - Patterns
  - Deep Learning - ANNs - Mimic Human Brain

Applications of AI - wide areas:

- **Healthcare** - IBM Watson Health, Google DeepMind's AI
- **Finance** - PayPal
- **Education** - Duolingo, Gradescope
- **Transportation** - Tesla's Autopilot system, Google Maps
- **Retail and E-Commerce** - Amazon
- **Manufacturing** - Siemens, Foxconn
- **Agriculture** - IBM Watson
- **Entertainment** - Netflix
- **Cybersecurity** - Darktrace

IndiaAI Mission

- **Objective** - Establish a robust AI computing infrastructure
- Enhance **data quality** and develop **indigenous AI technologies**
- Union Cabinet - March, 2024 - **Rs 10,372 Crores**
  - computing capacity of **> 10,000 GPUs & develop foundational models**
- **GPUs? -** critical - training and building large-scale AI models
- GPUs Procurement - **Indian startups - essential - CP**



- **Pillars of IndiaAI Mission:**
  - **IndiaAI Compute Capacity**: 10,000 GPUs
  - **IndiaAI Innovation Centre: LMMs** & foundational models
  - **IndiaAI Datasets Platform:** quality non-personal datasets
  - **IndiaAI Application Development Initiative:** large-scale socio-economic transformation
  - **IndiaAI FutureSkills:** Expansion of AI education
  - **IndiaAI Startup Financing:** streamlined funding access
  - **Safe & Trusted AI:** responsible AI practices

Selection of Sarvam - Bengaluru-based start-up - 1st indigenous AI LLM, 67 Applicants - IndiaAI Mission - Support - 4k GPUs for 6 months
- Model Features - 70 billion Parameters; population-scale deployment.

- **Special focus:**
  - Advanced reasoning,
  - Voice optimization,
  - Fluency in Indian languages.

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Variants Being Developed

- Sarvam-Large: Advanced reasoning and generation.
- Sarvam-Small: Real-time interactive applications.
- Sarvam-Edge: Compact on-device tasks.

Aims to promote:

- Strategic AI autonomy,
- Domestic innovation,
- Leadership in AI for India.

Challenges

- **Limited GPU Capacity and Infrastructure**:
  - High costs of GPUs
  - Low Availability of GPUs
- **Data Access and Quality**: current datasets - inadequate - indigenous AI models.
- **Limited AI Expertise and High Costs**: shortage - skilled AI professionals
- **High Implementation Costs**: includes capital investments - infrastructure & integration
- **Infrastructure Deficiencies**: Deficit - advanced cloud computing infrastructure; AIRAWAT
- **Ethical and Integrity Concerns**: Datasets - biases; sensitive and personal data - privacy issue
- **Geopolitical and Regulatory Issues**: restrict access to essential AI technologies and components
- **Environmental Concerns**: use significantly more energy than regular searches; more heat - IEA - 1.3% to 3% electricity

Way Forward

- **Incentivize Hardware Manufacturing**: Expanding PLI Scheme - stimulate growth
- **Start-up Support**: financial incentives, mentorship; like T- Hub of Telangana.
- **Comprehensive Data Ecosystem**: centralised data repository - standardised formats and quality checks; encryption techniques & data labelling
- **Prioritise Ethical AI**: Comprehensive AI ethics guidelines; independent AI ethics boards, regular AI audits
- **AI Applications for Societal Impact**: Identify - societal challenges and develop AI-driven solutions; Ensure equitable access to AI benefits
- **Promote Sustainable AI**: investing in energy-efficient AI algorithms and hardware; renewable energy sources for data centres, and creating AI-powered solutions
- **Talent Gap**: internships, research projects, and faculty exchange; Incentives - better salaries

MAINS PRACTISE QUESTION

"Discuss the objectives and potential benefits of the IndiaAI Mission in driving technological innovation and digital transformation in India. Highlight the challenges associated with its implementation and suggest measures to address them."

(15 Marks, 250 words)

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Boiling Cities: Urban Heat Island Effect

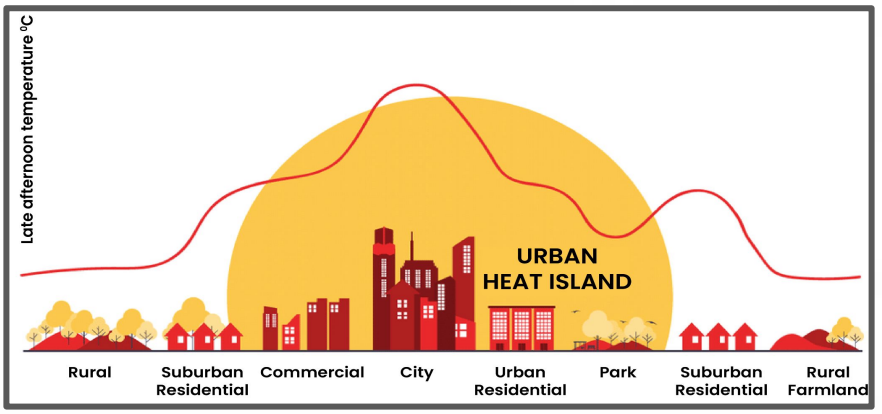
CONTEXT: The urban heat island effect contributes to an increase in human heat exposure and subsequent death globally during hotter seasons.

What are Urban Heat Islands(UHIs)?

- '**local and temporary phenomenon**' - certain pockets within an **Urban** setup - experience **higher heat load** than its surrounding area.
- Rise of heat - buildings and houses - concrete - heat is trapped and not able to dissipate.
  - UHIs - induced due to trapped heat - between establishments made up of concrete.
  - The temperature variation can range between 3 to 5 degrees Celsius.

Why are Urban areas hotter than Rural Areas?

- greener localities < temperatures - non-green localities.
- Green vegetation - plants, trees and forests are prominent factors to - regulate the incidences of the urban heat islands.
- **Rural areas** - more green cover than urban areas.
- **Transpiration** - Plants - regulate the temperature.
- **Urban areas** - UHIs
  - Construction of High Rise structures, Roads, Parking spaces, Pavements, etc. - accelerated the incidences of UHIs
- It occurs by **black or any dark colored material**.
  - Buildings - bricks, cement, and concrete- attract and absorb more heat.



What are the Causes of Urban Heat Island?

- **Manifold increase in construction activities**: carbon absorbing material - asphalt and concrete - trap huge amounts of heat - increases the mean surface temperatures
- **Dark surfaces**: decreasing albedo and increased absorption of heat.
- **Air conditioning**: Buildings - dark surfaces heat up - require more cooling from air conditioning - more energy from power plants - more pollution. Also, ACs - exchange heat - cascading effect UHIs.
- **Urban Architecture**: Tall buildings- narrow passages/streets - hinder circulation of air - reduce the wind speed - reduce natural cooling - **Urban Canyon Effect**
- **Need for mass transportation system**: Transportation systems + Fossil fuels - add warmth
- **Lack of Trees and green areas**: Impedes evapotranspiration; removal of carbon dioxide

How can UHIs be Reduced?

- **Increase Area Under Green Cover**: Plantation and green cover - cut heat load
- **Passive Cooling to Reduce Urban Heat Islands**: naturally ventilated buildings - residential and commercial buildings.
  - The IPCC report - ancient Indian building designs that have used this technology
- Other methods of heat mitigation include using **appropriate construction materials.**
  - **Roof and terraces** - painted in **white or light colors** - reflect heat and reduce the absorption.
  - **Terrace plantation and kitchen gardening**

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Boiling Cities: Urban Heat Island Effect

CONTEXT: The urban heat island effect contributes to an increase in human heat exposure and subsequent death globally during hotter seasons.

■ Other methods of heat mitigation include using **appropriate construction materials.** ○ **Roof and terraces** - painted in **white or light colors** - reflect heat and reduce the absorption. ○ **Terrace plantation and kitchen gardening**	**MAINS PRACTISE QUESTION** *"Urban Heat Islands (UHIs) are an unintended consequence of rapid urbanisation. Discuss their causes, impacts, and suggest sustainable strategies to mitigate their effects in Indian cities."* ***(15 Marks, 250 words)***

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India's Continental-Shelf Claims

SYLLABUS : GS 3 Paper : Indian Economy - Mobilisation of Resources.
Newspaper : The Hindu **Page Number :** 09

India has increased its claim in the central Arabian Sea, as part of its "extended continental shelf" by nearly 10,000 square km and also modified an earlier claim to avoid a long-standing dispute with Pakistan over the maritime boundary between the two countries, suggest documents submitted earlier this month with the United Nations.

Coastal countries have an exclusive economic zone (EEZ), which gives exclusive mining and fishing rights, up to 200 nautical miles from their coastlines. In addition to this, such States can make claims for more area in the ocean provided they can scientifically establish to a UN body, called the Commission on the Limits of the Continental Shelf (CLCS), that this claimed area extends unbroken from their landmass all the way to the seabed.

All of this oceanic area is considered part of a country's extended continental shelf. This gives them rights to commercially mine for valuable minerals, polymetallic nodules and oil reserves. India already has 12 nautical miles of territorial sea and 200 nautical miles of the EEZ measured from the baselines.

"With the anticipated addition of approximately 1.2 million square km of extended continental shelf from the two submissions to the 2 million sq. km of EEZ, India's seabed and sub-seabed area would become almost equal to its land area of 3.274 million sq. km," according to the National Centre for Polar and Ocean Research (NCPOR), Goa.

India made its first claim in 2009 in vast stretches of sea spanning the Bay of Bengal, Indian Ocean and the Arabian Sea. Due to geology, the continental shelf of a country can frequently overlap with another, and the process of scrutinising and deciding upon the claims of countries can run into years. While India's claims are still being weighed upon, Pakistan in 2021 objected to portions of India's claimed territory in the western offshore regions on the grounds that nearly 100 nautical miles overlapped with a maritime border that was under "dispute".

Specifically, this referred to a dispute between the countries over the Sir Creek, a strip of water in the marshes of the Rann of Kutch in Gujarat. The creek roughly separates the Kutch region in India and Pakistan's Sindh province. While India countered these objections, the net result was that the CLCS, in March 2023, rejected the entirety of India's claim in the Arabian Sea region. However, the commission gives leeway to countries to submit "modified claims".

It's in response to this that on April 3, India split its original claim (in the western Arabian Sea) into two "partial ones". Doing so, said an official in the Ministry of Earth Sciences (MoES), is to ensure that India's claim in the central Arabian Sea region is not affected.

"Countries can submit any number of partial claims. Overall we have increased our claim by an additional 10,000 sq. km based on additional data gathered," M. Ravichandran, Secretary, MoES, told *The Hindu*. "The remaining part can be discussed bilaterally. This strategy is part of our approach to ensure that at least (the region) without dispute, and which is very valuable, is awarded to us." Institutions of the MoES, such as the NCPOR, have played a key role in the technical aspects of determining India's continental shelf.

Some parts of India's continental shelf claims in the Arabian Sea overlap with that of Oman. However, the two countries have an agreement in place since 2010 that while the continental shelf between them is yet to be delimited, it is 'not under dispute'.

India has claimed about 300,000 square km in the Bay of Bengal and the Indian Ocean, though these have faced contests by Myanmar and Sri Lanka.

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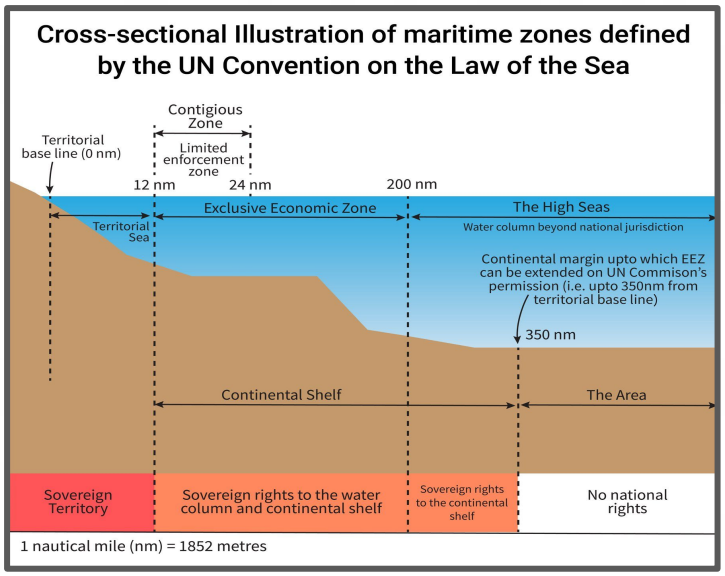

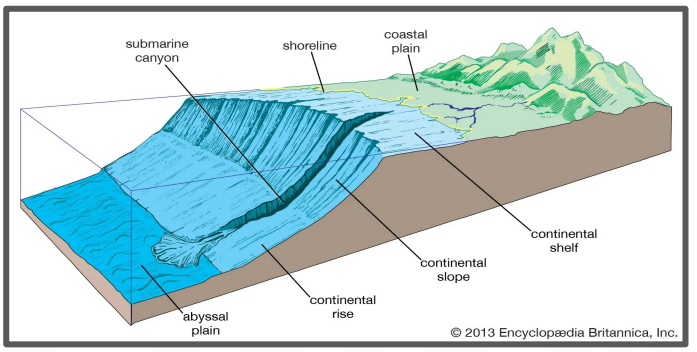

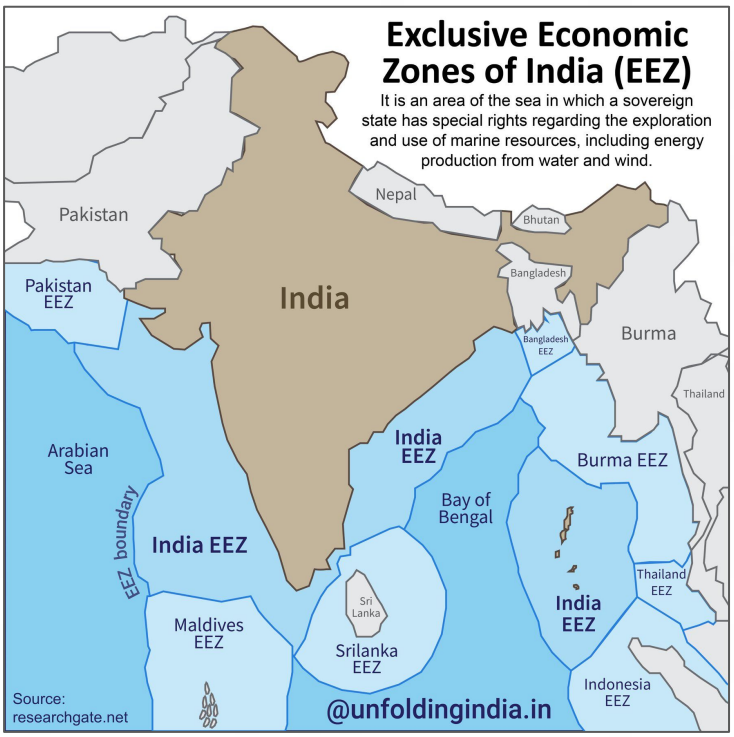

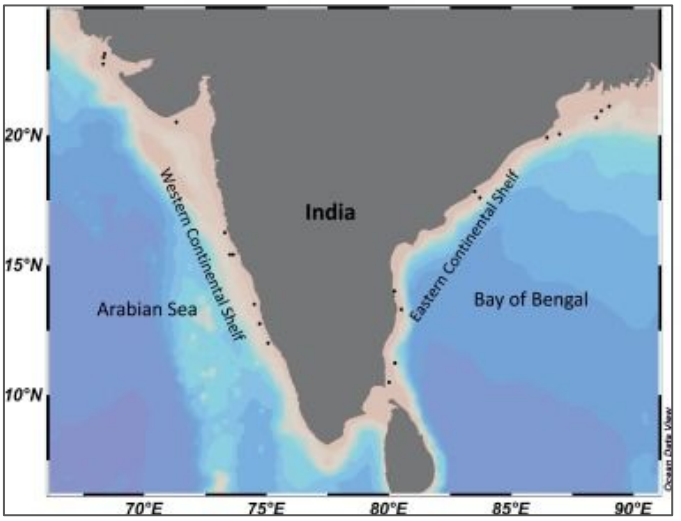

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OCEANS & LAW OF THE SEA
UNITED NATIONS
DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA

Commission on the Limits of the Continental Shelf (CLCS)
Purpose, functions and sessions

Purpose of the Commission

The purpose of the Commission on the Limits of the Continental Shelf (the Commission or CLCS) is to facilitate the implementation of the United Nations Convention on the Law of the Sea (the Convention) in respect of the establishment of the outer limits of the continental shelf beyond 200 nautical miles (M) from the baselines from which the breadth of the territorial sea is measured. Under the Convention, the coastal State shall establish the outer limits of its continental shelf where it extends beyond 200 M on the basis of the recommendation of the Commission. The Commission shall make recommendations to coastal States on matters related to the establishment of those limits; its recommendations and actions shall not prejudice matters relating to the delimitation of boundaries between States with opposite or adjacent coasts.

Functions of the Commission

Annex II to the Convention contains the provisions governing the Commission. As set forth in article 3 of Annex II, the functions of the Commission are:

(a) To consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with article 76 and the Statement of Understanding adopted on 29 August 1980 by the Third United Nations Conference on the Law of the Sea;

(b) To provide scientific and technical advice, if requested by the coastal State concerned during preparation of such data.

In accordance with article 76(8), the Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.

Sessions of the Commission

The Commission meets at United Nations Headquarters in New York. The convening of these sessions and services to be provided are subject to approval by the General Assembly of the United Nations in its annual resolutions on oceans and the law of the sea.

The meetings of the Commission, its subcommissions and subsidiary bodies are held in private, unless the Commission decides otherwise (Rule 23 - Public and private meetings - of the Rules of Procedure of the Commission).

Information on the progress in the work of the Commission at its sessions is contained in the statements by the Chairman.

ESSO NCPOR
राष्ट्रीय ध्रुवीय एवं समुद्री अनुसंधान केन्द्र
पृथ्वी विज्ञान मंत्रालय, भारत सरकार
NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH
Ministry of Earth Sciences, Government of India

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Home › Welcome to NCPOR

Welcome to NCPOR

National Centre for Polar and Ocean Research (NCPOR) is India's premier R&D institution responsible for the country's research activities in the Polar and Southern Ocean realms.

The mandate of NCPOR is multi-dimensional:

- Leadership role in niche areas of scientific research in the domain of polar and ocean sciences.
- Lead role in the geoscientific surveys of the country's EEZ and its extended continental shelf beyond 200M, deep-sea drilling in the Arabian Sea basin through the IODP, exploration for ocean non-living resources such as the gas hydrates and multi-metal sulphides in mid-ocean ridges.
- Facilitatory role in the scientific research activities being undertaken by several national institutions and organizations in Antarctica, the Arctic and in the Indian Ocean sector of the Southern Ocean.
- Management role in implementing all scientific and logistics activities related to the Annual Indian Expeditions to the Antarctic, Arctic and Southern Ocean.
- Management and upkeep of the Indian Antarctic Research Bases "Maitri" and "Bharati", and the Indian Arctic base "Himadri"
- Management of the Ministry's research vessel ORV Sagar Kanya as well as the other research vessels chartered by the Ministry

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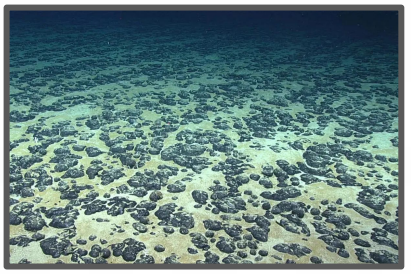
Polymetallic nodules, also known as manganese nodules, are mineral-rich deposits found on the deep ocean floor, primarily in abyssal plains. They are formed by the accumulation of iron and manganese oxides around a core, often a shell fragment or shark tooth. These nodules contain valuable metals like nickel, copper, cobalt, and manganese, making them a potential resource for industrial applications.



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Government of India
Ministry of Earth Science

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Polymetallic Nodules Programme

India's Polymetallic Nodules programme is oriented towards exploration and development of technologies for harnessing of nodules from the Central Indian Ocean Basin (CIOB) allocated to India. It has 4 components viz. Survey & Exploration, Environmental Impact Assessment, Technology Development (Mining), and Technology Development (Metallurgy). In the 75,000 sq. km area of CIOB, the estimated polymetallic nodule resource potential is 380 million tones, containing 4.7 million tonnes of nickel, 4.29 million tonnes of copper and 0.55 million tonnes of cobalt and 92.59 million tonnes of manganese. Cobalt and nickel are strategically important metals.

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WHO's Pandemic Accord

SYLLABUS : GS 2: Health
Newspaper : The Hindu **Page No :** 12

After more than three years of intense negotiations involving over 190 countries, the World Health Organization (WHO) has finalised a historic pandemic accord aimed at preventing and responding to future global health crises. The agreement was reached during a marathon session at the WHO headquarters in Geneva and concluded in the early hours of April 16, 2025.

Why was it needed?

Tedros Adhanom Ghebreyesus, WHO director-general, called it "a significant milestone in our shared journey towards a safer world," emphasising the importance of global solidarity in facing health emergencies. The agreement comes five years after the outbreak of COVID-19, a pandemic that laid bare the vulnerabilities of international health systems. With the growing threat of infectious diseases such as H5N1 bird flu, mpox, measles, and Ebola, the sense of urgency among negotiators was palpable.

The centrepiece of the newly adopted agreement is the proposed Pathogen Access and Benefit-Sharing System (PABS), which is designed to facilitate the swift sharing of pathogen data among nations and with pharmaceutical companies. This data-sharing mechanism is expected to play a critical role in accelerating the development of vaccines, diagnostics, and treatments during future pandemics. The agreement outlines a system where cooperation becomes not just ideal, but operationally necessary, enabling scientific collaboration at an unprecedented pace. It also includes provisions to ensure fair and equitable access to pandemic-related health products, particularly for low- and middle-income countries that were left behind during the COVID-19 response.

The COVID crisis had seen wealthier nations securing vast supplies of vaccines, testing kits, and protective equipment, while many poorer countries struggled with shortages and delays. The new deal directly addresses these imbalances by introducing guidelines aimed at preventing such inequities from recurring.

Technology transfer was one of the most debated aspects of the agreement. Developing countries pushed for language that would mandate the sharing of critical health technologies during pandemics. However, countries with powerful pharmaceutical industries resisted such mandatory provisions, citing concerns about intellectual property rights and innovation incentives. A compromise was eventually reached, with the final text stating that any technology transfer must be "mutually agreed," a clause designed to balance the needs of global equity with the business realities of pharmaceutical innovation. The 32-page document was marked entirely in green, indicating complete consensus among the participating countries.

Will it shape global cooperation?

One of the crucial aspects of the agreement is its strong emphasis on equity. The WHO chief highlighted that the text reflects a broader commitment to fairness in access, especially for countries that often bear the brunt of health crises without the resources to respond adequately. The agreement acknowledges that pandemic preparedness is not just about stockpiling vaccines or hospital beds; it's about establishing a framework for transparency, trust, and timely action. For lower-income countries, the agreement promises capacity building and international support to strengthen health infrastructure and logistics. Although equity is central to the agreement's language, its realisation will depend heavily on political will and practical implementation. Helen Clark, former Prime Minister of New Zealand and co-chair of the Independent Panel for Pandemic Preparedness and Response, noted that this accord shows that global multilateralism is still possible – even in a fragmented geopolitical environment. David Reddy, director-general of the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA), remarked that while the agreement is a useful starting point, certain conditions must be met to maintain industry participation in pandemic preparedness. He emphasised the need for legal certainty and protection of intellectual property if companies are to continue investing in the research and development of high-risk, high-cost medical solutions. The industry fears that poorly designed policy interventions could discourage innovation or delay crucial products.

What lies ahead?

While the agreement has been finalised, member states will be expected to integrate its principles into national laws, establish financing mechanisms, and develop monitoring systems that ensure compliance. The agreement will be presented for formal adoption at the WHO's annual assembly.

What gaps did the pandemic expose?

The COVID-19 pandemic exposed serious gaps in the world's ability to mount a coordinated response to global health emergencies. These gaps included fragmented and delayed data sharing, unequal access to vaccines and other medical tools, lack of standardised protocols, and limited international accountability. Many nations acted in isolation, often hoarding resources or closing borders in panic, which hindered collective efforts and prolonged the pandemic's impact. Although initiatives like COVAX attempted to create more equitable access to vaccines, they were hampered by underfunding, supply chain challenges, and a lack of global cooperation.

Public health experts have long warned that without a globally accepted and legally grounded framework, the world risks repeating the same mistakes in the face of future outbreaks. In an increasingly interconnected world, where viruses can cross borders in hours, pandemics are no longer national crises – they are shared threats.

What were the key challenges?

Negotiations were deeply complex and often stalled due to diverging national interests. Article 11 of the agreement, which deals with the transfer of pandemic-related technologies, became a major sticking point. Low- and middle-income countries argued that equitable access to life-saving innovations like vaccines, antivirals, and diagnostics could not be guaranteed unless there was a mechanism for sharing intellectual property and manufacturing know-how. On the other hand, nations with large pharmaceutical industries, particularly in Europe, opposed any language that would make such transfers obligatory. They contended that mandatory provisions could undermine the financial incentives needed for rapid pharmaceutical innovation and would interfere with existing international trade laws. The compromise to allow "mutually agreed" transfers reflects a diplomatic middle ground, though some critics argue it lacks enforceability and may not protect vulnerable populations.

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WHO's Pandemic Accord

SYLLABUS : GS 2: Health
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What is World Health Organisation, and its objectives?

The World Health Organization (WHO), established in 1948, is a specialized agency of the **United Nations** that connects nations, partners and people to promote health, keep the world safe and serve the vulnerable – so everyone, everywhere can attain the highest level of health.

Some of the important **objectives** of WHO are:

- Lead global efforts to expand universal health coverage.
- Focus on the areas of disease prevention, control and elimination, and the promotion of health and well-being.
- Provide leadership on global health issues, set standards for public health, and provide technical assistance and support to countries.
- Collaborate with various partners, including other UN agencies, governments, civil society organizations, and the private sector.

What is the governance structure and functioning of WHO?

The governance structure of the WHO is designed to support the implementation of its mandate and the achievement of its objectives. It includes:

- **Membership:** WHO currently has 194 member states.
- **World Health Assembly (WHA):** The highest decision-making body of WHO and comprises representatives from all member States.
- **Secretariat**: Responsible for carrying out the policies and programs approved by the WHA.
- **Director-General:** Director-General heads the WHA and is supported by a senior management team.
- **Regional Offices:** WHO also has six regional offices: Africa, the Americas, **Southeast Asia**, Europe, Eastern Mediterranean, and Western Pacific.
  - Each regional office is responsible for coordinating and supporting WHO's work in their respective regions.
- **Meetings**: The WHA meets annually to set policies, approve the budget and elect the Director-General.
- **Funding mechanism:** WHO gets its funding from two main sources:
  - **Assessed contributions:** These are the dues countries pay in order to be a member of the Organization.
  - **Voluntary contributions:** It is from Member States (in addition to their assessed contribution) or from other partners like United Nations organizations, intergovernmental organizations, philanthropic foundations, the private sector etc.

What is the role of WHO in global health governance?

key roles of the World Health Organization (WHO) in global health governance:

- **Setting global health standards and guidelines:** To help countries to address health challenges effectively.

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WHO's Pandemic Accord

SYLLABUS : GS 2: Health
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- **Monitoring and assessing global health trends:** To provide updates on emerging health issues and disease outbreaks to help countries prepare and respond.
- **Coordinating international health responses:** Working with governments, other UN agencies, and international partners to coordinate global health responses to epidemics, disasters, and other health emergencies.
- **Building health systems:** The WHO supports countries in strengthening their health systems, which includes improving access to essential medicines, training health workers, and developing health infrastructure.
- **Conducting research and development:** The WHO conducts and promotes research into global health issues, with a focus on finding solutions to health challenges affecting low- and middle-income countries
- **Advocating for better health policies and funding:** The WHO advocates for policies and funding that prioritize global health issues and ensure that health is a central component of development agendas.
- **Providing technical assistance and capacity building:** The WHO provides technical assistance and capacity building to countries, to help them develop and implement effective health policies and programs.

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SMILE Scheme

SYLLABUS : GS 2: Vulnerable Sections
Newspaper : The Hindu **Page No :** 9

Abhinay Lakshman
NEW DELHI

Two years after the Union Social Justice Ministry started identifying, surveying, and profiling people engaged in begging under the SMILE scheme, the programme has so far identified only 9,958 such individuals across 81 cities and towns where it is being implemented. In comparison, the 2011 Census had recorded 3.72 lakh beggars across the country.

As per records available with the Ministry, which runs the Support for Marginalised Individuals for Livelihood and Enterprise (SMILE) scheme, of the 9,958 persons identified, only 970 have been rehabilitated, as of December 2024. Of those rehabilitated, 352 were children.

The scheme identified fewer than 10,000 people engaged in begging across 81 towns and cities. K. RAGESH

The SMILE scheme was launched in 2022. One of its components was the sub-scheme to identify, profile, and rehabilitate individuals engaged in the act of begging, with their consent. The idea was to "make identified urban spaces, mainly religious cities, tourist places, and historical cities, free from beggary". The other component is the empowerment of transgender persons.

Phase 1 of the scheme was started across 30 cities, including Ayodhya, Dharamsala, Amritsar, Gir Somnath, Giridih, New Delhi, Kolkata, Hyderabad, Nagpur, Gaya, Lucknow, Madurai, Kochi, Jammu, Srinagar, and Jaisalmer. In Phase 2, 50 more cities were added to this list.

The Socio-Economic and Caste Census of 2011, which the Social Justice Ministry continues to refer to in its 2024 Handbook on Social Welfare Statistics, estimated that over 6.62 lakh households in rural India rely on begging, charity or alms.

According to the scheme guidelines, the target of the scheme was to rehabilitate at least 8,000 people in the three years between FY 2023-24 and FY 2025-26.

The latest guidelines for the sub-scheme said an allocation of ₹100 crore had been made for it, to be spent from 2023-24 to 2025-26. According to the Social Justice Ministry's Annual Report for 2024-25, as of December 31, 2024, the government had spent ₹14.71 crore on this scheme.

1. Right Against Exploitation (Article 23)

- **Article 23(1)** prohibits **traffic in human beings**, **begar** (forced labour), and other similar forms of forced labour.
- Though **"begar"** originally meant **forced unpaid labour**, it also morally connects to the idea that forcing people into degrading conditions (like beggary through poverty) violates human dignity.

🔵 **Key point:**

- The Constitution bans **forced labour** but does **not directly outlaw beggary**.
- However, if a person is **forced into beggary**, it could be seen as a violation of Article 23.

2. Right to Life and Dignity (Article 21)

- **Article 21** guarantees **Right to Life** and **Right to Live with Human Dignity**.
- Extreme poverty forcing a person into beggary can be interpreted as an attack on their right to live with dignity.

🔵 **Key point:**

- Beggary is indirectly related to **Article 21** because no one should have to beg for survival.

3. Directive Principles of State Policy (Article 39(a) and 41)

- **Article 39(a):** State should ensure that citizens have the right to an adequate means of livelihood.
- **Article 41:** State should provide **public assistance** in cases of unemployment, old age, sickness, and disablement.

🔵 **Key point:**

- These Articles guide the State to create conditions where people are **not forced into beggary**.

4. Legislative Actions

- Various states like **Delhi**, **Maharashtra**, **West Bengal**, etc., have passed laws like the **Bombay Prevention of Begging Act, 1959** to criminalize or regulate beggary.
- However, in **2021**, the **Delhi High Court** decriminalized begging, stating that poverty is **not a crime**.

Important Fact:

- **Begging** itself is **not banned** under the Indian Constitution.
- Forced beggary, exploitation, or denial of dignified living can be challenged under **Articles 21 and 23**.

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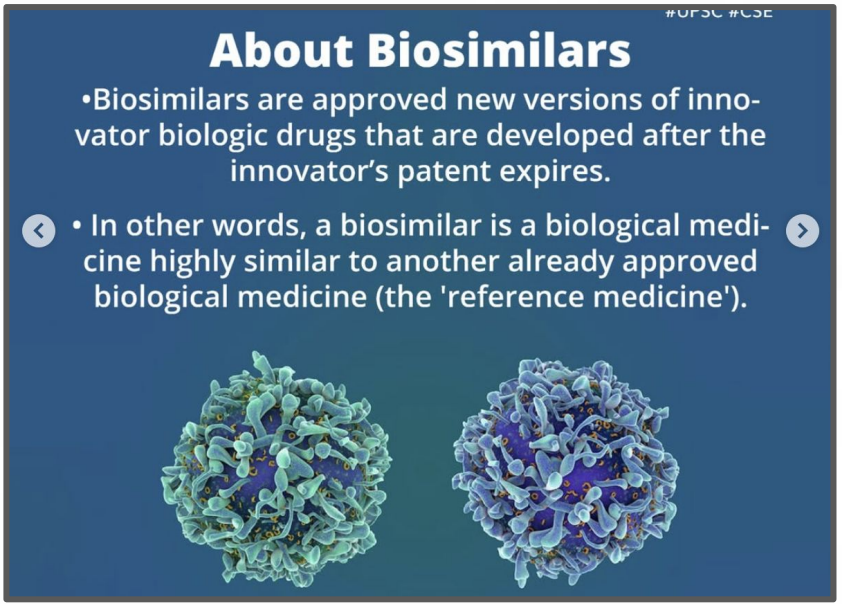
Biologics & Biosimilars

SYLLABUS : GS 3: Science & Tech.
Newspaper : The Hindu **Page No :** 10

- **Biologics**: Refers to **products derived from living cells or organisms**, such as proteins, nucleic acids, or cells.
  - They encompass a **wide range of products**, including: vaccines, blood components, gene therapy, tissues, proteins, like monoclonal antibodies and cell signalling proteins etc.
- **Biosimilars**: It is a **biologic that is "similar" to another biologic medicine** (known as a reference product) that has been cleared by the authorities for prescription by doctors.
  - Also called **'follow-on biologics'** and are used to **treat the same disorders** as the first biologic drug.
  - Biosimilars **closely match the reference product** in safety, purity, and potency, though they may contain **minor variations** in inactive components.
  - They offer **new hope for patients** by providing **cost-effective alternatives to original biologics**, which are often expensive and complex.



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CONCOR

SYLLABUS : GS 3: Indian Economy
Newspaper : The Hindu **Page No :** 10

GAIL, CONCOR ink pact for LNG use for logistics fleet

GAIL (India) and Container Corporation of India have signed an MoU to assess the feasibility of using Liquefied Natural Gas (LNG) as fuel for CONCOR's logistics fleet. The collaboration seeks to harness LNG's advantages as a cleaner and more cost-effective alternative to diesel, which could result in reduced emissions and lower operational costs, GAIL said post signing of the MoU in the presence of Director (Marketing) Sanjay Kumar and CONCOR CMD Sanjay Swarup.

- Container Corporation of India Limited is an **Indian PSU** - engaged in **transportation and handling of containers**
- Largest network of 66 **ICDs/CFSs**
- Ministry of Railways
- CONCOR operates **three core businesses**: cargo carrier; terminal operator, warehouse operator & MMLP operation
- Given India's size - **rail transport is often a cheaper option** for all cargo over medium and long distances - especially if the cost of inter-modal transfers can be reduced.

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Daily Quiz

Q1. Consider the following statements regarding Artificial Intelligence (AI):

1. Deep learning is a subfield of AI that mimics the human brain using artificial neural networks.
2. AI applications are limited to healthcare, finance, and cybersecurity.
3. Machine learning is a technique within AI that focuses on identifying patterns in data.

Which of the statements given above are correct?

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

Answer: b

Q2. Consider the following statements regarding Urban Heat Islands (UHIs):

1. Urban Heat Islands are local and temporary phenomena where certain urban pockets experience higher heat than surrounding areas.
2. The primary cause of this is the presence of concrete structures that trap heat.
3. The temperature difference due to UHIs can range between 3 to 5 degrees Celsius.

Which of the statements given above are correct?

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

Answer: d

Q3. Consider the following statements regarding the World Health Organization (WHO):

1. It currently has 194 member states.
2. The World Health Assembly (WHA) is WHO's highest decision-making body, and it comprises representatives from all member states.
3. The WHO Secretariat elects the Director-General and is responsible for implementing WHO's policies and programs.

How many of the statements given above is/are correct?

a) Only One
b) Only Two
c) All Three
d) None

Answer: b

Q4. Consider the following statements regarding Biologics and Biosimilars:

1. Biologics refer to products derived from living organisms and include vaccines, gene therapies, and monoclonal antibodies.
2. Biosimilars are chemically identical to their reference biologics and are used for entirely different disorders.

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

Answer: a

Q5. Consider the following statements regarding polymetallic nodules:

1. Polymetallic nodules are rich in metals such as copper, nickel, cobalt, and rare earth elements.
2. These nodules are primarily found in shallow coastal waters and are easy to extract.

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

Answer: a

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