



UN Specialised Agencies: WIPO, WMO and IMO (Part-4)

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UN SPECIALISED AGENCIES

UNSA's are 15 autonomous international organizations working with the UN

Part IV
WIPO, WMO
and IMO

WIPO

- Estd. - 1967 (joined UN in 1974)
- Headquarters - Geneva, Switzerland

*World Intellectual
Property Day - 26th April*

- Functions -
 - » Encourage creative activity, promote the protection of intellectual property (IP) throughout the world
 - » Shape balanced intl. IP rules
- Members - 193 (India joined in 1975)

- WIPO Treaties that India has ratified/acceded-
 - » Paris Convention (industrial property)
 - » Berne Convention (for Literary and Artistic Works)
 - » WIPO Performance and Phonograms Treaty
 - » Budapest Treaty
 - » Madrid Protocol for the International Registration of Marks
 - » Marrakesh Treaty (for Published Works by Visually Impaired Persons)
 - » WIPO Copyright Treaty
 - » Washington Treaty (IP for Integrated Circuits)
 - » Nairobi Treaty (for Olympic Symbol)
- Publication - Global Innovation Index



WMO

- Estd. - 1873 (originated from Intl. Meteorological Organization - Vienna International Meteorological Congress)
 - » Became a UNSA by WMO Convention 1950

WMO is a UNSA for meteorology, operational hydrology & geophysical sciences

- Headquarters - Geneva, Switzerland

- Functions -
 - » Coordinate activities of National Meteorological/Hydrological Services in Member States
 - » Predictions concerning locust swarms, transport of pollutants (nuclear, toxic substances, volcanic ash)
- Member States - 193 (incl. India)

World Meteorological Day - 23rd March

IMO

- Estd. - 1948 (Convention on International Maritime Organization held in Geneva)
- Headquarters - London, United Kingdom
- Functions -
 - » Improve safety and security of intl. shipping
 - » Prevent pollution from ships
 - » Also involved in legal matters (liability, compensation issue)

- Member States - 174 (India joined in 1959)
- Important Treaties India has Ratified:
 - » MARPOL (1973) and its Protocols
 - » International Convention for the Safety of Life at Sea (SOLAS, 1974)

IMO lists India among the 10 states with the largest interest in intl. seaborne trade



Drishhti IAS

[UN Specialised Agencies: FAO, UNIDO and ICAO \(Part -1\)](#)

[UN Specialised Agencies - UNWTO, IFAD and UPU \(Part-2\)](#)

[UN Specialised Agencies: ILO, WHO, ITU \(Part-3\)](#)

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Women and Men in India 2022

For Prelims: Sex Ratio, Gender Description, Fertility Rate.

For Mains: Women and Men in India 2022 Report.

Why in News?

Recently, the Ministry of Statistics and Programme Implementation has released **Women and Men in India 2022 report**.

What are the Findings of the Report?

▪ Sex Ratio:

- The [sex ratio](#) at birth went up by three points to 907 in 2018-20 from 904 in 2017-19.
- India's sex ratio (females per 1,000 males) is expected to improve to **952 by 2036**, up significantly from 943 in 2011.

▪ Labour Force Participation:

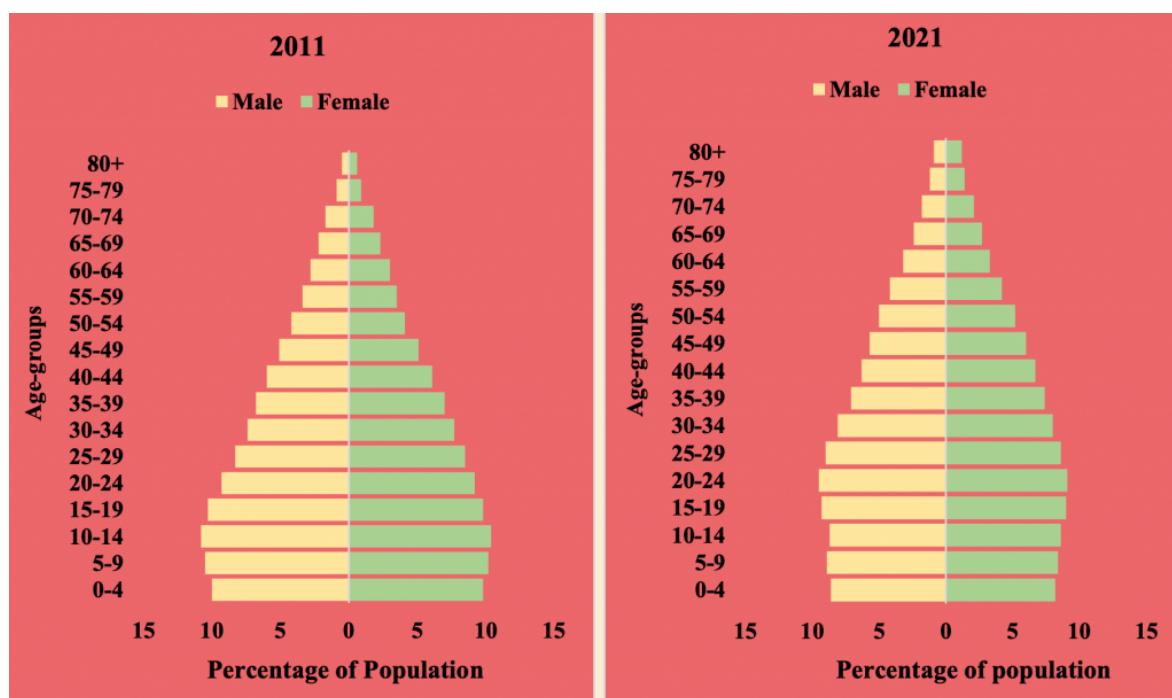
- India's Labour Force Participation Rate for those above 15 years of age has been on the rise since 2017-2018. However, **women are severely lagging behind** men.
 - The rate was 77.2 for males and 32.8 for females in 2021-22, with no improvement in this disparity over the years.
- Less participation is due to social **factors, educational qualifications and [gender discrimination](#)** in terms of wages and opportunities in the workplace.

▪ Population Growth:

- The population growth, already **on a downward trend from 2.2% in 1971 to 1.1% in 2021**, is projected to fall further to 0.58% in 2036.
- In absolute figures, this translates into 1.2 billion people with 48.5% female population as per [Census](#) 2011 to an expected 1.5 billion in 2036 with a marginal improvement in the female population share (48.8%).

▪ Age of Sex Structure:

- India's age and sex structure, as per which the population under 15 years of age is expected to decline and the **population above 60 years is expected to increase by 2036**.
- Accordingly, **the population pyramid will undergo a shift as the base of the pyramid in 2036 would narrow down**, while the middle would be broadened.
 - The age and sex structure of a country's population can affect gender issues in a variety of ways. Age structure impacting various aspects of societies is determined primarily by trends in fertility and mortality.



▪ Access to Health Information and Services:

- Lack of access to resources and decision-making power, restrictions on mobility, etc make access to health **information and services more difficult for women** and girls than men and boys.

▪ Fertility Rate:

- The age-specific **fertility rate** for the 20-24 year and 25-29 years age group between 2016 and 2020 reduced from 135.4 and 166.0 to 113.6 and 139.6 respectively.
 - This is likely a function of **economic independence by attaining proper education** and securing a job.
- The same indicator for the 35-39 years age group increased from **32.7 in 2016 to 35.6 in 2020**.
 - The mean age for marriage has improved marginally up from 22.1 years in 2017 to 22.7 years in 2020.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Why do some of the most prosperous regions of India have an adverse sex ratio for women? Give your arguments. **(2014)**

Source: DTE

India's Inland Water Transport

For Prelims: Maritime India Vision 2030, Jal Vikas Marg Project (JVMP), Arth Ganga, Zero Carbon Emission.

For Mains: India's Inland Water Transport.

Why in News?

Government intends to increase the share of Inland Water Transport (IWT) to 5% as per [Maritime India Vision \(MIV\)-2030](#).

What is the IWT?

▪ About:

- Inland water transport refers to the transportation of people, goods, and materials via waterways such as **rivers, canals, lakes, and other navigable bodies of water** that are located within a country's boundaries.
- IWT is the **most economical mode of transportation**, especially for bulk cargo like coal, iron ore, cement, food grains and fertilizer. Presently, it remains **underutilized at a share of 2% in India's modal mix**.

▪ Socio-Economic Benefits of IWT:

- Cheaper operating cost and relatively lesser fuel consumption
- Less polluting mode of transportation
- Lesser requirement of land relative to other modes of transportation
- More environment friendly mode of transportation
- Moreover, waterways can be **used for recreational purposes such as boating and fishing**.

What is the Scope and Challenges of Inland Waterways in India?

▪ About:

- India has an extensive network of inland waterways, including rivers, canals, and backwaters, covering **over 20,000 kilometers in length**. Inland water transport has enormous potential in India as a mode of transportation for both passengers and cargo.
- Priority development of [National Waterway-1](#) was undertaken through the [Jal Vikas Marg Project \(JVMP\)](#), which includes [Arth Ganga](#), and they will give an economic boost of Rs 1,000 crore over the next five years.
- The inland waterways can play a crucial role in realising Prime Minister (PM) vision of making India a [zero-carbon emission country by 2070](#).

▪ Challenges:

- **No Navigability throughout the Year:**
 - **Some rivers are seasonal** and do not offer navigability through the year. Around 20 out of the 111 identified national waterways have reportedly been found unviable.
- **Intensive Capital and Maintenance Dredging:**
 - All the identified waterways require intensive capital and maintenance dredging, which could be resisted by the local community on environmental grounds, including displacement fears, thereby posing implementation challenges.
- **Other Uses of water:**
 - Water also has important competing uses, viz. need for living as well as for irrigation, power generation etc. It would not be possible for the local government/others to overlook these needs.
- **Exclusive Jurisdiction of the Central Government:**
 - The exclusive jurisdiction of the Central Government is only in regard to shipping and navigation on inland waterways declared to be 'national waterways' by an act of Parliament.
 - Utilisation/sailing of vessels, in other waterways, is within the ambit of the concurrent list or is in the jurisdiction of the respective state governments.

What is Maritime India Vision 2030?

▪ About:

- It is a **ten-year blueprint for the maritime sector** which was released by the Prime Minister at the **Maritime India Summit in November 2020**.

- It will supersede the **Sagarmala initiative and aims to boost waterways**, give a fillip to the shipbuilding industry and encourage cruise tourism in India.
- **Policy Initiatives and Development Projects:**
 - **Maritime Development Fund:** A Rs. 25,000-crore fund, which will provide low cost, long-tenure financing to the sector with the Centre contributing Rs. 2,500 crores over seven years.
 - **Port Regulatory Authority:** A pan-India port authority will be set up under the new Indian Ports Act (to replace the old Indian Ports Act 1908) for enabling oversight across major and non-major ports, enhance institutional coverage for ports and provide for structured growth of the ports sector to boost investor confidence.
 - **Eastern Waterways Connectivity** Transport Grid project: It will aim to develop regional connectivity with Bangladesh, Nepal, Bhutan and Myanmar.
 - **Riverine Development Fund:** Calls for extending low cost, long-term financing for inland vessels with the support of a Riverine Development Fund (RDF) and for extending the coverage of the tonnage tax scheme (applicable to ocean-going ships and dredgers) to inland vessels also to enhance the availability of such vessels.
 - **Rationalisation of Port Charges:** It will make them more competitive, besides doing away with all hidden charges levied by ship liners to bring in more transparency.
 - **Promotion of Water Transport:** For decongestion of urban areas, and developing waterways as an alternative means of urban transport.

What are the Related Government Initiatives?

- [Eastern and western Dedicated Freight Corridors \(DFCs\)](#)
- [Sagarmala Project](#)
- [Jal Marg Vikas Project](#)
- [PM Gati Shakti](#)
- [Inland Vessels Bill, 2021](#)

Way Forward

- With India's burgeoning population and increasing traffic, the development of inland waterways **will not only reduce travel time and ensure a seamless journey for people and goods**, be cost-effective, and bring down pollution levels, we can **holistically design a policy that factors in safety, infrastructure support, inter-state coordination and integrate with other transportation modes.**

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Enumerate the problems and prospects of inland water transport in India. (2016)

[Source: PIB](#)

ICC Issues Arrest Warrant for Vladimir Putin

For Prelims: ICC, ICJ, United Nation Security Council.

Why in News?

The [International Criminal Court \(ICC\)](#) issued an arrest warrant for war crimes for **President Vladimir Putin** and a second Russian official.

- This is the first time that the ICC has issued an arrest warrant against one of the **five permanent members of the [United Nation Security Council](#)**.

Why did the ICC Issue an Arrest Warrant against Putin?

- ICC issued an arrest warrant against Russian President Vladimir Putin for the alleged **war crime of unlawfully deporting and transferring children** from occupied areas of Ukraine to the Russian Federation.

What is ICC?

- On 17 July, **1998 Rome Statute was adopted by 120 States** in direction of creating a more just world.
- On 1 July, **2002 Rome Statute took effect upon ratification by 60 states, officially establishing the ICC**. Since it has no retroactive jurisdiction, the ICC deals with crimes committed on or after this date.
- The Rome Statute, grants the **ICC jurisdiction over four main crimes**:
 - **The crime of Genocide**
 - **Crimes against Humanity**
 - **War crimes**
 - **Crime of Aggression**
- The Court is participating in a **global fight to end lawlessness**, and through **international criminal justice**, the Court aims to hold those responsible accountable for their crimes and to help prevent these crimes from happening again.
- The ICC is the **world's first permanent international criminal court**.
- Currently, **123 countries** are party to the Rome Statute, **India is not a party to Rome Statute along with US and China**.
- The ICC was established to prosecute the most heinous offenses only when a country's own legal machinery fails to act. Unlike the [International Court of Justice \(ICJ\)](#), which deals with **countries and inter-state disputes**, the ICC prosecutes individuals.

How is ICC Different from ICJ?

- Unlike the International Court of Justice, the **ICC is not part of the [United Nations](#) system**, with the UN-ICC relationship being governed by a separate agreement.
- The ICJ, which is among the **UN's 6 principal organs**, mainly hears disputes between nations. It was established in 1945 and is seated at The Hague (Netherlands).

Does the ICC have the Power to Prosecute Russia?

- As of March 2023, **Russia is not a party to the Rome Statute**, and therefore, the **ICC has no jurisdiction over crimes committed on its territory**. However, the ICC can investigate and prosecute crimes committed by individuals from other countries who committed the alleged crimes on the territory of a **state party to the Rome Statute**.
- Ukraine is also not a State Party to the Rome Statute, but **it has twice exercised its options to**

accept ICC's jurisdiction over alleged crimes under the Rome Statute, occurring on its territory, **under Article 12(3) of the Statute.**

- **Article 12(3) states** that if the acceptance of a state that is not a party to the statute, the **state may accept the jurisdiction of the court** for a crime concerned, by **making a declaration to the Registrar and cooperating without any delay or exception.**

[Source: IE](#)

Net Neutrality

For Prelims: Cellular Operators Association of India (COAI), Telecom Regulatory Authority of India (TRAI), Internet Service Providers.

For Mains: Net Neutrality.

Why in News?

The [Cellular Operators Association of India \(COAI\)](#), which represents **Bharti Airtel, Vodafone Idea, and Reliance Jio**, the three major [telecom operators in India](#), has been demanding that platforms such as **YouTube and WhatsApp** pay a share of revenue to make up for the network costs.

- This has reignited the debate around [net neutrality](#).

What are the Arguments and Recent Developments on the Issue?

- **Telecom operators** are demanding payment for enormous usage on their networks.
 - **Telecom operators in the [European Union](#)** are also demanding similar usage fees from content providers.
 - Content providers argue that imposing such a fee, even on a limited number of large players, was a **distortion of the internet's architecture.**
- In 2016, the [Telecom Regulatory Authority of India \(TRAI\)](#) ruled in **favour of net neutrality.**
- In 2018, the **Department of Telecommunications** embedded the net neutrality concept into the **Unified Licence**, whose conditions all telecom operators and internet providers are bound by.

What is Net Neutrality?

- Net neutrality is the **principle that all internet traffic should be treated equally, without discrimination or preference given to any particular website, service, or application.**
- Net neutrality ensures that **everyone has equal access to information and services on the internet**, regardless of their financial resources or the size and power of the websites they use.
 - It is an important principle that helps to ensure a **level playing field** on the internet, and to **protect the free flow of information and ideas.**
- Without net neutrality, [Internet Service Providers](#) could potentially **use their market power to steer users towards certain websites and services**, or to limit access to others.

A QUICK REMINDER

What is net neutrality?

All traffic on the internet should be treated equally.

NO BLOCKING

Your internet access provider (IAP) cannot block you from accessing legal content of your choice.

NO THROTTLING

Your IAP cannot intentionally throttle legal internet traffic to slower speeds than other traffic.

NO PAID PRIORITIZATION

Your IAP cannot sell 'fast lane' service to content providers who can pay more than others.



WORLD WIDE WEB
FOUNDATION

Who are the Different Stakeholders in the Internet Space?

- The stakeholders in the internet space are:
 - The **consumers** of any internet service
 - The **Telecom Service Providers (TSPs)** or **Internet Service Providers (ISPs)**,
 - The **Over-the-top (OTT) service providers** (those who provide internet access services such as websites and applications),
 - The government, who may regulate and define relationships between these players.
 - Also, **TRAI is an independent regulator in the telecom sector**, which mainly regulates TSPs and their licensing conditions, etc.

How is Net Neutrality Regulated?

- Until now, net neutrality has **not directly been regulated in India** by any law or policy framework.
- Over the last year, there have been some developments with respect to the formulation of a net neutrality policy.
 - TRAI is working on **Differential Pricing for Data Services as well as Regulatory Framework for Over-The-Top Services (OTT)**.
 - A Committee set up by the **Department of Telecommunications (DoT)** has also examined the issue of net neutrality.
- Also, Internationally, countries like the **USA, Japan, Brazil, Chile, Norway**, etc. have some form of law, order or regulatory framework in place that affects net neutrality.

What Will Happen if There is No Net Neutrality?

- **Monopolizing Internet:**
 - Without net neutrality, ISPs would have the ability to **shape internet traffic** to derive extra benefits from it.
 - This would give them the power to **charge companies like YouTube and Netflix**

for services that consume more bandwidth compared to a normal website.

▪ **Discourage Innovation:**

- Lack of net neutrality **could spell doom for innovation on the web. Startups would be at a disadvantage** compared to established players who have the resources to pay for faster access.
- This could lead to a **web that is dominated by a few large players**, rather than an open and diverse ecosystem.

▪ **Package Plans for Consumers:**

- The lack of net neutrality would also mean that instead of free access, there could be "package plans" for consumers.
 - For example, users may have to pay more to access international websites compared to websites based in their own country. This would create a tiered internet system where users who **pay more get better access to content**.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Which of the following is/are the aims/aims of the “Digital India” Plan of the Government of India? (2018)

1. Formation of India’s own Internet companies like China did.
2. Establish a policy framework to encourage overseas multinational corporations that collect Big Data to build their large data centres within our national geographical boundaries.
3. Connect many of our villages to the Internet and bring Wi-Fi to many of our schools, public places and major tourist centres.

Select the correct answer using the code given below:

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

Ans: (b)

[Source: TH](#)

Anticipatory Bail

Prelims: Types of Offences, Power to grant bail, CrPC, Supreme Court Judgements

Mains: Effects of indiscriminate arrests on society, Constitutional Protection

Why in News?

Recently, an MLA has been granted pre-arrest bail or [Anticipatory bail](#) by the High Court; a decision challenged in [Supreme Court](#) by the state [Lokayukta](#).

What is Bail and What are its Types?

- **Definition:** Bail is the conditional/provisional release of a person held under legal custody (in matters which are yet to be pronounced by the Court), by undertaking a promise to appear in the Court as and when required. It signifies a **security/collateral deposited** before the Court for release.
 - In ***Supt. and Remembrancer of Legal Affairs v. Amiya Kumar Roy Choudhry (1973)*** case, the Calcutta High Court explained the **principle behind giving Bail**.
- **Types of Bail in India:**
 - **Regular Bail:** It is a direction given by the Court (any Court within the country) to release a person who is **already under arrest** and kept in police custody. For such Bail, a person can file an application under **Section 437 and 439** of the CrPC.
 - **Interim Bail:** Bail granted for a **temporary and short period** by the Court till the application seeking Anticipatory Bail or Regular Bail is **pending** before a Court.
 - **Anticipatory Bail or Pre-arrest Bail:** It is a legal provision that allows an accused person to apply for bail before being arrested. In India, pre-arrest bail is granted under section 438 of the Code of Criminal Procedure, 1973. It is **issued only** by the **Sessions Court and High Court**.
 - The provision of pre-arrest bail is discretionary, and the court may grant bail after considering the nature and gravity of the offence, the antecedents of the accused, and other relevant factors. The court may also impose certain conditions while granting bail, such as surrendering the passport, refraining from leaving the country, or reporting to the police station regularly.

What are the Judicial Interpretations of Pre-Arrest Bail?

- The **Supreme Court (SC)** of India has held that the power to grant **pre-arrest bail is an extraordinary power to be exercised only in exceptional cases**.
- ***Gurbaksh Singh Sibbia vs State of Punjab (1980)* case:** SC ruled that "Sec. 438(1) should be interpreted in the light of **Article 21** (protection of life and personal liberty) of the Constitution."
 - Granting of anticipatory Bail as a matter of right of an individual should not be limited by time.
 - The Court **could impose appropriate restrictions** on a case-by-case basis.
- ***Salauddin Abdulsamad Shaikh vs State of Maharashtra (1995)* case:** SC overruled its earlier judgment and held that "granting of anticipatory Bail **should be limited by time**."
- ***SS Mhetre vs State of Maharashtra & Ors (2010)* case:** SC held that "**life/duration** of an order granting anticipatory Bail **could not be curtailed**."
- ***Sushila Aggarwal and others v. State (NCT of Delhi) (2020)*:** The Court held that Anticipatory bail as a '**general rule**' will not be limited to a **fixed period of time**.

What are the Conditions for Granting an Anticipatory Bail in India?

- The person seeking anticipatory bail should have reason to believe that they **may be arrested for a non-bailable offense**.
- The court may also impose a **monetary bond**, which the person seeking anticipatory bail will have to pay if they **fail to appear before the court or violate the conditions imposed**.
- The person seeking anticipatory bail must make themselves **available for interrogation** by the **investigating officer as and when required**.
- The court may grant anticipatory bail for a limited period, and the person will have to **surrender to custody once the period expires**.
- It is important to note that the granting of **anticipatory bail is at the discretion of the court and is not an absolute right**. The court will consider various factors, such as the nature and gravity of the offense, the antecedents of the person seeking anticipatory bail, and the likelihood of the person absconding or tampering with evidence, before deciding whether to grant anticipatory bail.

On What Grounds Anticipatory Bail can be Cancelled?

- **Sec. 437(5) & Sec. 439 of CrPC** deal with the cancellation of anticipatory Bail. They imply that a Court which has the power to grant anticipatory Bail is also **empowered to cancel the Bail or recall the order** related to Bail upon appropriate consideration of facts.
- A **High Court or Court of Session** may direct that any person who has been released on Bail by it be arrested, and brought under custody after filing of an application by the complainant or the prosecution. However, a Court does **not have the power** to cancel the **Bail granted by the police officer**.
- Over the years, anticipatory Bail has acted as the protection (granted under **Sec. 438** of CrPC) to **safeguard a person against whom false accusation or charges have been made**. It ensures the release of such falsely accused person even before they are arrested.

Conclusion

- Pre-arrest bail is an important legal provision that safeguards the fundamental rights of individuals in India.
- The provision allows an accused person to apply for bail before being arrested for a non-bailable offence. The court **may grant bail after considering the nature and gravity of the offence, the antecedents of the accused**, and other relevant factors. The Supreme Court of India has laid down guidelines for granting pre-arrest bail, which require the court to consider various factors while granting bail.

[Source: IE](#)

Coral Breach in Gulf of Mannar

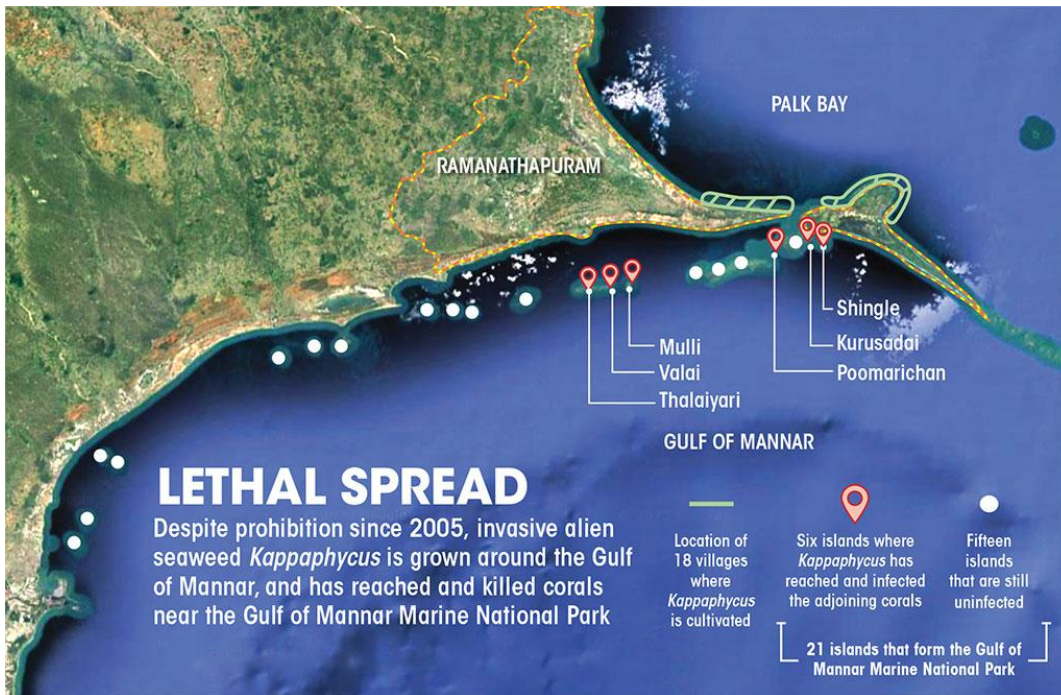
For Prelims: Coral reefs, Gulf of Mannar Marine National Park, Seaweed species, Tamil Nadu's proposed Seaweed Park, Wildlife (Protection) Act, 1972.

For Mains: Seaweed Production in India, Issues Related to Corals.

Why in News?

Recently, the **dead coral reefs** were observed near **Kurusadai (Tamil Nadu)**, one of the **21 uninhabited islands forming the Gulf of Mannar Marine National Park**.

- The primary reason behind this loss is **Kappaphycus alvarezii**, a **seaweed species** **deliberately introduced for commercial cultivation** some two decades ago.



What are Seaweeds?

▪ About:

- Seaweed is the name given to the **many species of marine algae and plants that grow in water bodies** such as rivers, seas and oceans.
- They vary in size, from microscopic to large underwater forests.
- Seaweed is found on the shores across the world, but is **more commonly a staple in Asian countries**.

▪ Significance:

- Seaweed has numerous benefits, including being a **source of nutrition, containing anti-inflammatory and anti-microbial agents** for medicinal purposes
- Contributing to **economic growth through its use in manufacturing**, acting as a **bioindicator by absorbing excess nutrients and balancing out ecosystems**.
- **Trapping excess iron and heavy metals** and supplying oxygen and nutrients to other marine life forms.

▪ Seaweed Production in India:

- In 2021, **India cultivated around 34,000 tonnes of seaweed**, and the Centre earmarked **Rs 600 crore to increase seaweed production to 11.85 million tonnes by 2025**.
- Currently, about **750 farmers are engaged in seaweed farming, primarily Kappaphycus**, in **18 villages of Ramanathapuram, Tamil Nadu** and it is also likely to be cultivated in [Tamil Nadu's proposed seaweed park](#).
- National research institutes and companies are for increased cultivation of *Kappaphycus* to improve livelihoods, profits and to reduce India's import of **kappa-carrageenan**.

▪ Impact of *Kappaphycus alvarezii* Seaweed:

- The ***Kappaphycus alvarezii* seaweed species** has invaded **six of the 21 islands of the Gulf of Mannar Marine National Park in Tamil Nadu** and has killed the corals near Kurusadai.
- It has also caused considerable damage to **Coconut Island in Hawaii, Cubagua Island in Venezuela, Zanzibar in Tanzania, and Almirante and Cristobal in Panama and Costa Rica**.
- The [International Union for Conservation of Nature](#) lists *Kappaphycus alvarezii* as one of the world's **100 most invasive species**.

▪ **Gulf of Mannar:**

- It is an **inlet of the [Indian Ocean](#)**, between southeastern India and western Sri Lanka.
 - It is bounded to the northeast by **Rameswaram (island), Adam's (Rama's) Bridge (a chain of shoals), and Mannar Island.**
- It receives several rivers, including the **Tambraparni (India) and the Aruvi (Sri Lanka).**
- The gulf is noted for its **pearl banks and sacred chank** (a gastropod mollusk).

▪ **Gulf of Mannar Marine National Park:**

- The **Marine National Park** was established in **1982** under the provisions of the **[Wildlife \(Protection\) Act, 1972](#)**. Total area of the National park is about 162.89 km².
- Major ecosystem types available are **coral reefs, [mangroves](#), mudflats, creeks, seagrass, & seaweeds, estuaries, sandy strands** to saline grasslands, marshy areas and rocky shores.

Conclusion

The **corals are an essential habitat for marine life**, protect against storms, and support livelihoods through **fisheries and [tourism](#)**. Therefore, it is necessary to **prevent the spread of *Kappaphycus alvarezii* seaweed** to protect the Gulf of Mannar Marine National Park and its ecosystem.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. 1 "Biorock technology" is talked about in which one of the following situations?

- (a) Restoration of damaged coral reefs
- (b) Development of building materials using plant residue
- (c) Identification of areas for exploration/extraction of shale gas
- (d) Providing salt licks for wild animals in forests/protected areas

Ans: (a)

Q.2 Which of the following have species that can establish a symbiotic relationship with other organisms? (2021)

1. Cnidarians
2. Fungi
3. Protozoa

Select the correct answer using the code given below.

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

Ans: (d)

Q.3 Consider the following statements: (2018)

1. Most of the world's coral reefs are in tropical waters.
2. More than one-third of the world's coral reefs are located in the territories of Australia, Indonesia and Philippines.
3. Coral reefs host far more number of animal phyla than those hosted by tropical rainforests.

Which of the statements given above is/are correct?

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

Ans: (d)

Q.4 Which of the following have coral reefs? (2014)

1. Andaman and Nicobar Islands
2. Gulf of Kachchh
3. Gulf of Mannar
4. Sunderbans

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only
- (b) 2 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

Ans: (a)

Mains

Q. Assess the impact of global warming on the coral life system with examples. (2019)

[Source: DTE](#)

India's Sugar Exports

Why in News?

India has gone from being a marginal sugar exporter five years ago to **No. 2 in the world, behind only Brazil**. Between 2017-18 and 2021-22, exports have soared from USD 810.9 million to USD 4.6 billion.

- [Sugar exports](#) may cross USD5.5 billion in the current fiscal year.

What is the Status of the Sugar Industry in India?

▪ About:

- **Sugar industry** is an important [agro-based industry](#) that impacts the rural livelihood of about **50 million sugarcane farmers** and around 5 lakh workers directly employed in sugar mills.
- In **(Oct-Sep) 2021-22** India emerges as the **world's largest producer** and **consumer** of sugar and world's **2nd largest exporter of sugar**.

▪ Distribution:

- Sugar industry is broadly distributed over **two major areas of production**- Uttar Pradesh, Bihar, Haryana and Punjab in the north and Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh in the south.

- South India has a **tropical climate** which is suitable for higher sucrose content giving a higher yield per unit area as compared to north India.

▪ **Geographical Conditions for the Growth of Sugar:**

- **Temperature:** Between 21-27°C with hot and humid climate.
- **Rainfall:** Around 75-100 cm.
- **Soil Type:** Deep rich loamy soil.

What is the Status of Sugar Exports?

▪ **Background:**

- Till 2017-18, India hardly exported any **raw sugar** (produced after the first crystallisation of cane juice).
- It mainly shipped **plantation white sugar** (produced by refining of raw sugar) with 100-150 **ICUMSA value** (International Commission for Uniform Methods of Sugar Analysis). This was referred to as **low-quality whites or LQW** in international markets.
 - ICUMSA is a measure of purity. The lower the value, the more the whiteness.

▪ **Current Status:**

- Out of **India's total 110 lakh tonnes(lt) sugar exports in 2021-22**, raws alone accounted for 56.29 lt.
 - **The biggest importers of Indian raw sugar** were **Indonesia** (16.73 lt), **Bangladesh** (12.10 lt), **Saudi Arabia** (6.83 lt), **Iraq** (4.78 lt) and **Malaysia** (4.15 lt).

CHART 1

INDIA'S SUGAR EXPORTS IN VALUE



CHART 2

INDIA'S SUGAR EXPORTS IN LAKH TONNES

Sugar Year	Raw Sugar	White Sugar***	Total
2016-17	0	0.46	0.46
2017-18	0.47	5.73	6.2
2018-19	13.13	24.87	38
2019-20	17.84	41.56	59.4
2020-21	28.16	43.74	71.9
2021-22	56.29	53.71	110
2022-23**	19.13	30.91	50.04

Note: Sugar Year is from Oct-Sept

As on March 15; *Includes refined sugar

▪ **Reasons for Rising Exports:**

- **Free of Bacterial Compound:** Indian raw sugar is **free of dextran, a bacterial compound** formed when sugarcane stays in the sun for too long after harvesting.
 - Indian cane is crushed within 12-24 hours of harvesting while it takes around 48 hours in Brazil.
- **High Sucrose Content:** Indian raw sugar has a **higher polarization (98.5-99.5%)** compared to other producers like Brazil, Thailand, and Australia, making it easier and cheaper to refine.
 - Polarisation is the **percentage of sucrose present in a raw sugar mass.**

▪ **Cap on Exports:**

- **Lower stocks and production dipping** in 2021-22 has **led the government to cap India's exports** in the current sugar year to 61 lakh tonnes to ensure domestic availability.
 - The government did it to ensure domestic availability and contain food inflation but **overseas markets once lost aren't easy to regain.**

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to the current trends in the cultivation of sugarcane in India, consider the following statements: (2020)

1. A substantial saving in seed material is made when 'bud chip settlings' are raised in a nurse, and transplanted in the main field.
2. When direct planting of setts is done, the germination percentage is better with singlebudded setts as compared to setts with many buds.
3. If bad weather conditions prevail when setts are directly planted, single-budded setts have better survival as compared to large setts.
4. Sugarcane can be cultivated using settlings prepared from tissue culture.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
(b) 3 only
(c) 1 and 4 only
(d) 2, 3 and 4 only

Ans: (c)

Exp:

- **Tissue culture** is a technique in which fragments of plants are cultured and grown in a laboratory.
 - It provides a new way to rapidly produce and supply disease-free seed cane of existing commercial varieties.
 - It uses meristem to clone the mother plant.
 - It also preserves genetic identity.
 - The tissue culture technique, owing to its cumbersome outfit and physical limitation, is turning out to be uneconomical.
- **Bud Chip Technology**
 - As a viable alternative of tissue culture, it reduces the mass and enables quick multiplication of seeds.
 - This method has proved to be more economical and convenient than the traditional method of planting two to three bud setts.
 - The returns are relatively better, with substantial savings on the seed material used for planting. **Hence, statement 1 is correct.**
- The researchers have found that the setts having buds are giving germination about 65 to 70% with better yield. **Hence, statement 2 is not correct.**
- Large setts have better survival under bad weather but single budded setts also give 70%

germination if protected with chemical treatment. **Hence, statement 3 is not correct.**

- Tissue culture can be used to germinate and grow sugarcane seedlings which can be transplanted later in the field. **Hence, statement 4 is correct.**
- **Therefore, option (c) is the correct answer.**

Mains

Q. Do you agree that there is a growing trend of opening new sugar mills in the Southern states of India? Discuss with justification. **(2013)**

Source: IE

GPT-4

Why in News?

OpenAI has recently launched its [ChatGPT Plus subscription for Indian users](#), providing them with early access to the latest language model **GPT-4**.

- This move comes at a time when tech giants are **competing to offer the best [generative AI](#) to the customers.**

How is GPT 4 Different from Other Previous Models?

- According to OpenAI, **GPT-4 is more advanced than its predecessors** when it comes to **creativity, visual comprehension and context**.
 - It also possesses the ability to collaborate with users on various creative projects, including music, **screenplays, technical writing**, etc.
- It can process up to **25,000 words of text and facilitate extended** conversations.
- **GPT-4 can encompass more than just text** – it also accepts images as input.
 - On the contrary, **GPT-3 and GPT-3.5 only operated in one modality, text, allowing users only to ask questions by typing** them out.
- GPT-4 is **more multilingual** and OpenAI has demonstrated that **it outperforms GPT-3.5 and other Large Language Models (LLMs)** by accurately answering thousands of multiple-choice across 26 languages.
 - It handles English best with an 85.5% accuracy, but Indian languages like Telugu aren't too far behind either, at 71.4%.

What is ChatGPT?

- ChatGPT is a **variant of GPT ([Generative Pre-trained Transformer](#))** which is a large-scale neural network-based language model developed by OpenAI.
- GPT models are trained on vast amounts of text data to generate human-like text.
 - It can generate responses to a wide range of topics, such as answering questions, providing explanations, and engaging in conversations.
 - In addition to being able to **"admit its mistakes, challenge false premises, and refuse unsuitable requests,"** the ChatGPT can also "answer follow-up questions."
- The chatbot was also trained using [Reinforcement Learning from Human Feedback \(RLHF\)](#).

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q1. With the present state of development, Artificial Intelligence can effectively do which of the following? (2020)

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
(b) 1, 3 and 4 only
(c) 2, 4 and 5 only
(d) 1, 2, 3, 4 and 5

Ans: (b)

Source: IE

Rapid Fire Current Affairs

Tamil Nadu TB Death Free Project (TN-KET)

TN-KET (Tamil Nadu Kasanoi Erappila Thittam, meaning TB death-free project) has achieved significant reduction in the number of early TB deaths. The program is implemented by Tamil Nadu government with the support of [Indian Council of Medical Research](#) - **National Institute of tuberculosis research (ICMR-NIRT)** in Chennai and the WHO India.

‘Differentiated TB Care’ as a part of the initiative is aimed at **assessing and triaging** patients to decide **whether people with TB need ambulatory care or admission** in a health facility.

The TN-KET initiative has already achieved the initial target of 80% **triaging of patients**, 80% **referral**, **comprehensive assessment and confirmation of severe illness**, and 80% **admission** among confirmed.

Kudumbashree and Unnathi Programme

Recently, the President inaugurated the silver jubilee celebration of **‘Kudumbashree’** - one of the largest women’s self-help networks in the world and launched **‘Unnathi’** - an umbrella programme to create opportunities for employment and self-employment, among the youth belonging to SC and ST communities.

Kudumbashree was launched in **Kerala** in 1998 as a joint programme of the Government of Kerala and NABARD **to wipe out absolute poverty through community action**. It is the largest women empowering project in the country. It has **three components** i.e., **microcredit, entrepreneurship and empowerment**. It has **three tier structure** - **neighborhood groups (SHG), area development**

society (15-20 SHGs) and Community development society (federation of all groups).

Matua Mahamela

Matua mela is being organised in **West Bengal** to celebrate the 212th birth anniversary of Sri Sri Harichand Thakur, the founder of the [Matua sect](#).

Harichand Thakur was born in peasant farmer family of the **Thakur community (SC community)**. He founded **a sect of Vaishnavite Hinduism called 'Matua'**. This was adopted by members of the **Namasudra community**, also known as Chandalas and **considered untouchable**.

Originally from East Pakistan, the Matuas migrated to India during Partition and after the creation of Bangladesh. However, **a sizable number are yet to get Indian citizenship**.

Matua Mahasangha is a religious reformation movement that originated, around **1860 AD**, in modern-day Bangladesh for the **upliftment of the oppressed**.

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