Science and Technology

O-SMART Scheme
Syllabus : GS 3/Science & Technology

In News
- The Cabinet Committee on Economic Affairs chaired by the Prime Minister gave its approval for the continuation of the umbrella scheme O-SMART for implementation during the period from 2021-26 at an overall cost of Rs. 2177 crore.

Rationale behind the move
- The present decade has been declared as the Decade of Ocean Science for Sustainable Development by the United Nations (UN) and continuation of the scheme would strengthen our stand in the global oceanographic research and technology development.
  - This continuation of the scheme would contribute significantly towards national policy on the blue economy for effective and efficient use of the vast ocean resources in a Sustainable way.

What is O-SMART Scheme?
- It is a scheme of the Ministry of Earth Sciences launched on August 29, 2018.
- Objectives & Significance:
  - It aims to promote ocean research and setting early warning weather systems. It also aims to address ocean development activities like technology, services, science, resources, and observations.
  - To generate and regularly update information on Marine Living Resources and their relationship with the physical environment in the Indian Exclusive Economic Zone (EEZ).
  - To develop high resolution models for ocean forecast and reanalysis systems.
  - To carry out exploration of Polymetallic Nodules (MPN) from a water depth of 5500 m in a site of 75000 sq.km allotted to India by the United Nations

Exclusive Economic Zone (EEZ)
- Every coastal country’s EEZ extends to 200 nautical miles (370 km) from its shores and the country has exclusive rights to all resources in the water,
including oil, natural gas and fish. Any military activity in the EEZ requires Country’s permission
- It is also referred to as a maritime continental margin and, in colloquial usage, may include the continental shelf.
- The term does not include either the territorial sea or the continental shelf beyond the 200 nautical mile limit.

Achievements
- The most significant is India’s recognition as Pioneer Investor with International Seabed Authority (ISA) for conducting extensive research on deep-sea mining of Poly Metallic Nodules (PMN) and hydrothermal sulphides in the allotted area of the Indian Ocean.
- The technology development for desalination using low-temperature thermal desalination installation of such a facility in Lakshadweep islands is also a significant achievement.
- Moreover, India's ocean-related activities are now extended from the Arctic to the Antarctic region covering large ocean space which has been monitored through in-situ and satellite-based observation.
- Efforts towards achieving United Nations sustainable Development Goal-14 to conserve and sustainably use the oceans, seas and marine resources are being covered through the coastal research and marine biodiversity activities.
- Significant contribution to the national GDP is being made and to be continued through the ocean advisory services and technologies developed benefiting communities and several sectors working in the marine environment, particularly in the coastal states of India.

Source: PIB

International Relations

Strategic Oil Reserve Programme

Syllabus: GS2/ Effect of Policies and Politics of Developed and Developing Countries on India’s interests

In News
- India plans to release crude oil from its emergency stockpile to cool international oil prices.

Rationale Behind This Step
- The decision has come after the US has urged some of the world's largest oil-consuming nations, including China, India and Japan to release crude oil from their respective reserves in order to bring down global prices of crude oil.
- The request came after the US government was unable to persuade OPEC+ to pump more oil with major producers arguing the world was not short of crude.
- India’s Concerns:
  - India stated that the crude oil release will take place in consultation with these countries, which are also major global energy consumers.
India has repeatedly expressed concern at supply of oil being artificially adjusted below demand levels by oil-producing countries, leading to rising prices and negative attendant consequences.

At the same time, in a bid to control fuel prices' inflationary trends, excise duty on petrol and diesel had been reduced.

**Challenges**
- India is the world's third-largest oil consumer and importing nation and has been severely impacted by the relentless rise in international oil prices.
- These high prices undermine the global economic recovery in the backdrop of COVID.
  - High prices are starting to produce unwanted inflation and undermine recovery from the COVID-19 pandemic.
- OPEC and other ally producers – including Russia, known collectively as OPEC+ – have been adding around 4,00,000 barrels per day to the market on a monthly basis, which many see as not sufficient to cool prices that had been rising as demand returns to pre-pandemic levels.

**Benefits of Oil Release**
- It will make the pricing of liquid hydrocarbons reasonable, responsible and be determined by market forces.
- It will also help in supply of oil being artificially adjusted below demand levels by oil producing countries, leading to rising prices and negative attendant consequences.

**Strategic Petroleum Reserves (SPR) in India**
- These are huge stockpiles of crude oil for emergency situations.
- SPRs are strategic in nature and the crude oil stored in these reserves will be used during an oil shortage event, as and when declared so by the Government of India.
- India holds about 26.5 million barrels of oil in its reserves.
Need for SPR

- The Gulf War in 1990 led to a sharp rise in oil prices and a huge increase in India’s imports.
- Post-1991 Indian economic crisis, foreign exchange reserves were very low and India continued to be affected by volatility in oil prices.
- In 1998, former Prime Minister Atal Bihari Vajpayee administration proposed the creation of petroleum reserves as a long-term solution for managing the oil market.

Phases of the Strategic Petroleum Reserves (SPR) Programme

Conclusion

- India strongly believes that the pricing of liquid hydrocarbons should be reasonable, responsible and be determined by market forces.

Organization of the Petroleum Exporting Countries (OPEC)

- The OPEC was founded in Baghdad, Iraq, with the signing of an agreement in September 1960
• Founding members were five countries namely
  o Islamic Republic of Iran,
  o Iraq,
  o Kuwait,
  o Saudi Arabia and
  o Venezuela.
• These countries were later joined by:
  o Qatar (1961),
  o Indonesia (1962),
  o Libya (1962),
  o the United Arab Emirates (1967),
  o Algeria (1969),
  o Nigeria (1971),
  o Ecuador (1973),
  o Gabon (1975),
  o Angola (2007),
  o Equatorial Guinea (2017) and
  o Congo (2018).
• Ecuador suspended its membership in December 1992, rejoined OPEC in October 2007, but decided to withdraw its membership of OPEC effective 1 January 2020.
• Indonesia suspended its membership in January 2009, reactivated it again in January 2016, but decided to suspend its membership once more at the 171st Meeting of the OPEC Conference on 30 November 2016.
• Gabon terminated its membership in January 1995. However, it rejoined the Organization in July 2016.
• Qatar terminated its membership on 1 January 2019.
• This means that, currently, the Organization has a total of 13 Member Countries:
  ▪ Islamic Republic of Iran,
  ▪ Iraq,
  ▪ Kuwait,
  ▪ Saudi Arabia and
  ▪ Venezuela.
  ▪ Libya
  ▪ the United Arab Emirates
  ▪ Algeria
  ▪ Nigeria
  ▪ Gabon
  ▪ Angola
  ▪ Equatorial Guinea
  ▪ Congo
• The OPEC Statute distinguishes between the Founder Members and Full
**Members** - those countries whose applications for membership have been accepted by the Conference.

- The Statute stipulates that “any country with a substantial net export of crude petroleum, which has fundamentally similar interests to those of Member Countries, may become a Full Member of the Organization, if accepted by a majority of three-fourths of Full Members, including the concurring votes of all Founder Members.

### OPEC Membership, 2020

![OPEC Membership Map](Image)

Source: OPEC.

Image Courtesy: [CFR](https://www.cfr.org)

Source: [TH](https://th.in)

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**Polity and Governance**

**India, ADB sign $300 million loan to improve primary health care in India**

**Syllabus:** GS 2/Health

**In News**

- Recently, India and the [Asian Development Bank](https://www.adb.org) have signed a 300 million dollar loan agreement to **strengthen and improve** access to **comprehensive primary health care** in urban areas of 13 states.

**Strengthening Comprehensive Primary Health Care and pandemic preparedness in Urban Areas Program**

**About:**

- The programme supports the Government of India’s key health initiatives - [Ayushman Bharat Health and Wellness Centres (AB-HWC)](https://www.mohandswasthya.gov.in) and [Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PM-ASBY)](https://pmay.gov.in) - which has been renamed as Pradhan Mantri [Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)](https://pmay.gov.in) - by expanding availability and
access to quality primary health care services particularly for vulnerable populations in urban areas.

- PM-ABHIM announced in the Budget 2021-22, is the largest pan-India Health Infrastructure Scheme that aims to provide a much-needed fillip to India's capacity to address emergent Public Health issues.

- **Funding:**
  - The programme is supported by a $2 million technical assistance grant from ADB’s Japan Fund for Poverty Reduction to provide support for programme implementation and coordination, capacity building, innovation, knowledge sharing and application of scalable best practices across the healthcare system.

- **Significance:**
  - This will benefit over 256 million urban dwellers including 51 million from the slum areas.
  - The programme complements the government's efforts to bridge healthcare gaps by strengthening institutional capacity, operation, and management of urban health and wellness centres at central, state, and municipal levels.

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### About Ayushman Bharat

- Ayushman Bharat, a flagship scheme of Government of India, was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC).
- This initiative has been designed to meet Sustainable Development Goals (SDGs) and its underlying commitment, which is to "leave no one behind."
- Ayushman Bharat is an attempt to move from a sectoral and segmented approach of health service delivery to a comprehensive need-based health care service.
- Ayushman Bharat adopts a continuum of care approach, comprising of two interrelated components, which are:
  - **Health and Wellness Centres (HWCs)**
    - Under it, 1,50,000 Health & Wellness Centres (HWCs) will be created to deliver Comprehensive Primary Health Care, that is universal and free to users, with a focus on wellness and the delivery of an expanded range of services closer to the community.
  - **Pradhan Mantri Jan Arogya Yojana (PM-JAY)**

Source: PIB

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### Health

**National Family Health Survey-5**
**Syllabus: GS 2/ Issues related to Health**
**In News**
- NFHS-5, the most **comprehensive survey on socio-economic and health indicators** in the country, shows some **surprising demographic transitions**.
  - The previous four rounds of the NFHS were conducted in 1992-93, 1998-99, 2005-06 and 2015-16.

**Major Outcomes of the Survey**
- **Births in institutional facilities:**
  - Such as a hospital, improved by nearly eight percentage points.
- **Stunting and wasting:**
  - Children who were either stunted or displayed signs of wasting only dropped by a **maximum of three percentage points**, shows a comparison of National Family Health Survey-5 (NFHS-5) and NFHS-4.
  - Slow and steady progress is seen on stunting, which seems to be coming from change happening in big States such as Uttar Pradesh and others.
- **Total fertility rate (TFR):**
  - India has also officially hit a **total fertility rate (TFR) of 2.0** that indicates a **decrease from the 2.2** in the NFHS-4.
  - According to the United Nations Population Division, a TFR of about 2.1 children per woman is called **replacement-level fertility**.
  - If replacement level fertility is sustained over a sufficiently long period, each generation will exactly replace itself.
  - The **urban TFR is 1.6** and the **rural TFR is 2.1**.
  - **Only six States:** Bihar, Meghalaya, Manipur, Jharkhand and Uttar Pradesh have a TFR above 2.0.
  - This is a significant feat for the country’s family-planning programme, which does not include coercive policies.
  - These findings bust the **population-explosion myth** and show that India must steer away from coercive measures of population control.
  - While the increase in the use of modern contraceptive methods is heartening, an increase in female sterilisation coupled with continued stagnation in male sterilisation uptake shows that the onus of family planning still lies with women.
- **Use of contraceptives:**
  - An overall survey of the major differences between the NFHS-5 and NFHS-4 suggests that the use of contraceptives has improved from 53.5% to 66.7% in the latest NFHS-5 and institutional births increased from 78.9% to 88.6%.
- **Vaccination of children:**
  - The proportion of children (12-23 months) who were fully vaccinated improved from 62%-76% and children under 6 months who were exclusively breastfed also showed a sharp improvement from 54.9 to 63.7%.
- **Nutrition concerns:**
  - There were, however, mixed signals in nutrition.
  - Though the gains in childhood nutrition were minimal, women and men (15-49) who had a below normal body mass index (BMI) each dropped roughly four percentage points.
Those overweight (or had a higher BMI than ideal) increased by around 4 percentage points.

Abnormal BMIs are linked to an increase in obesity and other non-communicable diseases (NCD).

- **Anaemia:**
  - India's battle with anaemia also appears to have faltered. The proportion of anaemic children (5-59 months) increased from 58% to 67%.
  - Women aged 15-49 who were anaemic increased from 53% to 57% and men of the same age increased from 29% to 31% between both editions of the NFHS.

- **Obesity:**
  - Nutritionally deficient diet likely explained the rise in obesity.
  - Very challenging findings on waist-hip ratio. 56.7% women and 47.7% men have a high-risk waist-to-hip ratio.

- **Demographic shift in India:**
  - The fifth edition of the National Family Health Survey (NFHS) confirmed signs of a demographic shift in India.
  - Which suggests more women than men in India.
  - For the first time since the NFHS began in 1992, the proportion of women exceeded men: there were 1,020 women for 1,000 men.
  - In the last edition of the survey in 2015-16, there were 991 women for every 1,000 men.
  - Only the decadal census is considered the official marker of population trends in India and has a wider surveillance programme.
    - The NFHS surveys are smaller but are conducted at the district level and are a pointer to the future.

- **Sex ratio at birth:**
  - However, sex ratio at birth for children born in the last five years only improved from 919 per 1,000 males in 2015-16 to 929 per 1,000, underscoring that boys, on average, continued to have better odds of survival than girls.
  - Most States and Union Territories (UTs) had more women than men, the NFHS-5 shows.
  - States that had fewer women than men included Gujarat, Maharashtra, Arunachal Pradesh, Haryana, Madhya Pradesh, Punjab and Union territories such as Jammu & Kashmir, Chandigarh, Delhi, Andaman and Nicobar Islands, Dadra and Nagar Haveli, and Ladakh.
  - All of these States and UTs, however, showed improvements in the population increase of women.
  - A notable exception is Kerala, a State with among the highest ratios of women to men at 1,121 and improvement over 1,049 recorded in the NFHS-4.

- **Most populous country in the world:**
  - India is still poised to be the most populous country in the world with the
current projection by the United Nations population division forecasting that India's population will peak around 1.6 to 1.8 billion from 2040-2050.

- A Government report projected that India would overtake China as the world’s most populous country around 2031 almost a decade later than the United Nations projection of 2022.

### Hunger watch

The nutritional status of children in India barely improved in 2019-20 from the levels in 2015-16, the National Family Health Survey-5 data show

<table>
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<tr>
<th>Indicator</th>
<th>2019-20</th>
<th>2015-16</th>
<th>2005-06</th>
</tr>
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<tr>
<td>Children aged six to 59 months who are anaemic</td>
<td>67.1</td>
<td>58.6</td>
<td>69.4</td>
</tr>
<tr>
<td>Children under five who are stunted</td>
<td>35.5</td>
<td>38.4</td>
<td>48</td>
</tr>
<tr>
<td>Children under five who are wasted</td>
<td>19.3</td>
<td>21</td>
<td>19.8</td>
</tr>
<tr>
<td>Children under five who are severely wasted</td>
<td>7.7</td>
<td>7.5</td>
<td>6.4</td>
</tr>
<tr>
<td>Children under five who are underweight</td>
<td>32.1</td>
<td>35.8</td>
<td>42.5</td>
</tr>
<tr>
<td>Children aged six to 23 months receiving an adequate diet</td>
<td>11.3</td>
<td>9.6</td>
<td>-</td>
</tr>
<tr>
<td>Institutional births</td>
<td>88.6</td>
<td>78.9</td>
<td>38.7</td>
</tr>
</tbody>
</table>

Image Courtesy: TH

### About NFHS Survey

- It is a **large-scale, multi-round survey** conducted in a representative sample of households throughout India.
- The survey provides state and national information for India on **fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services**.
- The Ministry of Health and Family Welfare (MOHFW) designated the **International Institute for Population Sciences (IIPS) Mumbai**, as the nodal agency, responsible for providing coordination and technical guidance for the survey.

### Stunting

- **Stunting is defined as low height-for-age.**
- It is the result of chronic or recurrent **under nutrition**, usually associated with poverty, poor maternal health and nutrition, frequent illness and/or inappropriate feeding and care in early life.
- Stunting **prevents children from reaching their physical and cognitive potential.**

### Wasting

- **Wasting is defined as low weight-for-height.**
- It often indicates recent and severe weight loss, although it can also persist for a long time.
• It usually occurs when a person has not had food of adequate quality and quantity and/or they have had frequent or prolonged illnesses.
• Wasting in children is associated with a higher risk of death if not treated properly.

**Body mass index (BMI)**
• Body Mass Index (BMI) is a person’s weight in kilograms divided by the square of height in meters.
• A high BMI can indicate high body fatness.
• BMI screens for weight categories that may lead to health problems, but it does not diagnose the body fatness or health of an individual.

**Anaemia**
• Anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal.
  o Haemoglobin is needed to carry oxygen and if you have too few or abnormal red blood cells, or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body’s tissues.
  o This results in symptoms such as fatigue, weakness, dizziness and shortness of breath, among others.
• Anaemia is a serious global public health problem that particularly affects young children and pregnant women.
• WHO estimates that 42% of children less than 5 years of age and 40% of pregnant women worldwide are anaemic.

Source: TH

**Indian Economy**

**Equalisation Levy 2020**
Syllabus: GS2/ Effect of Policies and Politics of Developed and Developing Countries on India’s interests

**In News**
• Recently, India and USA agreed on a transitional approach on Equalisation Levy 2020.

**About**
• India and United States joined 134 other members of the OECD/G20 Inclusive Framework (including Austria, France, Italy, Spain, and the United Kingdom) in reaching agreement on the Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalization of the Economy.
  o Pillar One, which is about reallocation of an additional share of profit to the market jurisdictions and
  o Pillar Two, consisting of minimum tax and subject to tax rules.
• The United States and Austria, France, Italy, Spain, and the United Kingdom reached an agreement on a transitional approach to existing Unilateral Measures while implementing Pillar 1.
• India and the United States have agreed that the same terms that apply under the
October 21 Joint Statement shall apply between the United States and India with respect to India’s charge of 2% equalisation levy on e-commerce supply of services and the United States’ trade action regarding the said Equalisation Levy.

- The settlement is broadly on the lines of the one reached under the Unilateral Measures Compromise reached among the UK, Austria, France, Italy and Spain with the US on October 21 this year.
- However, the interim period that will be applicable will be from 1st April 2022 till implementation of Pillar One or 31st March 2024, whichever is earlier.
- The final terms of the Agreement shall be finalised by 1st February 2022.

Background of the issue

- The U.S. administration had announced initiation of investigation under section 301 of the U.S. Trade Act, 1974 against the taxation on digital services adopted or under consideration by countries, including the Equalisation Levy applied by India.
- With respect to India, the focus of the investigation was on the 2% Equalisation Levy (EL) levied by India on e-commerce supply of services.
- The U.S. investigation included whether the EL discriminated against the U.S. companies, was applied retrospectively, and diverged from U.S or international tax norms due to its applicability on entities not resident in India.
- It was clarified that the EL was applied only prospectively, and has no extra-territorial application, since it is based on sales occurring in the territory of India through digital means.
- India based e-commerce operators are already subject to taxes in India for revenue generated from the Indian market. However, in the absence of the EL, non-resident e-commerce operators (not having any Permanent Establishment in India but significant economic presence) are not required to pay taxes in respect of the consideration received in the e-commerce supply or services made in the Indian market.

Applicability:
- The EL levied at 2% is applicable on non-resident e-commerce operators, not having a permanent establishment in India.
- The threshold for this levy is Rs. 2 crores, which is very moderate and applies equally to all e-commerce operators across the globe having business in India.
- The levy does not discriminate against any U.S. companies, as it applies equally to all non-resident e-commerce operators, irrespective of their country of residence.

Suggested by:
- In addition, EL was one of the methods suggested by 2015 OECD/G20 Report on Action 1 of BEPS Project which was aimed at tackling the taxation challenges arising out of digitization of the economy.

Significance of Recent Agreement
- It will put to rest the trade conflict between India-US because of digital service taxes and will certainly facilitate ongoing trade negotiations between the
countries.

- The deal requires countries to remove all digital services tax and other similar unilateral measures.
- It will ensure a level-playing field with respect to e-commerce activities undertaken by entities resident in India, and those that are not resident in India, or do not have a permanent establishment in India.
- It will ensure fair competition, reasonableness and exercise the ability of governments to tax businesses that have a close nexus with the Indian market through their digital operations.

Conclusion

- This agreement is a sensible solution that will allow nations to concentrate on their collaborative action over the execution of the iconic OECD/G20 Inclusive Framework deal.

Equalisation Levy

- Origin:
  - Equalisation Levy was introduced in India in 2016, with the intention of taxing the digital transactions i.e. the income accruing to foreign e-commerce companies from India.

- Focus on:
  - It is aimed at taxing business to business transactions.

- Recent Update:
  - CBDT has further extended the last date for furnishing the Equalisation Levy Statement (Form-1) for the FY 2020-21 to 31st December 2021.

- Eligibility:
  - Companies with a turnover of over Rs. 2 crore, will pay this levy on the consideration received for online sales of goods and services.

- Purpose:
  - The purpose of the levy is to ensure fair competition, reasonableness and exercise the ability of governments to tax businesses that have a close nexus with the Indian market through their digital operations.

- Background and Relevance of Equalisation Levy
  - Over the last decade, Information Technology has gone through an exponential expansion phase in India and globally. This has led to an increase in the supply and procurement of digital services.
  - Consequently, this has given rise to various new business models, where there is a heavy reliance on digital and telecommunication networks.
  - As a result, the new business models have come with a set of new tax challenges in terms of nexus, characterization, and valuation of data and user contribution.
  - The combination of inadequacy of physical presence based nexus rules in the existing tax treaties and the possibility of taxing such payments as royalty or fee for technical services creates a fertile ground for tax disputes.
To bring clarity in this regard, the government introduced vide Budget 2016, the equalisation levy to give effect to one of the recommendations of the BEPS (Base Erosion and Profit Shifting) Action Plan.

### Applicability of Equalisation Levy
- Equalisation Levy is a direct tax, which is withheld at the time of payment by the service recipient.
- The two conditions to be met to be liable to equalisation levy:
  - The payment should be made to a non-resident service provider;
  - The annual payment made to one service provider exceeds Rs. 1,00,000 in one financial year.

### Services Covered Under Equalisation Levy
- Currently, not all services are covered under the ambit of equalisation Levy.
- The following services covered:
  - Online advertisement
  - Any provision for digital advertising space or facilities/service for the purpose of online advertisement
  - As and when any other services are notified will be included with the aforesaid services.

### Rate of Tax Under Equalisation Levy:
- Currently, the applicable rate of tax is 6% of the gross consideration to be paid.

### Consequences of Delayed Payments
- Interest is charged at 1% of the outstanding levy for every month or part thereof is delayed.
- In case there is non-compliance on behalf of the service recipient:
  - **Penalty for failure of payment:**
    - Equalisation Levy not deducted: Penalty equal to the amount of levy failed to be deducted (along with interest and depositing of the principal levy outstanding).
    - Equalisation Levy deducted but not deposited: Penalty equal to INR 1,000/day subject to the maximum of the levy failed to be deducted (along with interest and depositing of the principal levy outstanding).
    - Disallowance of such expenditure in the hands of the payer (unless the defect is rectified).
  - **Penalty for failure of filing statement of compliance:**
    - INR 100/day for each day the non-compliance continues.
  - **Prosecution:**
    - If a false statement has been filed then the person may be subjected to imprisonment of a term of up to 3 years and a fine.

Source: PIB
Disaster Management

5th World Congress on Disaster Management

Syllabus: GS 3/Disaster management

In News

- Recently, the Union Defence Minister virtually inaugurated the 5th World Congress on Disaster Management in New Delhi.

More in News

- Defence Minister lauded the Armed Forces for being the first responders in the region for Humanitarian Aid and Disaster Relief (HADR) operations.
- He reiterated India’s vision for the Indian Ocean, summarized by the concept of SAGAR (Security and Growth for All in the Region).
  - India’s engagement with the world and especially the Indian Ocean Region (IOR) has been robustly strong.

Humanitarian Aid and Disaster Relief (HADR) operations.

- Indian defence forces, under the aegis of Headquarters Integrated Defence Staff (HQ IDS) have been carrying out HADR operations within the country as well as outside the country to deepen coordination with its neighbours and friendly countries with a focus on sharing expertise and building capabilities.
- During various HADR contingencies, Indian defence forces use well ingrained expertise in reconnaissance, damage assessment, evacuation, setting up of relief infrastructure, restoring communication & providing medical facilities, distributing ration supplies, clothing etc.
- Some notable HADR missions in the IOR undertaken by India in recent years, including Operation Rahat in Yemen in 2015 when India rescued and evacuated over 6,700 persons, including over 1,940 citizens of more than 40 other countries; cyclone in Sri Lanka in 2016; an earthquake in Indonesia in 2019; Cyclone Idai in Mozambique and flooding and landslides in Madagascar in January 2020 where Indian assistance was promptly provided.
  - The COVID-19 pandemic has not dented India’s commitment, which was demonstrated by India’s response during the Oil Spill in Mauritius in August 2020 and Oil tanker fire in Sri Lanka in September 2020.

Other initiatives of India

- India is taking the lead and offering the expertise of Disaster Resilient Infrastructure (DRI) to its friendly countries.
- Coalition for Disaster Resilient Infrastructure (CDRI) was first proposed by India during the 2016 Asian Ministerial Conference on Disaster Risk Reduction held in New Delhi.
- India has developed a large capacity for production of COVID-19 vaccines and is extending help to many countries.

About 5th World Congress on Disaster Management

- This event aimed at bringing researchers, policymakers and practitioners across
the world to a common platform to discuss the challenges and risks of various disasters.

- Enormous attention was given to the promotion of science, policy and practices to head towards a disaster-resilient future.
- The first World Congress on Disaster Management was organised in the year 2008 in Hyderabad with an intention to build a strong network of tackling the disasters with the involvement of its various stakeholders across the scientific community and government.
- The WCDM is now a global conference on disaster management outside the UN framework.

**Security and Growth for All in the Region(SAGAR Programme)**

- SAGAR is a term coined by Hon. PM Narendra Modi in 2015 during his Mauritius visit with a focus on the blue economy.
- It is a maritime initiative which gives priority to the Indian Ocean region (IOR) for ensuring peace, stability and prosperity of India in the Indian Ocean region.
- It is in line with the principles of the Indian Ocean Rim Association (IORA).
- Effective response mechanism to address humanitarian crises & natural disasters one of the most important pillars of SAGAR.
- SAGAR has both distinct and inter-related elements such as
  - Deepening economic and security cooperation among the littoral states.
  - Enhancing capacities to safeguard land and maritime territories.
  - Working towards sustainable regional development.
  - Blue Economy and promoting collective action to deal with non-traditional threats like natural disasters, piracy and terrorism.
- Objectives of SAGAR:
  - To seek a climate of trust and transparency,
  - Respect for international maritime rules and norms by all countries,
  - Sensitivity to(towards) each other’s interests
  - Peaceful resolution of maritime issues
  - Increase in maritime cooperation.

**How is ‘Disaster’ and ‘Disaster management’ defined by Act?**

- **Disaster**: It defines a ‘disaster’ as a catastrophe, mishap, calamity or grave occurrence in any area – arising from natural or man-made causes, or by accident or negligence.
  - It results in substantial loss of life, human suffering, or damage to and destruction of property or the environment.
- **Disaster management**: It is defined as a continuous and integrated process of planning, organising, coordinating and implementing measures necessary to prevent the danger or threat of a disaster, mitigating or reducing the risk of a disaster or its consequences; capacity-building; preparedness to deal with a disaster; and rehabilitation and reconstruction.

Source: PIB
Facts In News

Defence

37th edition of India-Indonesia CORPAT

Syllabus: GS3/ Defence

In News

- The 37th edition of India-Indonesia Coordinated Patrol (CORPAT) is being conducted in the Indian Ocean region.

India-Indonesia Coordinated Patrol (CORPAT)

- About:
  - It will witness the participation of Maritime Patrol Aircraft from both Nations.
  - India and Indonesia have been carrying out Coordinated Patrols along the International Maritime Boundary Line (IMBL) twice a year since 2002.

- Aim:
  - To keep the Indian Ocean Region safe and secure for commercial shipping, international trade and conduct of legitimate maritime activities.
  - CORPATs help build understanding and interoperability between navies and facilitate the institution of measures to prevent and suppress Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy.

- In line with SAGAR:
  - As part of the Government of India’s vision of SAGAR (Security And Growth for All in the Region), the Indian Navy has been proactively engaging with countries in the Indian Ocean Region to enhance maritime security in the region.

Military Exercises of India

- **Samudra Shakti**: Bilateral maritime exercise between Navies of Indonesia and India.
- **JIMEX**: India-Japan
- **Ex-Desert Knight 21 exercise**: It is a bilateral air exercise to be held between Indian Air Force and the French air and Space Force.
- **Indra Dhanush**: It is a joint air force exercise between the Indian Air Force and the Royal Air Force of the United Kingdom
- **Exercise Pitch Black**: India and Australia.
  - The main aim of the exercise is to practice Defensive Counter Air combat and Offensive Counter Air Combat
- **AUSINDEX**: Bilateral naval exercise between the Indian Navy and the Australian Navy.
  - Both countries hold bilateral army exercises named AUSTRAHIND.
- **Dharma Guardian**: The joint military exercise named “Dharma Guardian” between India and Japan.
  - The exercise is aimed at developing mutual understanding and respect between militaries of both countries, as also facilitate in tracking worldwide...
phenomenon of terrorism

- **Aviaindra**: India and Russia joint air exercise.
- **Nomadic Elephant**: India and Mongolia joint exercise.

Source: BS

**Defence**

**Exercise ‘Dosti’**

**Syllabus: GS3/ Defence**

**In news**

- The 15th edition of the biennial trilateral coast guard exercise ‘Dosti’ involving India, the Maldives and Sri Lanka is underway in the Maldives.

**About**

- **Completion of 30 years**: It was first launched in 1991.
  - 2021 marks 30 years since these exercises were first launched.
- **Trilateral exercise**: These exercises were bilateral, involving the Indian and the Maldives Coast Guards.
  - In 2012, however, Sri Lanka joined these exercises for the first time and since then, it has been a trilateral exercise.
- **Vessels involved**: Indian Coast Guard vessels, the *ICGS Vajra* and *ICGS Apoorva* were involved in the exercise and the Sri Lanka Coast Guard, *SLCGS Suraksha* among others.
- **Aim**: To further fortify the friendship, enhance mutual operational capability, and exercise interoperability and to build cooperation between the Coast Guards of Maldives, India and Sri Lanka.

**Significance**

- **Strategic importance**: Both the Maldives and Sri Lanka are of strategic importance to India and to its maritime security interests.
- **Enhance interoperability**: These exercises help during joint operations and missions undertaken by countries and also help enhance interoperability.
- **Training for possibilities**: Although piracy is not a major issue in this part of the Indian Ocean, these kinds of exercises also help coast guards with training for possibilities.
- **Better understanding**: These exercises help develop a better understanding of the other nation’s coast guard operations and how to enhance coordination during different kinds of missions.
- **Security context**: India, Sri Lanka and the Maldives agreed to work on what they called the “four pillars” of security cooperation. These involved the areas of marine security, human trafficking, counter-terrorism and cyber security.
- **NSA-level trilateral talks**: NSA-level maritime security cooperation is important for relations between India and the Maldives and India and Sri Lanka.

**Limitations**

- **Exclusive Economic Zones (EEZ)**: There are limitations and regulations involving international law, for instance the Exclusive Economic Zones (EEZ).
• **Continental shelf**: Then there is the continental shelf which also has specific rules.
  o Under *international law*, as stated in *Article 76 of the Law of the Sea Convention*, this maritime zone consists of the seabed and subsoil that extends to the outer edge of the continental margin or to a distance of **200 nautical miles** if the outer edge of the continental margin does not extend up to that distance.
  o The continental shelf and the exclusive economic zone (EEZ) are **distinct maritime zones**.
  o The extended continental shelf is **not an extension of the EEZ**.

• **Sovereign rights**: Some of the sovereign rights that a coastal state may exercise in the EEZ, especially rights to the resources of the water column (e.g. - pelagic fisheries), do not apply to the Extended Continental Shelf (ECS).

  Source: IE

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**Geography**

**ACROSS Scheme**

*Syllabus: GS1/ Physical Geography, GS3/ Disaster Management*

**In News**

• The **Cabinet Committee on Economic Affairs** chaired by Prime Minister approved the continuation of umbrella **scheme ‘Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)’** for the next five years at an estimated cost of Rs 2,135 crore.

**ACROSS Scheme**

• **About:**
  o The scheme pertains to the ministry's atmospheric science programmes and addresses different aspects of weather and climate services.
  o Each of these aspects is incorporated as **eight sub-schemes** under the umbrella scheme "ACROSS" and is implemented in an integrated manner through the four agencies.

• **Eight sub-schemes under ACROSS:**
  o Financial support will be provided to implement eight sub-schemes under ACROSS throughout the next finance cycle from 2021-26.
  o The India Meteorological Department (IMD) will be vastly contributing in five sub-schemes, namely: **commissioning of polarimetric doppler weather radars in the country**, **atmospheric observations network**, **study of monsoon and clouds**, **weather and climate services** and **upgradation of forecasting services** in the next five years.

• **Implementation:**
  o **Ministry of Earth Sciences (MoES)** through the India Meteorological Department, National Centre for Medium Range Weather Forecasting, Indian Institute of Tropical Meteorology and the Indian National Centre for Ocean Information Services.

• **Major impact:**
The scheme will provide improved weather, climate, ocean forecast and services, and other hazard related services thereby ensuring transfer of commensurate benefits to the end-user through various services like Public weather service, Agro-meteorological Services, Aviation services, Environmental monitoring services, Hydro-meteorological services, climate services, tourism, pilgrimage etc.

The whole process from generation of forecast to its delivery requires considerable manpower at every stage, thereby generating employment opportunities to many people.

Source: PIB

Polity and Governance

39th PRAGATI Meeting
Syllabus : GS 2/Government Policies & Interventions

In News
- Recently, the Prime Minister of India chaired the 39th PRAGATI meeting. The Prime Minister also reviewed Poshan Abhiyan.

Key Points of the meeting
- Nine agenda items were taken for review including eight projects and one scheme. Among the eight projects are:
  - Three projects were from the Ministry of Railways.
  - Two projects each were from the Ministry of Road Transport & Highways and Ministry of Power.
  - One project was from the Ministry of Petroleum & Natural Gas.
- These eight projects are concerned to seven states viz., Bihar, Madhya Pradesh, Rajasthan, Andhra Pradesh, Gujarat, Maharashtra and West Bengal.

About PRAGATI
- It is an Information and Communications Technology (ICT) based multimodal platform aimed at addressing the common man’s grievances and simultaneously monitoring and reviewing important programmes and projects of the Government of India as well as projects flagged by State Governments.
- Launched in 2015: Designed by the Prime Minister’s Office (PMO) team with the help of the National Informatics Center (NIC).

Features:
- Multi-purpose and multi-modal platform
- Unique integrating and interactive platform
- This platform will fulfil three objectives: Grievance Redressal, Programme Implementation and Project Monitoring.
- It uniquely bundles three latest technologies: Digital data management, video-conferencing and geo-spatial technology.

Significance:
- It will make the government more efficient and responsive.
- It is a step in the direction of cooperative federalism since it brings on one
stage the Secretaries of Government of India and the Chief Secretaries of the States.
  o It is also an innovative project in e-governance and good governance

Source: PIB

Modern History

Lachit Borphukan
Syllabus : GS 1/Personalities

In News
  • Recently, the Prime Minister, Shri Narendra Modi has paid tribute to Lachit Borphukan.

About
  • Born: 24th November 1622.
    o This day is celebrated by the people of Assam and the nation as Lachit Diwas.
  • He was an Army General of Ahom (Assam) Kingdom and is revered as the greatest military hero of Assam.
  • He excelled in the art of Guerrilla Warfare.
  • He is known for his exemplary leadership in the Battle of Saraighat (1671), where the Ahoms defeated the Mughal forces.
    o The battle was fought on the Brahmaputra River near Saraighat and was the last major attempt by the Mughals to extend their empire into Assam.
  • The Lachit Borphukan gold medal is awarded to the best cadet from the National Defence Academy.
    o It was instituted in 1999 to inspire defence personnel to emulate Borphukan’s heroism and sacrifices.
  • Death: 25th April 1672.

Source: PIB