



A compilation of foundational topics prerequisite for Civil Services

For the 2nd Week

of



(8th March to 13th March)

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1. Geography

1.1.Natural Capital Accounting and Valuation of Ecosystem services project

Natural Capital Accounting

- Natural capital accounting is the process of calculating the total stocks and flows of natural resources and services in a given ecosystem or region.
- Accounting for such goods may occur in physical or monetary terms.

Ecosystem Services

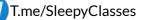
- Ecosystem services are the many and varied benefits to humans provided by the natural environment and from healthy ecosystems.
- Such ecosystems include, for example, agro ecosystems, forest ecosystems, grassland ecosystems and aquatic ecosystems.
- Collectively, these benefits are becoming known as 'ecosystem services', and are often integral to the provisioning of clean drinking water, the decomposition of wastes, and resilience and productivity of food ecosystems.
- The United Nations Statistics Division, the United Nations Environment Programme, the Secretariat of the Convention on Biological Diversity, and the European Union have launched the project "Natural Capital Accounting and Valuation of Ecosystem Services" (NCAVES).
- The project funded by the European Union through its Partnership Instrument (PI), aims to assist the five participating partner countries, namely Brazil, China, India, Mexico and South Africa.

Objective

• to advance the knowledge agenda on environmental-economic accounting, in particular ecosystem accounting.

Framework

- The System of Environmental-Economic Accounting (SEEA) provides a framework for measuring the link between the environment and the economy.
- It will initiate pilot testing of SEEA Experimental Ecosystem
- Accounting (SEEA EEA) with a view to:
 - ✓ Improving the measurement of ecosystems and their services (both in physical and monetary terms) at the (sub)national level;
 - ✓ Mainstreaming biodiversity and ecosystems at (sub)national level policy planning and implementation;
 - ✓Contribute to the development of internationally agreed methodology and its use in partner countries.
- The project will have a duration until the end of 2021.





Context

- The MoSPI has taken up several initiatives under the project "Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES)" which aims to advance the theory and practice of ecosystem accounting in India.
- Natural Capital Accounting and Valuation of the Ecosystem Services (NCAVES) India Forum-2021 is being organised by the Ministry of Statistics and Programme Implementation (MoSPI) in virtual format.

Additional Info

Initiatives

• EnviStats India:

✓ Releases environmental accounts in its publication "EnviStats India" on an annual basis since 2018.

- India-EVL Tool:
 - ✓ Essentially a look-up tool giving a snapshot of the values of various ecosystem services in the different States of the country



2. Polity & Governance

2.1.Postal Voting

- A restricted set of voters can exercise postal voting. Through this facility, a voter can cast her vote remotely by recording her preference on the ballot paper and sending it back to the election officer before counting.
- This facility is available to:
 - \checkmark Members of the armed forces like the Army, Navy and Air Force
 - ✓ Members of the armed police force of a state (serving outside the state)
 - ✓ Government employees posted outside India and their spouses
 - ✓ Voters under preventive detention
- Special voters such as the President of India, Vice President, Governors, Union Cabinet ministers, Speaker of the House and government officers on poll duty have the option to vote by post.
- But they have to apply through a prescribed form to avail this facility.



• Recently, the Law Ministry, at the Election Commission's behest, introduced a new category of 'absentee voters', who can now also opt for postal voting.

✓ These are voters employed in essential services and unable to cast their vote due to their service conditions.

Procedure

- The Returning Officer is supposed to print ballot papers within 24 hours of the last date of nomination withdrawal and dispatch them within a day.
 - ✓ This is done so that the ballot papers reach the concerned voter well before the polling date and she has enough time to send it back before the counting day.
- Postal ballot papers for members of the Armed Forces are sent through their record offices.
- For members of the armed police force of a state (serving outside the state), government employees posted outside India and their spouses, the ballot paper can be sent through post or electronically.
- For remaining categories ballot papers can be delivered personally or through post.
- After receiving it, the voter can mark her preference with a tick mark or cross mark against the candidate's name.
- They also have to fill up a duly attested declaration to the effect that they have marked the ballot paper.
- The ballot paper and the declaration are then placed in a sealed cover and sent back to the Returning Officer before the time fixed for the commencement of counting of votes.

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Opposition

- Few political parties has described it as an "arbitrary, malafide, unconstitutional" move against free and fair elections.
- It might lead to malpractices and foul play by those parties which are in power and having resources.
- By allowing those aged 65 and above to vote by postal ballot violates secrecy in voting as a large segment of the population is uneducated and they might seek assistance from others at numerous stages, ending up disclosing their preferred candidate.



3. Economy

3.1.10 Important Terms of Monetary Policy

- The Terms
 - ✓ Repo Rate
 - ✓ Reverse Repo Rate
 - ✓ Liquidity Adjustment Facility (LAF)
 - ✓ Marginal Standing Facility (MSF)
 - ✓ Corridor
 - ✓ Bank Rate
 - ✓ Cash Reserve Ratio (CRR)
 - ✓ Statutory Liquidity Ratio (SLR)
 - ✓ Open Market Operations (OMOs)
 - ✓ Market Stabilisation Scheme (MSS)

Repo Rate

• The (fixed) interest rate at which the Reserve Bank provides overnight liquidity to banks against the collateral of government and other approved securities under the liquidity adjustment facility (LAF).

Reverse Repo Rate

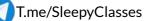
• The (fixed) interest rate at which the Reserve Bank absorbs liquidity, on an overnight basis, from banks against the collateral of eligible government securities under the LAF.

Liquidity Adjustment Facility (LAF)

- The LAF consists of overnight as well as term repo auctions.
- Progressively, the Reserve Bank has increased the proportion of liquidity injected under fine-tuning variable rate repo auctions of range of tenors.
- The aim of term repo is to help develop the inter- bank term money market, which in turn can set market based benchmarks for pricing of loans and deposits, and hence improve transmission of monetary policy.
- The Reserve Bank also conducts variable interest rate reverse repo auctions, as necessitated under the market conditions.

Marginal Standing Facility (MSF)

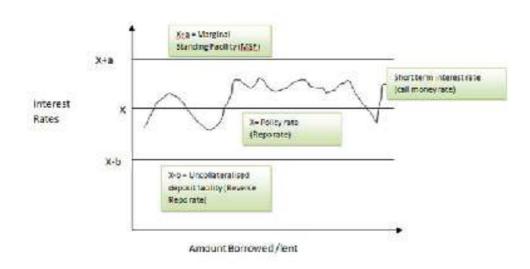
- A facility under which scheduled commercial banks can borrow additional amount of overnight money from the Reserve Bank by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit at a penal rate of interest.
- This provides a safety valve against unanticipated liquidity shocks to the banking system.





Corridor

• The MSF rate and reverse repo rate determine the corridor for the daily movement in the weighted average call money rate.



Bank Rate

- It is the rate at which the Reserve Bank is ready to buy or rediscount bills of exchange or other commercial papers.
- The Bank Rate is published under Section 49 of the Reserve Bank of India Act, 1934.
- This rate has been aligned to the MSF rate and, therefore, changes automatically as and when the MSF rate changes alongside policy reporte changes.

Cash Reserve Ratio (CRR)

• The average daily balance that a bank is required to maintain with the Reserve Bank as a share of such per cent of its Net demand and time liabilities (NDTL) that the Reserve Bank may notify from time to time in the Gazette of India.

Statutory Liquidity Ratio (SLR)

- The share of NDTL that a bank is required to maintain in safe and liquid assets, such as, unencumbered government securities, cash and gold.
- Changes in SLR often influence the availability of resources in the banking system for lending to the private sector.

Open Market Operations (OMOs)

• These include both, outright purchase and sale of government securities, for injection and absorption of durable liquidity, respectively.

Market Stabilisation Scheme (MSS)

- This instrument for monetary management was introduced in 2004.
- Surplus liquidity of a more enduring nature arising from large capital inflows is absorbed through sale of short-dated government securities and treasury bills.
- The cash so mobilised is held in a separate government account with the Reserve Bank.

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4. Environment & Ecology

4.1.Indian Wild Ass

Introduction

- The Indian Wild Ass (Equus hemionus khur), also called Ghor Khar or Ghud Khur is found predominantly in the Little Rann of Kutch and its surrounding areas in Gujarat.
- It is also found in southern Pakistan, Afghanistan, and south-eastern Iran.
- Saline deserts (Rann), arid grasslands and shrub lands are its preferred environment.

Feature

- It is one of the fastest Indian animals (60 kmph)
- The coat of the animal is usually sandy and may vary from reddish grey, fawn, to pale chestnut.
- It feeds on grass, leaves and fruits of plant, crop and saline vegetation.
- Wild asses graze between dawn and dusk.
- They live either solitarily, or in small groups of twos and threes while family herds remain large.

Threats

- Threats to Wild Ass in the Little Rann of Kutch stem from increasing human activities.
- Land use patterns have changed since the Mega Narmada Dam Project which resulted in the Sardar Sarovar canals all around the protected area.
- Uninformed release of Sardar Sarovar canal excess waters into the Rann is having an impact on the micro-habitat, the short grasslands and is restricting the movement of Wild Ass and other species across the saline desert.
- In recent years Wild Ass have also been increasingly hit on the major express highway.
- The International Boundary with Pakistan has been fenced thus restricting any possibility of Wild Ass movement beyond borders.
- Although the population has somewhat increased over the past years, foaling rates in Wild Ass have been on the decline in recent years.
- Increased agricultural practices have converted lands into irrigation fields, resulting in shrinking habitat for the existing Wild Ass population.
- Religious activities, cattle breeding and influx of people have accelerated on the Islands or Bets of the Rann.
- Prosopis juliflora invasion is an additional threat to the habitat.
- An estimated 30-35% of the Wild Ass population lives outside the protected area and human-Wild Ass conflicts are increasing, particularly crop raiding.





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- In August 2015, the IUCN Red List has moved the Indian wild ass from the 'vulnerable' to 'endangered' category, indicating the need for heightened protection measures.
- It has been classified as 'nearly threatened' animal by IUCN in 2016.
- It is protected under Schedule 1 of the Wildlife Protection Act 1972.
- Included on Appendix I of the Convention on International Trade in Endangered Species (CITES), making international trade in this species illegal.
- Indian Wild Ass Sanctuary located in the Little Rann of Kutch is the largest wildlife sanctuary in India.
- A few years back, the Gujarat Ecological Education and Research Foundation (GEER) report had recommended that the Thar desert in Rajasthan should be developed as an alternative site for reestablishing the Indian wild ass

by reintroduction a few of them.

• However, currently, the Indian wild ass sanctuary (4900 km2), located in the Little and Great Rann of Kutch in Gujarat, is the ultimate refugia of the Asiatic wild ass population in southern Asia.

Present status

- The population of the wild ass in Gujarat has seen a significant rise of over 36% in the last five years, a population estimation report published by the state forest department in 2019 has claimed.
- The population estimation exercise conducted in March 2019 counted a total of 6,082 wild asses in the Little Rann Of Kutch (LRK).
- Five years back, the population was estimated to be 4,451.
- The counting of wild ass population, kept under Schedule-I of the Wildlife Protection Act, 1972, takes place once every five years.
- GPS tracking devices and drone cameras were part of the 9th Wild Ass population estimation.







5. Science & Technology

5.1.Types of Covid - 19 Tests in India

- India's strategy to combat COVID-19 is 'test, track and treat'
- RT-PCR tests are considered the most accurate method available for detection of the pathogen
- Antibody tests are only for surveillance purposes, and can determine if a patient has previously had coronavirus
- ICMR has advised antibody testing as "supplementary" to RT-PCR testing

RT- PCR (Reverse Transcription-Polymerase Chain Reaction) Test

- Requires nasal and throat swabs and are used to directly detect the presence of the virus rather than antibodies
- Detects the virus' RNA, which will be present in the body before antibodies form or symptoms of the disease are present
- Test proceeds by converting RNA to DNA through 'reverse transcription', before detecting the virus
- Time taken: three hours

Rapid Antibody Tests

- Antibody tests are fast, inexpensive, and can be used to gauge the extent of infection within a community
- Unlike RT-PCR, antibody tests require a blood sample to determine whether the human body has antibodies for coronavirus

✓ Antibodies are proteins produced by the body, and used by the immune system to identify and neutralise bacteria and viruses

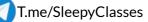
- Blood is then examined for two types of antibodies IgM antibodies, which appear early in an infection, and IgG antibodies, which are more likely to show up later
- ICMR has advised its use as sero-surveys on workers who have returned from other states, those who live in dense settings, people in containment zones, police and paramilitary personnel, among others
- Time: 20-30 minutes

Rapid Antigen Tests

- Like RT-PCR, the rapid antigen detection test too, seeks to detect the virus rather than the antibodies produced by the body
- Nasal samples are collected and tested for antigens, which are found in the SARS-CoV-2 virus

 \checkmark An antigen refers to any toxin in the body that triggers an immune response.

- Approved by ICMR for use in containment zones and healthcare settings
- Time: 30 minutes





TruNat Tests

- Used for detecting tuberculosis and HIV, and works on the same principle as RT-PCR, but with smaller kit and faster results
- TrueNat machine is chip-based, small and portable, and mostly runs on batteries. It detects the virus in nasal or oral swabs. The machines are equipped to detect the RdRp enzyme found in the virus RNA
- Time: 60 minutes

FELUDA(FNCAS9 Editor-Limited Uniform Detection Assay) Test

- It uses CRISPR-Cas technology for detection of genes specific to SARS-CoV-2 virus
- A protein called FnCas9 and a guide RNA(gRNA) which helps in recognising the viral genes is used
- If the patient sample has the viral gene, this gRNA- FnCas9 complex binds to the gene and using a paper strip this binding can be visualised
- Nasopharyngeal swab sample is collected to extract RNA

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This course includes 25 GS Tests

- 4 Tests for Current Affairs of 2019 (Jan-Feb-March; Apr-May-June; July-Aug-Sept; Oct-Nov-Dec)
 - 12 Sectional Tests 2 Tests each for History, Polity, Economy, Geography, Sci & Tech, and Environment, including Current Affairs of 12 months of 2020, one month in each test
 - 4 Half-Length Tests 2 Tests each for Hist + Pol + Eco, and Geo + Env + Sci & Tech

• 5 Full-Length Tests Bonus Test for Economic Survey and India Year Book

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