

GOVERNANCE**Updating Census Registers**

Recently, the Registrar General of India (RGI) has written to all State coordinators to update the census register.

- A census is the procedure of systematically enumerating, and acquiring and recording information about the members of a given population.

Key Points

- The Order: RGI has written to all State coordinators to update names of an area, locality, colony or a building in the “charge register”.
- Charge register: The charge register shows the distribution of work among enumerators and marks the House Listing Blocks (HLB) to be visited by each official.
- HLB is a primary unit of collection of data.

Use of Charge Register:

- It is an important census document that will help enumerators to collect details during the first phase of census house listing and housing census and National Population Register (NPR).
- The register will also be used for the field work relating to the updating of NPR since the same functionaries will be engaged.

Implication:

- The census exercise was suspended indefinitely owing to the Covid-19 pandemic. The communication from RGI may be an indication that the census exercise may take off in the near future.

Registrar General of India

- The Census Organisation was set up on an ad-hoc basis for each Census till the 1951 Census.
- The Government of India, in 1949 established an organisation in the Ministry of Home Affairs under Registrar General and ex-Officio Census Commissioner, India to develop systematic collection of statistics on the size of population, its growth, etc.
- Later, this office was also entrusted with the responsibility of implementation of Registration of Births and Deaths Act, 1969 in the country.
- It arranges, conducts and analyses the results of the demographic surveys of India including Census of India and Linguistic Survey of India.
- Census of India: It provides information on size, distribution and socio-economic, demographic and other characteristics of the country's population.
- The decennial Census of India has been conducted 15 times, as of 2011.
- While it has been undertaken every 10 years, beginning in 1872 under British Viceroy Lord Mayo, the first complete census was taken in 1881.
- Post-1949, it has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India.
- Linguistic Survey of India: The primary objective of the present Linguistic Survey of India is to present an updated linguistic scenario.
- It is conducted along with the decennial Census exercise.
- It also provides necessary inputs to the social/educational planners in respective States for their planning to attain the envisaged goals.
- First linguistic survey of India was published by George Abraham Grierson in 1928.
- The position of Registrar is usually held by a civil servant holding the rank of Joint Secretary.

National Population Register (NPR)

- NPR is a register of the usual residents of the country. It is prepared at the local (village and sub-town), sub-district, district, state and national levels under provisions of the Citizenship Act, 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.
- It is mandatory for every “usual resident of India” to register in the NPR.
- The data for the NPR was first collected in 2010 along with the house listing phase of Census 2011.
- In 2015, this data was further updated by conducting a door-to-door survey.

INDIAN ECONOMY**Digital Lending**

Recently, the Reserve Bank of India (RBI) cautioned individuals and small businesses against falling prey to the growing number of unauthorised digital lending platforms and mobile applications on promises of getting loans in quick and hassle-free manner.

Key Points

Digital Lending:

- It consists of lending through web platforms or mobile apps, by taking advantage of technology for authentication and credit assessment.
- India's digital lending market has seen a significant rise over the years. The digital lending value increased from USD 33 billion in FY15 to USD 150 billion in FY20 and is expected to hit the USD 350-billion mark by FY23.
- Banks have launched their own independent digital lending platforms to tap in the digital lending market by leveraging existing capabilities in traditional lending.

Significance of Digital Lending:

- Financial Inclusion: It helps in meeting the huge unmet credit need, particularly in the microenterprise and low-income consumer segment in India.
- Reduce Borrowing from informal channels: It helps in reducing informal borrowings as it simplifies the process of borrowing.
- Indians continue to borrow from family and friends, and moneylenders, sometimes at unreasonably high interest rates, primarily because these loans are more flexible and convenient.
- Time Saving: It decreases time spent on working loan applications in-branch. Digital lending platforms have also been known to cut overhead costs by 30-50%.

Issues with Digital Lending Platforms:

Growing number of unauthorised digital lending platforms and mobile applications as:

- They charge excessive rates of interest and additional hidden charges.
- They adopt unacceptable and high-handed recovery methods.
- They misuse agreements to access data on mobile phones of borrowers.

Steps Taken by RBI:

- Non-Banking Financial Companies (NBFCs) and banks need to state the names of online platforms they are working with.
- RBI has also mandated that digital lending platforms which are used on behalf of Banks and NBFCs should disclose the name of the Bank(s) or NBFC(s) upfront to the customers.
- The central bank had also asked lending apps to issue a sanction letter to the borrower on the letter head of the bank/ NBFC concerned before the execution of the loan agreement.
- Legitimate public lending activities can be undertaken by banks, NBFCs registered with the RBI and other entities who are regulated by state governments under statutory provisions.

India's Digital Ecosystem:

- Banks have partnered with Fintechs to serve their customers better.
- Government of India has taken many initiatives such as Unified Payments Interface, Jan dhan yojana, Aadhaar enabled Payment System, etc. to promote digital environment in the country especially after demonetization.

Way Forward

- India is on the verge of a digital lending revolution and making sure that this lending is done responsibly can ensure the fruits of this revolution are realized.
- As several players have access to sensitive consumer data, there must be clear guidelines around, for example, the type of data that can be held, the length of time data can be held for, and restrictions on the use of data.
- Digital lenders should proactively develop and commit to a code of conduct that outlines the principles of integrity, transparency and consumer protection, with clear standards of disclosure and grievance redressal.
- An agency can be created that tracks all digital loans and consumer/lender credit history.
- Apart from establishing technological safeguards, educating and training customers to spread awareness about digital lending is also important.

SCIENCE & TECHNOLOGY

Aquifer Mapping & Management

A Memorandum of Agreement (MoA) has been recently signed between Central Ground Water Board (CGWB), Ministry of Jal Shakti and Council Of Scientific And Industrial Research–National Geophysical Research Institute, for use of advanced heliborne geophysical survey (through helicopter) and other scientific studies under the Aquifer Mapping Programme.

- Geophysical data is used to provide information on the physical properties of the Earth's surface and subsurface. As a result, geophysical data can help locate hydrocarbons, minerals, aggregate, and other natural resources.
- For example groundwater mapping, mineral mapping.

Key Points

Objectives of the study:

- High resolution aquifer mapping using heliborne geophysical studies, including identification of sites for artificial recharge.
- The main advantages of the Heliborne geophysical survey is that it is fast, highly data dense, precise and economical.
- Create 3D Geophysical model, geophysical thematic maps at horizontal and vertical plains.
- Aquifer Geometry of principal aquifer with demarcation of de-saturated and saturated aquifers.
- The rocks in which groundwater is stored are called aquifers. They are typically made up of gravel, sand, sandstone or limestone.
- Spatial and depth wise distribution of paleochannel network if any and its linkage with the aquifer system.
- A palaeochannel, or paleochannel, is a remnant of an inactive river or stream channel that has been filled or buried by younger sediment
- Selecting suitable sites for groundwater withdrawal and water conservation through artificial or managed aquifer recharge.
- The study is likely to generate groundwater data in a very short time period helping in groundwater management by preparing site specific plans for improving ground water levels in water stressed areas.

India and Groundwater

- India is the largest user of groundwater in the world, extracting groundwater to the tune of 253 billion cubic meter (bcm) per year.
- It is about 25% of the global groundwater extraction.
- Out of the total of 6584 assessment units, 1034 have been categorized as 'Over-exploited', 253 as 'Critical', 681 as 'Semi-Critical' and 4520 as 'Safe'.
- The remaining 96 assessment units have been classified as 'Saline' due to non-availability of fresh groundwater due to salinity problems.

Availability of Water:

- India has about 1123 billion m³ of water resources available, out of which 690 bcm is surface water and rest 433 bcm is groundwater.
- Out of total groundwater available, 90% of it is used for irrigation purposes which is mainly for agricultural purposes.
- The remaining 10% accounts for domestic and industrial purposes combined.

Water Crisis in India:

- According to the Composite Water Management Index (CWMI) report released by the NITI Aayog in 2018, 21 major cities (Delhi, Bengaluru, Chennai, Hyderabad and others) are racing to reach zero groundwater levels by 2020, affecting access for 100 million people.
- The CWMI report also states that by 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions of people and an eventual 6% loss in the country's GDP.
- Maharashtra and nearly half the country is facing an acute water shortage. Besides Maharashtra, Tamil Nadu, Karnataka, Rajasthan, parts of Gujarat, Punjab and Haryana are facing a water shortage of unprecedented levels.

National Aquifer Mapping and Management program (NAQUIM)

- It is being implemented by the Central Ground Water Board (CGWB).

- NAQUIM envisages mapping of aquifers (water bearing formations), their characterization and development of Aquifer Management Plans to facilitate sustainable management of groundwater resources.
- NAQUIM was initiated as a part of the Ground Water Management and Regulation Scheme to delineate and characterize the aquifers to develop plans for ground water management.

Central Ground Water Board

- It is a subordinate office of the Ministry of Jal Shakti, and is the National Apex Agency entrusted with the responsibilities of providing scientific inputs for management, exploration, monitoring, assessment, augmentation and regulation of groundwater resources of the country.

CSIR-National Geophysical Research Institute

- The National Geophysical Research Institute (NGRI) is a geoscientific research organization established in 1961 under the Council of Scientific and Industrial Research (CSIR).

HQ: Hyderabad

BIODIVERSITY & ENVIRONMENT**Firefly for Great Indian Bustard**

The Ministry of Environment Forest and Climate Change (MoEFCC) along with the Wildlife Conservation Society (WCS) India has come up with a unique initiative a “firefly bird diverter” for overhead power lines in areas where Great Indian Bustard (GIB) populations are found in the wild.

- The Wildlife Conservation Society is a non-governmental organization headquartered in New York, that aims to conserve the world's largest wild places in 14 priority regions.

Key Points**About:**

- Firefly bird diverters are flaps installed on power lines. They work as reflectors for bird species like the GIB. Birds can spot them from a distance of about 50 meters and change their path of flight to avoid collision with power lines.
- Smaller birds can change their direction but for larger bird species, it is difficult because of their body weight and other factors.
- Since great Indian bustards are heavy birds with limited frontal vision, they find it difficult to change their course of flight swiftly even if they spot a live wire.
- The diverters are called fireflies because they look like fireflies from a distance, shining on power lines in the night.

Background:

- According to a report by the MoEFCC, power lines (especially high-voltage transmission lines) with multiple overhead wires, are the most important current threat for GIBs in the Thar region, and are causing unsustainably high mortality.
- The Supreme Court of India, in a recent hearing, directed that power lines in GIB landscapes should be placed underground.

Great Indian Bustard (GIB)**About:**

- It is one of the heaviest flying birds in the world.
- Scientific Name: *Ardeotis nigriceps*



Habitat:

- Bustards generally favour flat open landscapes with minimal visual obstruction and disturbance, therefore adapt well in grasslands.
- Its population is confined mostly to Rajasthan and Gujarat. Small populations occur in Maharashtra, Karnataka and Andhra Pradesh.

Protection Status:

- International Union for Conservation of Nature status: Critically Endangered
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix 1
- Wildlife (Protection) Act, 1972: Schedule 1
- It is one of the species for the recovery programme under the Integrated Development of Wildlife Habitats of the Ministry of Environment, Forests and Climate change.
- The Great Indian Bustard, Asian Elephant and Bengal Florican have been included in Appendix I of the UN Convention on Migratory Species at the 13th Conference of the Parties (COP) to the Convention on Migratory Species (CMS) in Gandhinagar (Gujarat).

Threats:

- Collision/electrocution with power transmission lines,
- Hunting (still prevalent in Pakistan),
- Irrigation and farming technology
- Mining
- Wind turbines and Solar farms (photovoltaic power stations)
- Plantation of exotic shrub/tree species in deserts and grasslands in the name of afforestation

IMPORTANT FACTS FOR PRELIM**Shaheen-IX**

China has recently asked India to “objectively” view the on-going month-long military exercises taking place between the Chinese and Pakistani air forces, amid increasing tensions with India.

Key Points

- “Shaheen-IX” or Eagle-IX exercise, is an exercise between the Pakistan Air Force and the People’s Liberation Army Air Force.
- Shaheen-IX is the ninth in the series which is conducted each year in both countries on alternate basis.
- The first such drill was held in Pakistan in 2011.

Other exercises between Pakistan and china:

Sea Guardians: Bilateral Naval exercise

India China exercises:

Hand In Hand: Bilateral Army exercise

DAILY ANSWER WRITING PRACTICE

Qns Do you think that the pattern of Indian monsoon has changed in past decade? Discuss how it impacts various facets of our lives. (150 words)

Ans:

The term monsoon has been derived from the Arabic word mausim meaning ‘season’.

It marks the seasonal reversal of easterly winds blowing from the northeast during cooler months and reverse direction to blow from the southwest during the warmer months of the year.

Indian monsoon is the most prominent of the world’s monsoon systems, which primarily affects India and its surrounding water bodies.

Majority of rainfall in India is convectional in nature and falls between the months of June and September.

Changing pattern of monsoon

- Indian monsoon is considered a ‘textbook phenomenon’ clearly defined which has not changed much in the preceding century.
- The average rainfall has remained within the 10% of the long term average.
- However this process has hit an erratic front, with floods in the northwest and the northeast and rainfall deficit in southern part of the nation.
- Rainfall extremes have increased threefold over the last few years and now extend over all of central India – from Gujarat to Odisha.

- Onset of monsoon has delayed every year since 2002 and it also lasts for shorter duration, compressing the Indian monsoon.
- The interspersed breaks in the monsoon have increased resulting in larger drier periods in the monsoon itself.
- Rainfall intensity, duration, frequency and spatial distribution have significantly undergone change in the past decade or two.

Possible reasons of change

- Decreasing mean rainfall, increasing spatial variability of rainfall, and a threefold rise in rainfall extremes – are associated with a weakening monsoon wind circulation and a decrease in the number of monsoon depressions from the Bay of Bengal.
- Subcontinent has warmed significantly in the last decade and the Indian Ocean has cooled down during the same period due to anthropogenic reasons.
- The contrast in the temperature between land and sea might result in decreased moisture demand from land.
- India has experienced a reduction in low clouds, due to increase in anthropogenic aerosols such as black carbon or soot, which simultaneously absorb and heat the surrounding air, and prevent clouds from forming.

Implications of changing Indian monsoon

- Shifting monsoon patterns of the country has resulted in acute water shortage in the nation, with drying up of wells and rivers.
- Major Indian reservoirs run 10% lower than their normal at any given point of time in the year
- There has been economic loss across agriculture and industry sectors caused by water shortage.
- Cycles of droughts and floods have become more common in many parts of India.
- Water shortage may fuel interstate tensions in India, ex- Cauvery river dispute between Karnataka and Tamil Nadu; Krishna river dispute among Andhra Pradesh, Maharashtra, Karnataka and Telangana;
- Variation in monsoon has also resulted in the incidence of vector borne diseases such as malaria, dengue.

Importance of Indian monsoon

- Indian monsoon plays vital role in India's attempt to achieve food security.
- About 64 % Indian population depend on agriculture for their livelihood, which is based on southwest monsoon.
- Nearly 60 percent of the country's farms lack irrigation facilities, leaving millions of farmers dependent on the rains
- Monsoon is critical to replenish 81 reservoirs necessary for power generation, irrigation and drinking.
- Monsoon regime emphasizes the unity of India with the rest of Southeast Asian region.

DAILY QUIZ

1. With reference to North Eastern Region Power System Improvement Project, consider the following statements:

1. It receives assistance from the World Bank.
2. It is sponsored by the centre and States on a 60:40 basis.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

2. With reference to New Development Bank, consider the following statements:

1. In its ownership structure, only Russia and China have veto powers.
2. It has received an observer status in the United Nations General Assembly.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

3. With reference to Parliamentary sessions, consider the following statements:

1. The power to convene a session of Parliament rests with the Government.
2. The Constitution provides for three fixed parliamentary sessions in a year.

Which of the statements given above is/are correct?

- a) **1 only**
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

4. Consider the following statements:

1. The Young Champions of the Earth prize was established by the United Nations Environment Programme (UNEP) in 2005.
2. The UNEP was established to guide and coordinate environmental activities within the United Nations (UN) system.
3. The Emission Gap Report is released by the UNEP.

Which of the statements given above is/are correct?

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

5. With reference to National Hydrology Project, consider the following statements:

1. It is a Centrally Sponsored Scheme to improve accessibility of water resources information.
2. It is an initiative of the Ministry of Jal Shakti and supported by the World Bank.

Which of the statements given above is/are correct?

- a) 1 only
- b) **2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2



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