



RACE IAS

Current Affairs

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Regenerative Agriculture

Context:

- Farmers in Madhya Pradesh who follow regenerative farming methods find that they reduce the need for frequent irrigation, which conserves water and energy.

What is Regenerative Agriculture?

- Regenerative agriculture is a holistic land management approach to food and farming systems that emphasizes:
 - Building topsoil
 - Increasing biodiversity
 - Improving water cycles
 - Enhancing natural ecosystems
 - Increasing the ability of farmland to withstand climate fluctuation
 - Strengthening the health and vitality of farms
- The goal is to increase the resiliency of farms while restoring the vitality of the land and the people and animals that eat the crops.
- Regenerative Agriculture is modeled after nature's own healthy ecosystems and can revitalize the livelihoods and communities that engage with the land, now and for generations to come.
- The practice of Regenerative Agriculture is in collaboration with nature, rather than a struggle against it, and necessitates treating all life with respect.

Advantages of Regenerative Agriculture

- Regenerative agriculture improves the resources it uses, rather than destroying or depleting them.
- It advances sustainable agriculture by aiming to not only develop but also maintain resources like soil and water.

- Healthy soil aids in better water transfer, filtration, and agricultural runoff, according to the UN Food and Agriculture Organization.
- A healthy soil contributes to higher water use efficiency by storing, transmitting, filtering, and reducing agricultural runoff.
 - According to studies, every 0.4 hectare with a 1% increase in soil organic matter has a greater capacity to store water by more than 75,000 litres.
- Regenerative farming techniques reduce the energy required by irrigation equipment like pumps.

How is India promoting regenerative agriculture?

- **National Organic Farming Project:**
 - The Indian Institute of Farming System Research (ICAR) in Meerut has been conducting the nation's longest experiment on organic farming since it began in 2004.
- **Systematic Rice Intensification:**
 - A technique that increases yields by planting seeds farther apart and using organic manure.
- **Zero-Budget Natural Farming:**
 - It is also referred to as Subhash Palekar Natural Farming and places a strong emphasis on creating and using inputs created from fruit, cow dung, and urine, among other things, as well as crop residue.

Denotified, Nomadic and Semi-Nomadic Tribes

Context:

- The Parliamentary panel on Social Justice and Empowerment has asked the government to expedite categorisation of Denotified, Nomadic and Semi-Nomadic Tribes under either the SC/ST/OBC lists. Delay would increase their suffering and deprive them of welfare schemes.

Who are de-notified, nomadic and semi-nomadic tribes?

- These are communities who are the most vulnerable and deprived.
- Denotified tribes (DNTs): Communities that were 'notified' as being 'born criminal' during the British regime under a series of laws starting with the Criminal Tribes Act of 1871.
- Nomadic and semi-nomadic tribes: Communities are defined as those who move from one place to another rather than living at one place all the time.

What is the history of deprivation faced by these communities?

- This has a long history, first during colonial rule, and then in independent India.

- The Renke Commission said this is partly because these communities are largely politically 'quiet' — they do not place their demands concretely before the government for they lack vocal leadership and also lack the patronage of a national leader.
- Many commissions and committees constituted since Independence have referred to the problems of these communities. These include
 - Criminal Tribes Inquiry Committee, 1947 constituted in the United Provinces (now Uttar Pradesh),
 - Ananthasayanam Ayyangar Committee in 1949 (it was based on the report of this committee the Criminal Tribes Act was repealed),
 - Kaka Kalelkar Commission (also called first OBC Commission) constituted in 1953.
 - In 1965, an Advisory Committee constituted for revision of the SC and ST list under the chairmanship of B N Lokur referred to denotified tribes.
 - The B P Mandal Commission constituted in 1980 also made some recommendations on the issue.

Challenges Faced by Nomadic Tribes:

- The communities lack access to amenities including drinking water, shelter, and sanitary facilities. Additionally lacking are amenities for healthcare and education.
- Because they were once stigmatised as criminals, the local government and police still treat them as such and torture them.
- Because they move about a lot, they do not have a permanent residence. As a result, they are not covered by social security, are not given ration cards or adhar cards, etc., and are therefore not eligible for government welfare programmes' benefits.
- The caste categorization is not very clear for these communities, in some states some of the communities are included under the SC category, in some other states they are included under OBCs.

Policy measures for DNTs:

- The Government had constituted National Commission for Denotified, Nomadic and Semi-Nomadic Tribes (NCDNT) to prepare a State-wise list of castes belonging to Denotified and Nomadic Tribes and to suggest appropriate measures in respect of Denotified and Nomadic Tribes that may be undertaken by the Central Government or the State Government.
- The Renke commission estimated their population at around 10.74 crore based on Census 2001.
- The Idate Commission submitted its report in January 2018. It mentioned that a permanent commission for Denotified, Semi Nomadic, and Nomadic Tribes

should have a prominent community leader as its chairperson, and a senior Union government bureaucrat, an anthropologist, and a sociologist as members.

- A Development and Welfare Board for De-Notified, Nomadic and Semi-Nomadic Communities (DWBDNCs) has been constituted and a Committee has also been set up by the NITI Aayog to complete the process of identification of the De-Notified, Nomadic and Semi-Nomadic Communities (DNCs).
- The survey work of identification of DNT Communities and placing them in a category of SC/ST/OBC is also under process in NITI Ayog and Anthropological Survey of India (AnSI).

About SEED:

- The Ministry of Social Justice & Empowerment introduced Scheme for Economic Empowerment of Denotified/Nomadic/SemiNomadic (SEED) communities in February 2022.
- It intends to give these students free competitive exam coaching, give families health insurance, improve clusters of these communities through livelihood activities, and give money for housing.
- It guarantees spending of Rs. 200 crore over a five-year period beginning in 2021–22.
- Implementing this plan is the responsibility of the DWBDNCs (Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities).
- The agency has created an online site that will guarantee simple registration and serve as a repository for the data on these communities.
- Components:
 - Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
 - Health Insurance through PMJAY of National Health Authority.
 - Livelihoods to support income generation
 - Housing (through PMAY/IAY).

National Register of Citizens

Context:

- A recent Comptroller and Auditor-General of India (CAG) report on the update exercise of the National Register of Citizens (NRC) in Assam has flagged serious irregularities, including “haphazard development” of software for the exercise, making it prone to data tampering, and flagged undue profits worth crores amassed by the system integrator (SI) by violating the Minimum Wages Act.

What is the National Register of Citizens (NRC)?

- The National Register of Citizens (NRC) is a register created after the Census of 1951 was conducted in respect of each village, showing the houses or holdings in serial order and indicating against each house or holding the number and names of people staying therein.
- These registers covered every individual enumerated during the Census of 1951 and were maintained in the offices of Deputy Commissioners and Sub Divisional Officers in accordance with directives issued by the Government of India in 1951.
 - Later these registers were transferred to the Police in the early 1960s.
- This NRC was prepared under a directive from the Ministry of Home Affairs (MHA).
- At the moment, only Assam has such a register, but additional states may eventually be included.
 - The Register of Indigenous Inhabitants, a similar database, is already being created in Nagaland.

Update:

- The NRC will be updated as per the provisions of The Citizenship Act, 1955 and The Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.
- NRC in Assam
- In Assam, the NRC essentially serves as a registry of Indian residents residing in the region. The goal of the citizens' registry is to catalogue all foreign nationals living in the Bangladesh-bordering state.
 - To identify Indian nationals in Assam amid "unabated" migration from East Pakistan (now Bangladesh), the action was taken.

Eligibility for inclusion in updated NRC:

- Persons whose names appear in NRC, 1951.
- Persons whose names appear in the Electoral Rolls up to 24th March (midnight), 1971.
- Descendants of the above persons.
- Persons who came to Assam from Bangladesh between 1st January 1966 and 25th March 1971 and registered themselves with the Foreigner Regional Registration Office (FRRO) and were declared by the Foreigner Tribunal as Indian citizens.
- All Indian Citizens including their children and descendants who have moved to Assam post 24th March 1971 would be eligible for inclusion in the updated NRC

on adducing satisfactory proof of residence in any part of the country (outside Assam) as of 24th March 1971.

- Persons who can provide any of the admissible documents issued up to 24th March midnight, 1971.

Need for such exercise:

- It effectively calls for the introduction of legislation that will allow the government to track out infiltrators who have been residing unlawfully in India, place them in detention, and then return them to their home countries.
- Illegal immigrants in India will be the target.
- Hindus, Christians, Sikhs, Buddhists, Jains, and Parsis, however, who arrive in India claiming to have fled religious persecution in Afghanistan, Pakistan, or Bangladesh won't be impacted.
- It essentially indicates that every illegal immigrant from a country other than Pakistan, Afghanistan, or Bangladesh will be impacted if a national NRC is enacted as envisaged.
- And because the Citizenship Amendment Act does not apply to those three countries, those who are immigrants from them who are Muslim will also be impacted.

What has the CAG recommended?

- The country's top auditor sought penal measures against Wipro Limited for violating the provisions of the Minimum Wages Act and for paying data operators less than minimum wages.
- Secondly, the report recommended action against the State Coordinator of National Registration (SCNR) for "excess, irregular and inadmissible payments".
- The CAG also recommended fixing accountability of the SCNR as the principal employer for "not ensuring compliance with the Minimum Wage Act".

Naegleria fowleri : Brain-eating amoeba

Context:

- Recently, South Korea reported its first case of infection from *Naegleria fowleri* or "brain-eating amoeba",

What is *Naegleria fowleri*?

- *Naegleria* is an amoeba, a single-celled organism, and only one of its species, called *Naegleria fowleri*, can infect humans, according to the US Centers for Disease Control and Prevention (CDC).
- It was first discovered in Australia in 1965 and is commonly found in warm freshwater bodies, such as hot springs, rivers and lakes.

How does it infect humans?

- The amoeba enters the human body through the nose and then travels up to the brain.
- This can usually happen when someone goes for a swim, or dive or even when they dip their head in a freshwater body.
- In some cases, it was found that people got infected when they cleaned their nostrils with contaminated water.
- Scientists haven't found any evidence of the spreading of *Naegleria fowleri* through water vapour or aerosol droplets.
- Once *Naegleria fowleri* goes to the brain, it destroys brain tissues and causes a dangerous infection known as primary amebic meningoencephalitis (PAM), according to the CDC.

Symptoms of PAM:

- The first signs of PAM start showing within one to 12 days after the infection.
- In the initial stages, they might be similar to symptoms of meningitis, which are headache, nausea and fever. In the later stages, one can suffer from a stiff neck, seizures, hallucinations, and even coma.
- The US public health agency also observed that the infection spreads rapidly and on average causes death within about five days.
- The fatality of PAM is as such that only four people have survived out of 154 known infected individuals in the United States from 1962 to 2021.

Treatment for the infection:

- As the *Naegleria fowleri* infection is rare and progresses quickly, scientists haven't been able to identify any effective treatments yet.
- At present, doctors treat it with a combination of drugs, including amphotericin B, azithromycin, fluconazole, rifampin, miltefosine, and dexamethasone.

Can climate change increase the spread of the infection?

- According to the CDC, with the rising global temperatures, the chances of getting *Naegleria fowleri* infection will go up as the amoeba mainly thrives in warm freshwater bodies.
- The organism best grows in high temperatures up to 46°C and sometimes can survive at even higher temperatures.
- Various recent studies have found that excess atmospheric carbon dioxide has led to an increase in the temperature of lakes and rivers.
- These conditions provide a more favourable environment for the amoeba to grow.
- Heat waves, when air and water temperatures may be higher than usual, may also allow the amoeba to thrive
- So far, *Naegleria fowleri* has been found in all continents and declared as the cause of PAM in over 16 countries, including India.

Bengaluru Metropolitan Land Transport Authority (BMLTA) Bill, 2022

Why the Bill?

- Traffic congestion in Bengaluru is a major worry for the state government, as it feels that the traffic woes can deter investors.
- There have also been complaints of a lack of coordination between various transport and civic bodies, due to which public transport projects have been delayed.
- Moreover, the National Urban Transport Policy had also laid down a framework for the integration of various departments to enable holistic transport planning in cities such as Bengaluru.

Aim of the Bill:

- The legislation will be applicable to the Urban Mobility Region of Bengaluru and is aimed at the "regulation of development, operation, maintenance, monitoring, (and) supervision of urban mobility" within the said region.
- The enactment of the Bill will ensure a Comprehensive Mobility Plan for the gridlocked city, by adopting sustainable urban transport models.
- Integration of land use and transport planning are also key elements.
- The legislation also provides for measures such as "congestion parking, parking regulations, tolling, special purpose lanes etc. to regulate travel demand in the Urban Mobility Region."
- It addresses the "overlap in responsibilities and functions" of different institutions and departments related to transport in the city.
- Such overlap, according to the Bill, had impeded the process of planning and implementation of major transport schemes.

Who are the members of BMLTA?

- BMLTA will consist of 36 members with the Chief Minister of Karnataka as its ex-officio chairman, along with representatives from agencies such as BBMP, Bangalore Development Authority, Bangalore Metropolitan Region Development Authority, Bengaluru City Police, South Western Railways and National Highway Authority of India.
- Based on the suggestions made in the Assembly, an MLA elected from Bengaluru, who is a minister in the state Cabinet, will be its member.
- It will also consist of three experts in the field of urban mobility, corporate governance or Law, Finance or Transport economics, two representatives from civil society organisations working in urban mobility, three representatives from institutions and associations representing the private sector and professional bodies, and two representatives from academic institutions.

What can BMLTA do?

- BMLTA can establish an "appropriate framework for engagement of the private sector in planning, development and management of mobility service delivery

and effective contract execution by the Urban Transport Agencies, Traffic Management Agencies and Infrastructure Development Agencies.”

- Recommending policy measures, issuance of permits, registration of vehicles, operation of mobility services, handling of goods, management of traffic flow and other issues fall under the ambit of BMLTA.
- The agency will also prepare a parking policy, non-motorised transport policy, transit-oriented development policy, multi-modal integration policy and freight transport policy.
- BMLTA will also have to prepare a traffic management plan “at least once a year”, with a detailed traffic flow plan for road networks, movement of a certain type of vehicles such as freight and construction vehicles, traffic calming measures including a partial or full closure of streets, traffic management plans for special occasions, incident management plan, emergency evacuation plans etc.

Penalties:

- Any person failing to comply with the rules, regulations, orders or directions of BMLTA can be punished with a fine of up to Rs 1 lakh, which will extend to Rs 2 lakh for a second violation.
- In the case of continuing violation or non-compliance, the accused can be penalised with an additional fine which may extend up to Rs 5,000 per day during which the violation continues.
- Officials of various state government departments and agencies can also be punished under the provisions of the law.