

BIODIVERSITY AND ENVIRONMENT**WATER SECURITY IN INDIA**

Recently, the Centre for Science and Environment (CSE) stated that Global warming and climate change has the potential to put water security in India at risk.

Key Highlights**Increasing temperatures:**

- India is witnessing a repeat of 2021 conditions, when temperatures touched 40 degrees Celsius as early as February in some parts of the country.

Climate Change's Impact:

- Climate change impacts are about heat — increased and scorching temperatures — and about variable and extreme rain.
- Both have a direct correlation with the water cycle.

No Relief from La Niña:

- 2021 was the year of the La Niña — the Pacific water currents that are known to bring cooler temperatures globally.
- But global warming has offset this cooling effect of La Niña.
- Situation is bound to be worse in El Niño conditions.

Varying Rain Pattern:

- The number of rainy days in India will further go down, but extreme rainy days will increase.
- This will have a huge impact on India's plans for water management.

India's Water Security**About:**

- India faces a serious and persistent water crisis owing to a growing imbalance of supply and demand, as well as poor water resource management and climate change.

Severe crisis:

- India is projected to face severe water stress by 2050.

Issues:**Water Usage in Agriculture:**

- Although industry is the largest contributor to India's GDP, agriculture accounts for nearly 90% of water use.
- Two-thirds of India's irrigation needs and 80% of domestic water needs are met using groundwater, contributing to the significant groundwater depletion rate.

Inefficient Water Use:

- Although India has one of the world's largest irrigation systems, it is characterised by high levels of inefficient water use.
- Declining water tables mean increased cost of pumping, salty irrigation water as a result of over abstraction leading to crop and revenue losses for farmers, and long-term consequences for water availability.

Poor Access:

- Lack of access to improved water supply and adequate sanitation persists.
- According to the government census of 2011, only about 30% of the 167 million rural households in India have access to tap water and household toilets.

Declining Water Quality:

- The discharge of untreated sewage into water bodies is the most important source of water pollution in India; eighty percent of the sewage generated goes untreated.

Policy Loopholes:

- The existing policy framework lacks a clear incentive structure for efficient and sustainable water use.
- Intra- and inter-state water sharing and lack of adequate enforcement and monitoring of existing water policies undermine water governance.
- Low or absent water charging and energy subsidies for groundwater pumping drive severe depletion of resources.

Finance for Water Infrastructure:

- A lack of sustainable financing for water infrastructure results in poor maintenance of existing infrastructure and limits further investment.

Importance of Water Security for India**To Address Rising Demand:**

- With total water demand in India expected to rise by over 70% by 2025, a huge demand-supply gap is expected in the coming years.

Ensuring Health:

- Poor water quality and lack of adequate access to sanitation are also major causes of disease and poor health.
- Proper access to potable water will minimise health issues and medical expenses.

Supporting Economy:

- Adequate water security will act as a potentially significant booster on economic growth as it will reduce the costs for water infrastructure.

Challenges**Increasing Rate of Evaporation:**

- It is not that evaporation losses did not happen in the past, but the rate of evaporation will now increase with the soaring temperatures

Increased Usage:

- Heat will drive up the use of water — from drinking and irrigation to fighting fires in forests or buildings.

Intense drought and floods cycles:

- Climate change is already showing up in terms of the increasing number of extreme rain events.
- This means that one can expect rain to come like a flood, making the cycle of floods followed by droughts even more intense.

Land Degradation:

- In a country like India, where the bulk of the food is still grown in rain-fed regions, climate change will intensify land degradation and dust bowl formations.

Steps Taken

- **Jal Jeevan Mission:** It is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India.
- **Jal Shakti Abhiyaan:** It was launched by Jal Shakti Abhiyan (JSA) in 2019, a time-bound campaign with a mission mode approach intended to improve water availability including groundwater conditions in the water-stressed blocks of 256 districts in India.
- **National Water Policy:** National Water Policy (2012) has been formulated by the Department of Water Resources, RD & GR, inter-alia advocates rainwater harvesting and conservation of water and highlights the need for augmenting the availability of water through direct use of rainfall.
- **Groundwater legislation:** Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable groundwater legislation for the regulation of its development, which also includes the provision of rainwater harvesting. So far, 19 States/UTs have adopted and implemented groundwater legislation.
- **Central Ground Water Authority (CGWA):** It has been constituted under Section 3 (3) of the “Environment (Protection) Act, 1986” for the purpose of regulation and control of groundwater development and management in the Country.
- **Master Plan for Artificial Recharge to Groundwater- 2020:** It has been prepared by CGWB in consultation with States/UTs which is a macro-level plan indicating various structures for the different terrain conditions of the country including estimated cost.
- **National water Awards:** The Department of Water Resources, RD& GR has instituted National Water awards to incentivize good practices in water conservation and groundwater recharge.
- **Mass awareness programmes:** Training, Seminars, Workshops, Exhibitions, Trade Fares and Painting Competitions etc. are conducted from time to time each year under the Information, Education & Communication (IEC) Scheme of DoWR, RD & GR in various parts of the Country to promote rainwater harvesting and artificial recharge to groundwater.
- **Mission Water Conservation:** The Ministry of Agriculture & Farmers’ Welfare has developed an actionable framework for Natural Resources Management (NRM), titled ‘Mission Water Conservation’ to ensure gainful utilization of funds.
 - The Framework strives to ensure synergies in Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), erstwhile Integrated Watershed Management Programme (IWMP) now PMKSY Watershed Development Component and Command Area Development & Water Management (CADWM), given their common objectives.
- **Atal Bhujal Yojana (ABHY):** It is an Rs.6000 crore scheme with World Bank funding, for sustainable management of groundwater with community participation is being taken up in the identified over-exploited and water-stressed areas fall in the States of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

INTERNAL SECURITY**AHIR REGIMENT DEMAND**

- An ongoing agitation by members of the Ahir community disrupted traffic on a 6-kilometre stretch of the Delhi-Gurgaon highway. The protesters have been camping near Kherki Daula toll plaza in Gurgaon since February 4, demanding an Ahir Regiment in the Indian Army.

Genesis of the demand

- The Ahirwal region, which includes the southern Haryana districts of Rewari, Mahendragarh, and Gurgaon, and is associated with Rao Tula Ram, the Ahir hero of the revolt of 1857, has traditionally contributed soldiers to the Indian Army in large numbers.
- The region has seen the loudest clamour for the creation of an Ahir Regiment, even though the demand has also been raised in other states with sizeable Ahir populations.
- The community was brought into national limelight after the story of the bravery of the Ahir troops of Haryana in the Battle of Rezang La in 1962 was widely known.
 - Most of the soldiers of C Company of the 13th Battalion of the Kumaon Regiment perished fighting the Chinese onslaught, but broke the enemy's advance to Chushul.
- Members of the community have long argued that the Ahirs deserve a full-fledged Infantry Regiment named after them, not just two battalions in the Kumaon Regiment and a fixed percentage in other regiments.
- The demand got a boost during the 50th anniversary of the 1962 War in 2012 when the saga of the Ahirs' heroism was recounted repeatedly, and has received renewed traction in the 60th anniversary year.

Position taken by political parties on the demand for an Ahir Regiment

- Over the past decade, support has come from parties across the spectrum, but especially from ones with a presence in Ahir areas of influence — in Haryana, UP, Bihar, and even Maharashtra.
- In 2018, then Union Minister of State for Chemicals and Fertilisers Rao Inderjit Singh had written to then Defence Minister Nirmala Sitharaman asking her to consider the demand for an Ahir Regiment.
- Congress MP Deepender Hooda told Rajya Sabha: "History of Yaduvanshi bravery does not need to be proven to anyone."
- The Ahirwal region of Haryana and Rajasthan have always been at the forefront of the defence of the nation..."
- Earlier on February Shyam Singh Yadav, BSP MP from Jaunpur, Uttar Pradesh, had raised the demand for an Ahir Regiment.
- In Bihar, where the demand has been raised periodically, Raj Lakshmi Yadav, the daughter of Lalu Yadav and Rabri Devi, brought it up before the 2020 Assembly elections. The SP promised an Ahir Regiment in its manifesto ahead of the 2019 Lok Sabha elections.

Army's response to the demand

- The Army has rejected the demand for any new class or caste based regiment.
- It has said that while the older regiments based on castes and regions like the Dogra Regiment, Sikh Regiment, Rajput Regiment, and Punjab Regiment will continue, no new demands on the lines of an Ahir Regiment, Himachal Regiment, Kalinga Regiment, Gujarat Regiment or any tribal regiment would be entertained.
- It is stated that The Army is doing well with the present composition and therefore there is no need to add new regiments based on class or caste.

IMPORTANT FACTS FOR PRELIM

THE STATUS OF THE OPERATION GREENS SCHEME

Recently, the Minister of State for M/o Food Processing Industries has informed the Lok Sabha about the status of the Operation Greens Scheme.

Operation Greens Scheme

About:

- Operation Greens scheme was launched by the Ministry of Food Processing Industries (MoFPI) in November 2018.

Aim & Objectives:

- To enhance value realization of TOP farmers; reduction in post-harvest losses; price stabilization for producer and consumers and increase in food processing capacities and value addition.
- Price stabilisation for producers and consumers by proper production planning in the TOP clusters and introduction of dual-use varieties.
- Reducing post-harvest losses by creation of farm gate infrastructure, development of suitable agro-logistics, creation of appropriate storage capacity linking consumption centres.
- Increasing food processing capacities and value addition in the TOP value chain with firm linkages with production clusters.
- Setting up a market intelligence network to collect and collate real-time data on demand and supply and price of TOP crops.

Components:

- The scheme has two components i.e. Long Term Strategy i.e. Value Chain Development Projects and Short Term Strategy i.e. Price Stabilization Measures through grant of transportation/storage subsidy.

Performance:

- Since its inception, six (6) value chain development projects have been sanctioned and initiated with a total project cost of Rs.363.30 crore; Grant-in-aid sanctioned of Rs.136.82 crore; Processing capacity 3.34 Lakh MT and Preservation Capacity of 46,380 MT.

From TOP to TOTAL:

- The scope of short term measures originally applicable to Tomato, Onion and Potato crops were expanded to 41 notified fruits & vegetables w.e.f. June 2020 as a part of Aatmanirbhar Bharat Abhiyan Package.
- In Budget Announcement 2021-22, the scope of long term strategy i.e. Value Chain Development Projects was expanded from TOP crops to 22 perishables which include 10 fruits, 11 vegetables (including TOP crops) and 1 marine product i.e. Shrimp.

Operation Greens – Convergence with Kisan Rail and KrishiUdan:

- **Kisan Rail:** Kisan Rail ensures agro-products reach from one corner to another corner of the country in a quick time by faster transportation benefitting both the farmers and the consumers.
- **Krishi-Udan:** KrishiUdaan Scheme stands converged with Operation Greens through air freight subsidy of 50 per cent for the agri-perishables of NER (North-Eastern Region) States and four Himalayan States/UTs. nline MIS.

DAILY ANSWER WRITING PRACTICE

Q1. Do you think India's 'No first use' policy with respect to use of nuclear weapons is practical and pragmatic? Critically examine. (250 words)

Introduction

- No First Use (NFU) is a pledge by a nuclear power not to use nuclear weapons unless it is attacked by an adversary with the use of nuclear weapons. India has always held its commitment to NFU policy as proof of it being a responsible nuclear power. No first use is a reflection of our cultural inheritance.
- An unarmed Indian missile was accidentally fired into Pakistan. Expressing deep regret, India's government ascribed it to a technical malfunction during routine maintenance. India's stated stance of 'no first use' has proven itself valuable, as seen in Pakistan's response.

Body

Pros of a Non First Use policy

- A 'no first use' nuclear weapons policy suits India's interest. Shifting to a first-use policy would mark a shift from deterrence towards nuclear war fighting
- These weapons are enormously destructive and should not be used.
- Since there is no first use alert requirement, the chances of reacting to a false alarm are nullified
- A first use would result in international dishonour and weigh heavily on a country with a first use posture.
- NFU doctrine is cheaper to implement; for India, which has many economic targets to achieve, this is a very important factor.
- NFU policy is just right for India as it ensures security for the nation and does not detract it from its march towards better prosperity for its people.
- India's NFU policy which has kept the nuclear arsenal in both India and Pakistan in a de-mated posture, which means that the nuclear warheads are not mated with the delivery systems.

Challenges posed due to NFU

- The conventional criticism against a 'no first use' policy is that India would have to suffer a first strike before it retaliated.
- Critics of the NFU policy argue that the increasing stockpile of Pakistani nuclear weapons and China's expansionist designs in the region warrant a change in the doctrine.
- A major worry for India is a two-front war when both China and Pakistan collude and simultaneously launch offensives. In case India faces severe adversity, its traditional nuclear doctrine of NFU may not be ideal

Advancement

- India must ensure that deterrence does not fail, and that there is a clear communication to the adversary of the certainty of punitive nuclear retaliation.
- India's nuclear doctrine should be periodically reviewed and updated, possibly every decade or so, taking into account technological developments and changes in the security environment.

- Instead of focusing on adopting a first strike policy, India must work towards strengthening its counter strike and second strike capability.
- India's third leg, its sea based nuclear deterrence, must be strengthened at the earliest

Conclusion

- Mature nations always pursue a NFU policy. In the present strategic context, there is no necessity for India to change its existing nuclear doctrine. As India seeks to establish its credentials in the international comity as a responsible nation and a growing economic power, it should also project the same by means of its nuclear doctrine. New Delhi must take the effort of making its neighbours believe in its nuclear doctrine through effective confidence building measures.

DAILY QUIZ

- Q1. Which of the following statements is/are correct in regards to the Minamata Convention?
1. It is a UN global treaty to protect human health and the environment from the adverse effects of Mercury.
 2. Blue baby syndrome is a major disease caused by mercury contamination.
 3. Minamata Convention on Mercury put a ban on new mercury mines.
- Select the correct answer using the codes given below
Which of the given above statements are not correct?
- (a) **1 and 3 only**
(b) 2 only
(c) 1 and 2 only
(d) only 1
- Q2. EX-DUSTLIK is a defence exercise between India and which of the following countries?
- (a) Mongolia
(b) South Africa
(c) Tajikistan
(d) **Uzbekistan**
- Q3. With reference to the Operation Greens Scheme, consider the following statements:
1. It was launched by the Ministry of Agriculture & Farmers' Welfare in November 2018.
 2. It seeks to stabilize the supply of only Tomato, Onion and Potato (TOP) crops.
- Which of the given above statements is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) **Neither 1 and 2**
- Q4. With reference to Jal Jeevan Mission, consider the following statements:
1. It will provide safe drinking water to each household in rural India.
 2. This mission follows a community approach.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) **Both 1 and 2**
(d) Neither 1 and 2
- Q5. Consider the following statements regarding Ahir Regiment
1. The Ahirwal region, which includes the southern Haryana districts of Rewari, Mahendragarh, and Gurgaon,
 2. The community was brought into national limelight after the story of the bravery of the Ahir troops of Haryana in the Battle of Rezang La in 1962 was widely known.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) **Both 1 and 2**
(d) Neither 1 and 2