



## EDITION - 8

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## **Depleting Water Resources**

## **GS 1**

• Distribution of natural resources across the world

## **GS 3**

• Environmental conservation

## **Reasons for water scarcity**

- 1. Increasing demand for water particularly in developing countries
- The world's **population** is expected to increase from 7.6 billion (2017) to between 9.4 and 10.2 billion people (2050), with two-thirds of them living in cities.
- Therefore, those most in need of water will be in developing or emerging economies.
- 2. Climate change impacting water cycle
- Climate change is also impacting the global water cycle with wetter regions generally becoming wetter and drier regions drier.
- The International Water Management Institute estimates that total demand could increase from 680 billion cubic metres (BCM) to 833 BCM by 2025, and to 900 BCM by 2050.
- 3. Decreasing surface water resources
- By 2050, countries already facing water scarcity challenges may also be forced to cope with the decreased availability of surface water resources.

## Deteriorating water quality

- Along with water scarcity, there is the issue of water quality.
- 1. Urbanisation and associated water pollution
- India faces major threats to its water security, with most water bodies near urban centres heavily polluted.
- An estimated 80% of industrial and municipal wastewater is released without any prior treatment, with detrimental impacts on human health and ecosystems.
- Chennai is a textbook example of how nature is being ignored in urban development-posed challenges. Unplanned urban development and unwieldy

growth with no hydrological plan are causing many problems. Earlier, when there was heavy rain in catchment areas in the Chennai region, lakes, ponds, tanks, rivers and inter-linked drainage systems helped replenish groundwater, hold back some water and release the excess to the ocean. With development, a number of tanks and lakes in and around Chennai have been encroached upon by various stakeholders

## 2. Dimension of Inter-state disputes

- Inter-State disputes over river resources are also becoming more intense and widespread.
- Given the transboundary nature of most river basins, regional cooperation will be critical to addressing projected water quality challenges.
- A Central Pollution Control Board report indicates that almost half of India's inter-State rivers are polluted. It found that the untreated sewage and industrial waste was a major cause of pollution in 16 of 40 inter-State rivers in the country.

## Way forward

- Nature-based solutions can address overall water scarcity through "supply-side management," and are recognised as the main solution to achieving sustainable water for agriculture.
- World Water Development Report makes it clear that nature-based solutions which are also aligned with the principles and aims of the 2030 Agenda for Sustainable Development — can offer answers to our most pressing water-related challenges.
- Nature-based solutions hold great promise in areas which also include sustainable food production, improved human settlements, access to drinking water supplies and sanitation, water-related disaster risk reduction, and helping to respond to the impact of climate change on water resources.
- Nature-based solutions are closely aligned with traditional and local knowledge including those held by indigenous and tribal peoples in the context of water variability and change.
- 1. Environmentally-friendly agricultural systems
- Environmentally-friendly agricultural systems like those which use practices such as conservation tillage, crop diversification, legume intensification and biological pest control work as well as intensive, high-input systems.

• The environmental co-benefits of nature-based solutions to increasing sustainable agricultural production are substantial as there are decreased pressures on land conversion and reduced pollution, erosion and water requirements.

## 2. Wetlands construction

- Constructed wetlands for wastewater treatment can also be a cost-effective, nature-based solution that provides effluent of adequate quality for several non-potable uses (irrigation) and additional benefits that include energy production.
- Natural and constructed wetlands also biodegrade or immobilise a range of emerging pollutants. Infact, for some emerging pollutants, nature-based solutions work better than "grey" solutions, and in certain cases may be the only viable option.
- 3. Watershed management
- Watershed management is another nature-based solution that is seen not only as a complement to built or "grey" infrastructure but also one that could also spur local economic development, job creation, biodiversity protection and climate resilience.

## Connecting the dots

• Nature based solutions are touted as the way forward to address the issues of water scarcity and water pollution. Comment.



#### GS 3

## • Minimum Support Price

#### Intro

- The finance minister in the Union Budget 2018–19 has announced the proposal to fix the minimum support prices (MSP) at 50% in excess over the cost of production of crops.
- Along with the MSP, proper implementation of non-price factors can have a farreaching impact in terms of enhancing the livelihood security of the rural poor that constitutes the bulk of the Indian population.

## **Condition of farmers**

- According to the National Sample Survey Office (NSSO) data, an overwhelming majority of farmers (92%) in India are either small or marginal farmers who cultivated not more than 2 hectares (5 acres) of land in 2010–11. Thus, an overwhelming number of households cultivate small tracts of land.
- Given the tiny size of plots of land for a substantial number of farmer households, most of them (if not all) will be net buyers of agricultural commodities, particularly foodgrains. This also implies that only a small minority of households are net sellers of foodgrains. Thus, any rise in MSP will be beneficial for a tiny section of farmer households.

## Negative impacts of increasing MSP

- 1. Accumulation by a few
- The increase in MSP and shifts in the terms of trade in favour of agriculture will also hasten the process of accumulation.
- The rural rich, who are also the surplus producers, have better transport arrangements and infrastructure facilities. This enables them to sell agricultural commodities through procurement agencies, if there is a steep hike in MSP. Since they are the biggest producers, supply in the open market reduces, thus leading to a rise in prices.

## 2. General rise in inflation

• A rise in the prices of agricultural commodities will lead to a rise in the prices of industrial commodities that use the former as raw materials.

- For the poor, whose incomes are typically un-indexed with prices, any rise in prices of industrial commodities will mean lessening of expenditures on food, thereby jeopardising food security.
- The rural poor, who are net buyers of foodgrains, will be adversely affected due to erosion in real incomes with rise in prices Patnaik, Utsa (1983): "On the Evolution of the Class of Agricultural Labourers in India"
- Mitra, Ashok (1977): Terms of Trade and Class Relations: An Essay in Political Economy had argued that an increase in foodgrain prices, with a shift in the terms of trade in favour of agriculture, will reduce the non-food expenditure of the urban and rural poor. This is because incomes of the poor are un-indexed with prices, and demand for food is inelastic with respect to price.

## 3. Industrial stagnation

- As the demand for food and industrial goods will decline, the former by a lesser amount than the latter due to its inelastic nature. While decline in the demand for food will jeopardise the food security of the poor, contraction in demand for industrial goods will lead to industrial stagnation - Nayyar, Deepak (1994): "Industrial Development in India: Some Reflections on Growth and Stagnation", Industrial Growth and Stagnation: The Debate in India
- The price of agricultural goods, particularly food as a prime wage good, influences the level of wage demands; the prices of agricultural commodities as raw materials affect industrial prices and may, depending upon the wage-bargaining and mark-up practices, influence an inflationary movement of prices."

## 4. Balance of trade "imbalance"

Thus, increase in MSP can result in inflation in the economy. Also, increase in income
of the rich in the countryside will stimulate luxury consumption which is importintensive and hence can negatively impact the balance of trade in the economy Nayyar, Deepak (1994): "Industrial Development in India: Some Reflections on
Growth and Stagnation", Industrial Growth and Stagnation: The Debate in India

## 5. Exploitation by rich peasants as monelenders

• Unequal access to resources results in a situation in which a small section of the population in rural India dominates the majority who are poor, across credit, labour and output markets. In this role, the **rich peasant advances credit to a poor farmer** 

in return for the purchase of agricultural produce at a reduced price (lower than the MSP and price in the open market) through the receipt of commissions.

• De Roy, Shantanu (2018): "Economic Reforms and Agricultural Growth in India," Quarter Century of Liberalisation in India: Looking Back and Looking Ahead had argued that traders/moneylenders were typically the wealthiest persons in the village and were involved in production for profit.

## Way forward

- Providing cheap finance and subsidised inputs to the actual cultivators of land (primarily small, marginal, and poor peasants) to increase profitability from crop production
- Increasing government investment in rural infrastructure like irrigation, power, roads, and transport
- Increasing allocation for rural employment generation programmes like Mahatma Gandhi National Rural Employment Guarantee Scheme that can lead to increase in employment opportunities, thereby leading to tightening of the rural labour markets and supplement household incomes of small, marginal, and poor farmers with enhancement in food security
- Provision of universal PDS in rural areas
- Altering the agrarian structure that could lead to more equal access to resources.

These steps can lead to a widening of the size of the market, which, in turn, can stimulate industrial growth due to improved capacity utilisation of the industrial sector.

## Connecting the dots

• Increasing the MSP for crops have significant macroeconomic and social implications. Critically examine.

## Challenge of Breastfeeding Sensitisation

## GS 2

• Issues relating to health

## Intro

- Health surveys show less improvement in the breastfeeding rates than in the rate of institutional deliveries. Between the National Family Health Survey (NFHS)-2 in 1998–99 and the NFHS-4 in 2015–16, the rate of institutional deliveries increased by 52.9 percentage points. But for the same time period, the rates of early initiation of breastfeeding and exclusive breastfeeding showed dismal improvements of just 8.1 and 25.7 percentage points respectively.
- Mothers' Absolute Affection, the nationwide programme to improve breastfeeding, attempts to achieve the same by incentivising frontline health workers to create awareness on the issue.
- For each of the 685 districts in India, Rs 4,30,000 has been earmarked per year, to create awareness through mass media and interpersonal communication. The programme ambitiously plans to train and incentivise Accredited Social Health Activists (ASHAs) to promote breastfeeding.
- Through monetary rewards, it also plans to rope in Auxiliary Nurse Midwives (ANMs) and doctors at the delivery points in hospitals.

## Significance of breastfeeding

- Breastfeeding is indeed an important public policy issue in India.
- Findings from the **Demographic and Health Survey (DHS) for India**, conducted in 2005–06, indicate that **30% of 7-month-old children were underweight**.
- This indicates, among other causes, the inadequate adherence to early initiation of breastfeeding and exclusive breastfeeding during the first six months of an infant's life.

## Issues

- 1. Lower stipend for ASHAs
- MAA in its current form intends to provide Rs 300 as an annual stipend for ASHAs, along with a budget of Rs 50,000 for a one-day sensitisation of ANMs, nurses, and doctors in the district. Another Rs 10,000 has been earmarked as for ANMs, nurses, and doctors in district hospitals

 The government guidelines issued for MAA earmark a total Rs 3,20,000 towards payments of incentives to the ASHA workers in each of the 685 districts in India. On average, each district has 1,066 ASHA workers in India, but most districts in disadvantaged states such as Uttar Pradesh and Bihar have a significantly higher number of ASHAs per district This means that such districts with a greater number of ASHAs might face difficulties in compensating ASHAs for this additional role.

## 2. Absence of counselling by ASHAs

- Therefore, in addition to MAA, the government should run a parallel programme by hiring dedicated breastfeeding and newborn care consultants at each district hospital
- It is well known that health workers in villages, that is, ASHAs and ANMs, as well as doctors in hospitals fail to provide counselling-related services to people.
- While providing breastfeeding and newborn care, education has always been part of a health worker's written job description; in practice, health workers rarely counsel new mothers. Frontline health workers mostly perform those services that they get paid for, for instance, immunisation.
- Since breastfeeding counselling and newborn care services have little or no monetary returns, they are mostly abandoned.
- According to the Rapid Survey of Children (RSOC), conducted by the Ministry of Women and Child Development, only 31% of the women were visited by an ASHA at home during pregnancy, only 23% were advised to deliver in a hospital by an ASHA, and only 51% reported that they were visited by an ASHA, AWW, or ANM after delivery.
- There may be several reasons responsible for this: public hospitals usually function way over their capacity, and front-line workers lack supervision and support

## Way forward

## Need for a dedicated staff

- Considering that the cost for getting doctors and front-line health workers to prioritise breastfeeding counselling is much greater than the current funding available with a programme like MAA, expecting the programme to be successful by itself would be impractical.
- Hiring one breastfeeding consultant in each of the district hospitals would require a similar budget and would ensure a full-time dedicated staff for promotion of breastfeeding in hospitals.
- Promoting breastfeeding in the hospitals is important because when a mother does not feed her baby for the first few days of life, she may have an inadequate milk

supply during the later days. Also, many mothers stop breastfeeding after complaining of an inadequate milk supply. This forces them to supplement an infant's feed with something other than breastmilk, which ultimately makes infants more susceptible to the poor disease environment around them.

- Moreover, monitoring a consultant in the hospital is much easier, and more practically feasible than monitoring front-line health workers in the villages.
- However, a breastfeeding promotion programme at the district hospital level would mean admitting that the programme is making no efforts to reach those babies born in other clinics and private hospitals.

## Connecting the dots

• Breastfeeding sensitisation is as important as institutional deliveries, but both require different kinds of state interventions. Critically analyse in the light of MAA programme.

## **New FRBM Framework**

#### **GS 3**

• Government budgeting

#### Intro

- In 2003, the union government enacted the FRBM Act. The act required the government to bring down the fiscal deficit to gross domestic product (GDP) ratio to 3% and eliminate revenue deficit by 2008–09.
- The Government of India has proposed a very critical amendment to the Fiscal Responsibility and Budget Management (FRBM) Act in Union Budget 2018–19. As mentioned, "in the proposed FRBM architecture, Government will simultaneously target debt and fiscal deficit, with fiscal deficit as an operational target and do away with the deficit targets on revenue account that is revenue deficit (RD) and consequentially, effective revenue deficit (ERD)."
- It was the recommendation of the Fourteenth Finance Commission (FFC), which suggested an amendment to FRBM Act 2003 to eliminate "effective revenue deficit." The FFC mentioned that the current definition of effective revenue deficit is unique and does not fit within international practices of classification of accounts/expenditure.

• Gol **also constituted the FRBM Review Committee in 2016** to review the FRBM Act. Making fiscal deficit as the operational parameter was based on the recommendations of the FRBM Review Committee.

## History of deficits

- The concept of budget deficit(the overall deficit of the central government is that part of the deficit that was covered by 91 days Treasury bills) was eliminated in the early 1990s, and replaced with Ways and Means Advances for any temporary mismatch in receipts.
- Monetised deficit (a concept of deficit introduced by Chakraborty Committee [RBI: 1985] to capture the net Reserve Bank of India or RBI credit to the government) was contained in the 1990s by an institutional agreement between RBI and GoI to contain the inflationary pressures of monetisation of deficits.
- Since then, the emphasis has been on revenue deficit, fiscal deficit, and primary deficit.

## Implications

- 1. Revenue deficit may increase
- Compliance with the zero revenue deficit target in the FRBM Act implies imposition of hard budget constraint on government to prevent use of borrowed resources for the purpose of consumption expenditure such as wages and salaries, interest payment, pension, payment of subsidies, etc.
- As specified in this path, the Government of India (Gol) would only be able to achieve the 3% of GDP fiscal deficit target in 2020–21 instead of 2018–19. Though there is no target, revenue deficit would remain stubbornly high and would be at 1.6% of GDP in 2020–21.
- 2. Debt-GDP ratio may decline
- FRBM Review Committee has also proposed to replace the FRBM 2003 Act with a new Debt Management and Fiscal Responsibility Bill, suggesting a debt–GDP ratio of 60% with a 40% threshold limit to centre and 20% limit to states by 2023.
- The FRBM Committee has also recommended "escape clauses" in the suggested act, on how much the government can deviate from the debt-to-GDP target in case of exceptional macroeconomic circumstances or natural calamities or national security issues.

- The debt-GDP ratio, which is estimated at 48.8% of GDP in 2018-19, is expected to decline to 44.6% of GDP in 2020-21.
- 3. Distinction between expenditure on revenue expenses and capital formation from borrowings will end
- The distinction between how much of the fresh borrowings will be used for revenue expenses and for capital formation is blurred with the phasing out of revenue deficit.

#### Issues

- 1. Multiple deficit targets not plausible
- There was a dissent note in FRBM report by one of its committee members with regard to having multiple deficit targets—debt, fiscal deficit, and revenue deficit—with threshold limits. In the dissent note, the member argued that having multiple debt–deficit targets with precise limits may make it difficult to achieve them all by 2023. The dissent note proposed primary deficit to be targeted for fiscal prudence.
- 2. Fiscal deficit dependent on Revenue deficit
- Between 2008–09 and 2018–19 budget estimates (BE), both fiscal and revenue deficit declined from 6% of GDP to 3.3% of GDP and 4.5% of GDP to 2.2% of GDP respectively. In 2008–09, revenue deficit was 75% of fiscal deficit and in 2018–19 (BE), it is estimated to be 66.66% of the fiscal deficit.
- In other words, during the last 10 years, it is the revenue deficit of the union government that has driven the fiscal deficit.

## Connecting the dots

• Critically analyse the proposal to do away with Revenue Deficit in evaluating the budgeting of the governemt.

## **Doubling Farmers' Income**

## **GS 3**

• Agriculture

## Intro

- As there has been agrarian distress in the sector for the last two decades, NSSO (National Sample Survey Office) survey in 2003, which reported that 40% of Indian farmers disliked farming as a profession due to its low profits, high risk, and the lack of social status and, therefore, would like to leave it at the first opportunity
- Further, there are caste-wise differences among farmers in terms of their interest in farming; the higher castes seem to be more disenchanted with farming than Scheduled Caste (SC) and Scheduled Tribe (ST) farmers. Among the SCs and STs, the dislike for farming diminishes with increase in landholding size and increases in the case of other castes
- The promise of doubling farmers' income by 2022 has been added it to "New India" agenda.
- Committee on Doubling Farmers' Income led by Ashok Dalwai was also appointed to look into the same.

## Dalwai committee - issues and challenges

- Starting from a historical background of progress in agriculture to what needs to be done, the report is very expansive as well as specific in suggestions.
- Dalwai Committee found that an average Indian farmer household earned Rs 96,703 in 2015-16 (this was Rs 77,977 in 2012-13 according to the NSSO). Doubling this to Rs1,93,406 (at 2015-16 prices) by 2022-23, needed real incomes to grow at CAGR of 10.4 per cent at the all India-level, and at differentiated rates at statelevel.
- Going by the committee's general observation, the target is achievable

## 1. Agricultural growth

- The report says that **during 2004-2014**, agriculture reported a historic growth rate, an impressive **4 per cent during this period as compared to 2.6 per cent during 1995-2004**, **though in recent years**, **the sector seems to be slowing down**.
- The report says that this growth rate was possible due to better minimum support price, increased public investment and also better market price.
- 2. Ratio of Farm and non-farm incomes

- The report says that this involves a change in the ratio of a farmer's income from farm and non-farm sources: from the present 60:40 to 70:30 in 2022.
- India has finally accepted the dominance of farm income in farmers' overall wellbeing. The dream of adopting non-farm income as an alternative to dwindling agriculture is now junked
- The gap between farm and non-farm incomes has grown over the decades, from a ratio of 1:3 in the mid-1980s to 1:4.08 in the middle of last decade, and 1:3.12 in 2011–12
- 3. Investment required
- Agriculture is a private venture supported by official policies and programmes. It means both private and public investments are needed to double farmers' income. Eighty per cent of this must come from the government.
- While estimating the private and public investment required, the committee has assumed that the sector would grow at the same rate as of 2015-2016 till 2022 with the same efficiency. Practically, this means an annual growth of 9.23 per cent of a farmer's income.

## Private investment

- For this to happen, farmers need to invest `46,299 crore (at 2004-05 prices) in the next five years, while farmers invested `29,559 crore in 2015-16.
- But farmers do not have the capacity to invest such a huge amount of money on agriculture without any profits, as farmers already have a huge debt. This strategy will just add on to their debt.

## Public investment

- For governments, the investment has to be `102,269 crore; up from `64,022 crore in 2015-16
- A large chunk of public investment is for spending on irrigation projects which, as is widely known, are not taking off.

## 4. Differential growth in states

The need to focus on farmers' incomes also stems from the fact that a very large proportion of farming households in most of the central and eastern states (23%–45%) live below the poverty line (BPL), higher than the national average (22.5%).

- States like Bihar where real incomes of farmers was at (-)1 per cent (CAGR) between 2002-03 and 2012-13 would require a CAGR of 12.3 per cent between 2015-16 and 2022-23 to achieve the government's target.
- The proportion of BPL farming households (17.5%–22.5%), even in some of the socalled agriculturally progressive states, such as Gujarat, Karnataka, Maharashtra, and Tamil Nadu, is close to the national average.

## **Example from States**

## Madhya Pardesh

- Madhya Pradesh did it in 2016 and has also estimated the contributions of various sources of increase in incomes: increase in yields would contribute 30%, agricultural diversification 20%, reduction in input costs and better prices 15% each, with the rest coming from an expansion in area under cultivation (14%) and a reduction in post-harvest losses (6%)
- **District irrigation plans** have been prepared under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). Half a million temporary agricultural pumps are also being made permanent with an allocation of ₹5,000 crore.

The Government of Madhya Pradesh **identified 19 pillars** in order to double farmers' incomes.

- Increased irrigation from public sources
- Additional electricity supply for agriculture
- Interest-free crop loans
- Expansion of agricultural area
- Encouraging mechanisation
- Agricultural diversification
- Expansion of modern seeds
- Soil health management
- New channels of agricultural technology extension
- Farmer-producer company organisation
- Expansion of the food processing sector
- Encouragement to organic farming
- Management of natural risk in agriculture
- Expansion of agricultural storage capacity
- Better organisation of agricultural markets
- Animal husbandry
- Fisheries, silk, bamboo and agroforestry production
- Institutional structures for achieving the objective.

## Chattisgarh

The Government of Chhattisgarh has decided to focus on **seven points** to increase farmers' incomes

- Agricultural development of Adivasi farmers
- Reducing the cost of cultivation
- Increase in yields
- Improving the marketing infrastructure, storage and processing facilities
- Development of irrigation
- Agricultural diversification
- A better agricultural extension system.

## Way forward

- Reducing costs of cultivation (through neem-coating urea and soil health cards)
- Ensuring better prices for produce (through new cost plus-pricing MSP formula, reforming agri-markets through e-NAM and upgrading 22,000 village-markets)
- Reducing wastage in the value-chain (through proper storage, logistics, food processing, and implementing Operation Greens-TOP (tomatoes, onions and potatoes)
- Diversifying sources of farmer incomes (through blue, organic, sweet revolution).
- An increase in the seed replacement rate of maize and lentils
- Expansion in issuing soil health cards
- Promotion of the system of rice intensification
- Drip and sprinkler irrigation
- Enhancement of short-term crop loans
- Linking up of markets with the national agricultural market, e-NAM
- Expanding cold storage infrastructure and storage capacity
- Building green/shed net houses
- Organising new dairy cooperative societies
- Expanding bulk milk cooler and milk-chilling centre capacities, cage culture in fisheries
- Agri-clinics and agricultural business centres
- Doubling the production of lac

## Connecting the dots

• Doubling the income of farmers is a vexed issue with huge challenges. What steps can be taken in this regard?

## **Delimitation of Constituencies**

## **GS 2**

• Significant features and amendments to the constitution

## Intro

- In US, the term "gerrymandering" refers to the practice of redrawing the boundaries of electoral districts (or constituencies) to suit any one political party.
- Countries around the world, which, on paper, have followed the "one person, one vote" principle, have found their democracies undermined by "majorities" created through unrestricted gerrymandering. With increased political polarisation, it is possible that this issue is likely to become increasingly prominent worldwide.

## **Delimitation in India**

- The problem of partisan gerrymandering was not unknown to India's constitution framers. The term "gerrymander" or "gerrymandering" itself occurs on at least four occasions in the Constituent Assembly debates and the US experience features very much in the discussion relating to the size of constituencies.
- The final Constitution had Articles 82 and 170, which gave Parliament the power to delimit constituency boundaries for not just the Lok Sabha, but also for the state legislative assemblies, after the census was completed.
- So far, four delimitation acts have been passed, in 1952, 1962, 1972 and 2002, with a Delimitation Commission in charge of drawing constituency boundaries set-up in each case. The last commission was headed by Justice Kuldip Singh, a retired judge of the Supreme Court, and its report was implemented in 2008.
- The commission is also empowered to co-opt sitting members of Parliament and members of the legislative assembly from that state in a non-partisan manner.

## 84th amendment

- However, this changed in 2002 when the 84th Amendment was passed, amending these two articles.
- As it stands, the constituency boundaries are frozen till the first census after 2026, that is, at least until after 2031. Realistically, it may be even longer given that the delimitation exercise took six years on the previous occasion.

• Though there was a 30-year gap between the third and fourth delimitation commissions, a **30-year gap in the next delimitation commission could have graver consequences.** 

#### Issues

- 1. Lesser representation of urban voters given increasing urbanisation
- India runs the risk of "gerrymandering by default": where the constituency boundaries are fixed without providing enough opportunity for revision and readjustment given the demographic changes taking place.
- While constituency sizes are vastly different across India, increasing urbanisation and freezing of might result in the progressive disenfranchisement of urban voters; their vote will not count for as much as the rural voter given the demographic trend.
- With urban areas showing lower turnouts than rural areas, this could have major implications for democratic participation in India.
- 2. States with lower TFR getting higher share in Lok Sabha
- The census data since 1961 has shown that the three large South Indian states, Andhra Pradesh, Tamil Nadu and Karnataka, have seen their share of the population steadily fall.
- Tamil Nadu, for instance, accounted for 7.67% of India's population in 1961, whereas in 2011 it accounted for 5.96%. On the other hand, the three largest North Indian states here, Uttar Pradesh, Bihar and Madhya Pradesh have seen their shares in the overall Indian population increase steadily even after bifurcation.
- However, the Delimitation Act, 2002 mandated that data from the 1971 Census was to determine the number of seats for each state in the Lok Sabha. This has meant a sizeable gap between a state's share in the overall population of India and its share in the overall number of seats in the Lok Sabha.
- With the distribution of seats in the Lok Sabha frozen till at least 2031, the gap seen above is only likely to widen. Uttar Pradesh will be even more under-represented and Tamil Nadu even more over-represented in the Lok Sabha. Thus, the underlying principle—of one person, one vote—is worth defeated.
- However it is also argued that states that have worked to decrease their total fertility rate (through improved investment in health and education, especially for women) should not necessarily be punished with lower representation in the Lok Sabha. To balance out the concern that this might tilt the balance decisively away from the southern or even the smaller states, the Rajya Sabha should, like the US Senate, provide equal representation for all states irrespective of their size.

## **Connecting the dots**

• Freezing of delimitation of constituencies is antithetical to democratic ideals. Analyse.

## **Urban flood**

## **GS 1**

• Urbanisation and challenges

## **GS 3**

• Disasters and Disaster Management

## Intro

- There has been decades of misgovernance and poor urban planning which cause urban floods.
- Overflowing drains, unregulated construction on natural drains and riverbeds, poor drainage systems and the disappearance of mangroves reflect the state of planning which precipitated the devastating flood
- Like in Mumbai in 2005, there was little coordination among state and local authorities and institutions in Mumbai.

## Reasons

- 1. Faults in land use
- It is not just the inadequacy of storm water drains, but the root of the problem has been the callous indifference of the authorities to the natural features that facilitate the absorption of excess water like mangroves, wetlands, salt pans, floodplains, lakes, tanks and open grasslands.
- In every city, we see how these natural sponges have been destroyed by changing regulations for land use that allow these spaces to be filled up and built over
- In Chennai, which saw terrible flooding in November 2015, the airport stands on a floodplain; a bus terminal has been built in a flood-prone area and a mass rapid transport system is being built on a major canal.

- In **Bengaluru**, its famous **lakes** that provided water to the city and also acted as natural sinks to absorb excess water have been **encroached upon and have virtually disappeared**.
- In Mumbai, mangroves have been destroyed to make way for high-end residential buildings thereby ensuring that there is no barrier against sea-level rise in the future and frequent bouts of unusually heavy rainfall.
- Similarly, Mumbai's salt pans that are environmentally crucial, are being considered for constructing so-called "affordable" housing, basically poorly constructed structures on land that are vulnerable to flooding.

## 2. Factor of climate change

- Interdisciplinary Centre for Water Research at the Indian Institute of Science, Bengaluru, which looked at rainfall patterns in Chennai, Hyderabad and Bengaluru, concluded that climate change could be a factor in the increase in high intensity rainfall in these cities.
- Cities located by the sea are even more vulnerable because global warming is also leading to a rise in sea levels that would inundate these cities in the event of a cyclone, hurricane or a tsunami.

## Poor worst affected

- Urban poor settlements tend to come up in low-lying flood-prone areas.
- They face flooding even during normal monsoon days but when there is a cloudburst or a cyclone-like situation, they have nowhere to go.

## Way forward

- 1. Improve land use
- We necessarily require reassessing land use patterns, building codes and conserving mangroves and open unpaved spaces

## 2. Citizen participation in local governance

• The only recourse is for citizens, who continue to pay the price for such blind and delusional planning, to assert their right to live in a safe and sustainable urban environment.

## 3. Robust disaster management

- In India, we have disaster management structures including the National Disaster Management Authority and their state and district counterparts.
- Though the approach is to strengthen disaster preparedness, mitigation and emergency response, we have not seen the effectiveness of this approach in practice.
- Disaster risk reduction needs to be mainstreamed and integrated across all sectors.
- Institutions need to be strengthened and capacity building needs to be prioritised.
- Additionally, funds are a major issue with the states struggling to divert their resources to address disasters

## Connecting the dots

- What are the fault lines in urban governance that India repeatedly faces the brunt of floods? Examine
- Discuss the ways through which vulnerability of certain groups in cities be reduced to disasters.



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