



Mains Marathon
Compilation

31st Oct to 5th November, 2022

Mains Marathon Compilation for the Month of November, (First Week) 2022

- 1. The accident at Morbi is a symptom of a crisis at the heart of India's urban governance. Discuss the issues facing urban local governance in India. What policy measures can be helpful in making it effective?**
- 2. What are multi-modal logistics parks (MMLPs)? How can they revolutionize India's logistics landscape?**
- 3. Enumerate the agro-climatic conditions required for saffron cultivation. Discuss the initiatives launched in India for promoting Saffron cultivation.**
- 4. Examine the significance of genetic engineering for agriculture.**
- 5. How far Regional Rural Banks (RRBs) have been successful in fulfilling the financial needs of agriculture sector and rural economy?**
- 6. What is Dhara Mustard Hybrid-11 (DMH-11)? Why there has been opposition to its commercial release? Are hybrid mustard varieties better than local ones?**
- 7. With reference to UNEP report, Adaptation target not keeping pace with growing risks. What are the reasons behind the slow adaptation? What measures can be taken for increasing its pace to tackle growing climate risks?**
- 8. What are the reasons behind Delhi's air pollution as per CSE report? What policy measures can be taken for effectively reducing the pollution?**

Q.1) The accident at Morbi is a symptom of a crisis at the heart of India's urban governance. Discuss the issues facing urban local governance in India. What policy measures can be helpful in making it effective?

Indian Express , ToI

Introduction: Contextual introduction.

Body: Write some issues facing urban local governance in India. Also write some measures to make it effective.

Conclusion: Write a way forward.

74th Constitutional Amendment Act, 1992 provided constitutional status to local urban bodies. This act added a new **part IX-A** to the Constitution entitled as 'The Municipalities' and a new Twelfth Schedule containing 18 functional items for municipalities. The recent accident at Morbi, Gujarat exposed the issues associated with the urban local governance in India.

Issues facing urban local governance:

- **Poor governance:** In some States, **elections** to urban local bodies have not been held for years, defeating the goal of decentralised governance. E.g. Tamil Nadu. There is a complete lack of planning and governance at the urban local body level.
- **Lack of management capacity:** Poor urban planning and rapid unregulated growth in cities has caused severe damage to India's cities. E.g. recent **Bangalore flooding**.
- **Financial condition:** Collectively, municipal revenue remained stuck at **1% of GDP** between 2007-08 and 2017-18. Municipal revenues in South Africa and Brazil are around 6% and 7% respectively.
- **Top-down approach:** Urban planning is done at the state government level and municipalities have little or no role in it. Poor planning, poor accountability, and poor governance have led to disasters.
- **Lack of coordination:** Poor coordination among centre, state, and various departments at local level lead to poor implementation of urban policies. There is a range of institutions with **overlapping functional jurisdiction**, leading to confusion and poor coordination.

Measures to make it effective:

- **Greater autonomy:** State governments need to begin the process of empowering elected leadership of urban local bodies. Municipalities should be more autonomous in their functioning, so that they can deliver quality service.
- **Encouraging public-private partnership:** at both state and city levels **to fund city development**.
- **Planning:** The urban local bodies should **prioritise the development programmes**. Any mega project envisaged needs to be developed taking into account the views of all the stakeholders.
- **Governance reforms:** A minimum level of staffing should be provided in metropolitan areas. Elections to ULBs should not be, generally, delayed beyond six months. The Government may consider the adoption of a common categorisation of urban bodies across the country so as to assist a systematic planning process and devolution of funds.
- To make changes **voters should demand accountability** from empowered urban bodies, not state governments with conflicts of interests.

A series of reforms are needed by the Indian government to strengthen local-level governance. To improve urban governance and delivery of services there should be appropriate government as well administrative actions.

Q.2) What are multi-modal logistics parks (MMLPs)? How can they revolutionize India's logistics landscape?

Live Mint

Introduction: Explain multi-modal logistics parks (MMLPs).

Body: Write about how multi-modal logistics parks can revolutionize India's logistics landscape.

Conclusion: Write a way forward.

Multi-modal logistics parks are **large land parcels with rail and road connectivity**, where goods coming in get seamlessly transferred to trains and other modes of transport in a **hub-and-spoke model**.

So, freight from production zones will be shipped to nearby logistics parks, where it will be aggregated and shipped on a larger vehicle to a logistics park near the consumption zone. Then, the freight arriving at the destination logistics park will be disaggregated and distributed to the consumption zones inside the city. The **first multi-modal logistics park is coming up in Chennai**.

Multi-modal logistics parks revolutionize India's logistics landscape in following manner:

- **Reduced logistics cost:** They will provide **value-added services** such as customs clearance, labelling, repackaging, and packaging. All these features will ultimately bring down the overall logistics cost from the current about **14% of GDP to less than 10% of GDP**.
- **Improved efficiency:** The MMLPs will **increase the warehouse capacity** of the country. It will help in improving the efficiency of freight movement and reduction of freight transportation cost.
- **Lower handling costs:** due to the presence of best-in-class **modern and mechanised handling** infrastructure. They are expected to reduce secondary freight costs by co-location of large warehouses and value-added services.
- **Aggregation of demand:** These parks will ensure improved train services, **use of modern equipment, and electronic data interchange**. So, the time taken for the entire process of moving goods from the production centre to ports will be reduced.
- **Container movement:** Not just for exports, MMLPs will also facilitate the movement of containers to seaports for inland demand. As of now, inland goods movement is usually not done via containers.
- **Lower warehousing charges and less pollution:** because these parks are typically situated outside city limits where land costs are lower. Reduction in freight movement on busy city roads and movement of goods in larger trucks will also lower overall cost of freight.

India aims to become **US\$ 5 trillion economy in the near term and a developed economy by 2047**. For this, connectivity and robust infrastructure will become crucial points. As logistics develop, manufacturing and other industries like warehousing and infrastructure development will also develop and make India a manufacturing hub.

Q.3) Enumerate the agro-climatic conditions required for saffron cultivation. Discuss the initiatives launched in India for promoting Saffron cultivation.

The Hindu

Introduction: Contextual introduction.

Body: Write some agro-climatic conditions required for saffron cultivation. Also write some initiatives launched in India for promoting Saffron cultivation.

Conclusion: Write a way forward.

Pampore region, commonly known as **Saffron bowl of Kashmir**, is the main contributor to saffron production. Pampore Saffron Heritage of Kashmir is one of the **Globally Important Agricultural Heritage systems (GIAHS)** recognised sites in India. India occupies the 2nd largest area but produces approximately 7 percent of the total world production.

Agro-climatic conditions required for saffron cultivation:

- **Altitude:** Saffron grows well at an altitude of 2000 meters above sea level. It needs a photoperiod (sunlight) of 12 hours.
- **Soil:** It grows in many different soil types but thrives best in calcareous (soil that has calcium carbonate in abundance), humus-rich and well-drained soil with a pH between 6 and 8.
- **Climate:** need of explicit climatological summer and winter with temperatures ranging from not more than 35 or 40 degree Celsius in summer to about -15 or -20 degree Celsius in winter.
- **Rainfall:** It also requires adequate rainfall that is 1000-1500 mm per annum.

The following initiatives are launched in India for promoting Saffron cultivation:

- The **National Saffron Mission** was initiated in the year 2010 to extend support for creation of irrigation facilities through tube wells and sprinkler sets which would help in production of better crops.
- North East Centre for Technology Application and Reach (NECTAR) under **Saffron Bowl project** has identified few locations in Arunachal Pradesh and Meghalaya for saffron cultivation.
- A new **saffron park** has been started for the purpose of processing and promoting the sale of saffron from the Kashmir Valley.
- With the **introduction of GI Tagging and new techniques** of processing, the quality of Kashmir's saffron has been raised to be among the top in the world.
- Now Saffron of Kashmir is **available at 'NAFED' shops** across the country which will give a lot of impetus to the cultivation of saffron in Jammu and Kashmir.
- The **India International Kashmir Saffron Trading Centre (IIKSTC)** provided an **e-auction** for the Saffron growers and fetching them double the prices for their crop.

A proper strategy must be devised so that the saffron growers get full benefits. The adoption of latest technologies will not only increase the production but will also ensure better quality.

Q.4) Examine the significance of genetic engineering for agriculture.

Business Standard

Introduction: Contextual introduction.

Body: Write some the significance of genetic engineering for agriculture. Also write some associated concerns.

Conclusion: Write a way forward.

Genetic Engineering is the process of modifying an organism through the artificial manipulation, reconfiguration, and replication of DNA or other molecules such as nucleic acids. India has approved commercial cultivation of only one GM crop- **Bt cotton**. Recently, the government cleared the **GM Mustard Hybrid DMH 11 for commercial cultivation**. It is

a bid to pave the way for the introduction of gene-altered food crops, which can revolutionise Indian agriculture.

Significance of genetic engineering for agriculture:

- **Altering growth in Plants:** genetic engineering modifies the genes of plants in such a way that the plant can grow faster and, allowing the plant to survive and produce more crop yield.
- **Pest Resistance:** It can be used to change the genes of plants to make them more resistant to pesticides. E.g. **Bacillus thuringiensis (Bt) crops** contain bacterium crystal toxins that make them more resistant to other insects.
- **Crop Improvement:** It can be used to increase crop yields, lower food costs, improve food quality, food security, and medicinal value. For example, **Golden Rice**.
- **Herbicide Resistance:** The use of herbicide resistant plants provides additional benefits to farmers by reducing and simplifying the use of herbicides. In today's world, genetic engineering is also assisting scientists in the transfer of resistance to non-herbicide plants.
- **Frost Resistance:** using genetic engineering, the seed plant can withstand negative temperatures, giving the plant the ability to withstand even harsh climatic conditions.

Concerns:

- **Impact on Health:** Effects of GM crops on human health can be unpredictable. They might have a tendency to provoke any allergic reaction.
- **Environmental Concern:** They can **reduce species diversity**. E.g. Insect-resistant plants might harm insects that are not their intended target. GM technology could also allow the transfer of herbicide tolerant genes from GM crop to weeds, creating "**superweeds**", which will be immune to common control methods.
- **Economic Concerns:** Introduction of a GM crop to market is a lengthy and costly process. Patenting these seeds increases the price of seeds and small farmers especially in developing countries cannot afford to buy GM seeds every year.

By resisting genetic engineering technologies, India risks falling behind the rest of the world. Transparent, science-based, and efficient biosafety laws and regulations can help India to encourage the industry to invest in development in plant varieties that are able to resist pest attacks and diseases.

Q.5) How far Regional Rural Banks (RRBs) have been successful in fulfilling the financial needs of agriculture sector and rural economy?

Business Standard

Introduction: Contextual introduction.

Body: Explain how Regional Rural Banks (RRBs) have been fulfilling the financial needs of agriculture sector and rural economy. Also write some issues.

Conclusion: Write a way forward.

Regional Rural Banks (RRBs) under Regional Rural Banks Act, 1976 are financial institutions which ensure adequate credit for agriculture and other rural sectors. They were set up on the basis of the recommendations of the Narasimham **Working Group (1975)**. The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.

Regional Rural Banks (RRBs) have been successful in fulfilling the financial needs of agriculture sector and rural economy:

- To make the agriculture sector more profitable and to increase the scope of rural industries, the government included the concept of priority sector. The RRBs are required to provide 75% of their total credit as **priority sector lending (PSL)**.

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- RRBs **increase employment opportunities** by encouraging trade and commerce in rural areas.
- RRBs perform various functions such as carrying out government operations like **disbursement of wages of MGNREGA workers** and distribution of pensions, providing **para-banking facilities** like locker facilities, debit and credit cards, mobile banking, internet banking, and UPI services.
- RRBs provide **cheap and liberal credit facilities** to small and marginal farmers, agriculture labourers, artisans, small entrepreneurs and other weaker sections.
- They **act as a catalyst element** and thereby accelerate the economic growth in the particular rural region.

Issues:

- **Incurring losses:** many of RRBs branches do not have enough business as they focus mainly on offering government's schemes like direct benefit transfer in the rural areas of the country.
- **Regional imbalance:** They are concentrating their branches in some specific states and districts & losing other prospective groups of customers.
- **Poverty alleviation:** Although various efforts have been made in this regard, lack of economic infrastructure, poor marketing strategies, poor knowledge of customers, low production, low awareness about savings have created many hurdles for RRBs.
- **Low finance:** They are dependent on NABARD to collect finance for their further operation.

RRBs should start some new insurable policies like deposit-linked cattle and other animals' insurance policies, crop insurance policies, or life insurance policies for the rural depositors.

Q.6) What is Dhara Mustard Hybrid-11 (DMH-11)? Why there has been opposition to its commercial release? Are hybrid mustard varieties better than local ones?

The Hindu

Introduction: Explain Dhara Mustard Hybrid-11 (DMH-11).

Body: Write some reasons of opposition to its commercial release. Also explain how hybrid mustard varieties better than local ones.

Conclusion: Write a way forward.

DMH-11 is a transgenic crop because it uses foreign genes from a different species. DMH-11 is a **hybrid variant of mustard** developed by researchers at The Centre for Genetic Manipulation of Crop Plants, at the University of Delhi. It is a result of a cross **between two varieties: Varuna and Early Heera-2**. The soil bacterium Barnase in Varuna induces a temporary sterility because of which it can't naturally self-pollinate and Barstar in Heera blocks the effect of barnase allowing seeds to be produced. The result is DMH-11 that not only has better yield but is also fertile.

Reasons of opposition to its commercial release:

- Activist groups allege that the GM mustard has **not been evaluated as a herbicide (glufosinate-ammonium) tolerant crop** posing potential risks.
- GM mustard plants may dissuade bees and other pollinators from pollinating the plant and this could have knock-off **environmental catastrophes**.
- Some groups argued that GM mustard poses a **health hazard and could cause cancer** as HT (Herbicide Tolerant) technology was mostly carcinogenic.

Comparison of hybrid mustard varieties to local ones:

- Trials conducted by the Indian Council of Agricultural Research (ICAR) suggest that DMH-11 has 28% **higher yields** than its parent Varuna and was 37% better than zonal checks, or local varieties that are considered the best in different agro-climatic zones.

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- These trials lasted three years and took place in eight different locations. DMH-11, rather than being an end in itself, indicates the success of the barnase-barstar system, which can be used as a platform technology to develop newer hybrids.

There should not be any unnecessary delay in the approval of GM crops as an early decision will allow seed multiplication for farmers to be able to plant in the 2023-24 crop season. DMH-11 alone may not resolve India's edible oil crisis, thus rather seed companies should invest and develop their own hybrids.

Q.7) With reference to UNEP report, Adaptation target not keeping pace with growing risks. What are the reasons behind the slow adaptation? What measures can be taken for increasing its pace to tackle growing climate risks?

Business Standard

Introduction: Contextual introduction.

Body: Explain some reasons behind the slow adaptation, with reference to UNEP report. Also write some measures that can be taken for increasing its pace to tackle growing climate risks.

Conclusion: Write a way forward.

According to the **UNEP's Adaptation Gap Report, 2022: 'Too Little, Too Slow'**, global efforts towards adaptation planning, financing and implementation are not enough to prepare vulnerable communities around the world to adapt to the rising risks from the impacts of climate change. **Reasons behind the slow adaptation:**

- **Inadequate flow of finance:** Combined mitigation and adaptation finance flows in 2020 fell short of the annual US\$100 billion global goal pledged by developed countries. The adaptation finance gap in developing countries is likely five to 10 times greater than current international adaptation finance flows and continues to widen.
- **Inadequate involvement of stakeholders** through elite capture of resources and exclusion of marginalized groups, including women, indigenous peoples and local communities.
- Inadequate attention to **local contexts and ownership** through genuine local participation in adaptation design and implementation.
- **Short-term focus and neglect of future climate risks** resulting in inadequate attention to the long-term viability of adaptation solutions.
- Retrofitting development activities as adaptation actions without specifically addressing climate risks, often resulting in marginal resilience benefits or maladaptation.

Measures to tackle growing climate risks:

- **Linking adaptation and mitigation actions:** such as nature-based solutions, from the outset in planning, finance and implementation can enhance co-benefits. It could also limit potential trade-offs, such as hydropower reducing food security or irrigation increasing energy consumption.
- **Better climate risk data and analysis:** which are essential to safeguarding lives and means of subsistence in vulnerable nations and communities.
- **Increase financing for adaptation:** developed countries should provide a clear roadmap for their promise of doubling finance for adaptation to \$40 billion, which they had promised at COP 26 in Glasgow.
- The world urgently needs a **new business model** for turning adaptation priorities into investable projects.
- There should be implementation and operationalisation of **early warning systems against extreme weather events** and slow onset changes such as sea level rise.

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Strong mitigation and adaptation are both key to avoiding hard adaptation limits. Ambitious, accelerated action to adapt to climate change is therefore paramount, together with strong mitigation efforts.

Q.8) What are the reasons behind Delhi's air pollution as per CSE report? What policy measures can be taken for effectively reducing the pollution?

Indian Express

Introduction: Contextual introduction.

Body: Explain some reasons behind Delhi's air pollution as per CSE report. Also write some policy measures that can be taken for effectively reducing the pollution.

Conclusion: Write a way forward.

India's national capital New Delhi is known for being **one of the world's most polluted cities**, with the problem getting particularly severe in the winter months. Air pollution in Delhi-NCR and the Indo Gangetic Plains is a complex phenomenon that is dependent on a variety of factors.

The Centre for Science and Environment (CSE), a Delhi-based organisation that focuses on environment-related research and advocacy, gave following reasons behind Delhi's air pollution:

- **Local sources of pollution: vehicular emissions** may have contributed around 51 percent to the PM2.5 levels in Delhi. Among these local sources, the next largest contribution was 13 percent from residential sources, and 11 percent from industries.
- **Construction activities** contributed around 7 percent to PM2.5, followed by 5 percent each from the burning of waste and the energy sector. Road dust contributed around 4 percent to PM2.5 levels.
- The 67.1 % pollution came from **NCR districts** (32.8 per cent), other districts (25.8 per cent) and biomass burning in the neighbouring states (9.5 per cent).
- With vehicles contributing to the nitrogen dioxide levels in the city, the hourly nitrogen dioxide level was also found to peak around the time that **congestion** was maximum on the roads.

Measures for effectively reducing the pollution:

- **Verifiable and measurable shift to public transport** by improving access, improving bus services and integration of metro stations with other modes of transport, besides providing an extensive network of walking and cycling infrastructure to connect neighbourhoods.
- Delhi needs **congestion and pollution pricing** and other restraint measures to control the traffic volume.
- Targets set for the **electrification of the new vehicle** fleet should be accelerated and met.
- The State Governments of the NCR region must **fill the critical infrastructure gaps** that impede the implementation of policy measures. For instance, vehicle restraint measures are difficult to implement during smog episodes if the public transport infrastructure is inadequate in the region.
- Government should find ways to **commercialize paddy straw**, as wheat straw is useful farmers have found ways to use it, unlike paddy.
- **More smog tower and anti-smog guns** should be installed to reduce the level of smog in the capital.

Appropriate political will and aware citizenry is a prerequisite to tackle the menace. India must establish **a national environment regulator** just like SEBI (Stock Market regulator), RBI (Banking sector regulator) etc.