

21 MARCH 2019

Indoor emissions affect air-quality standards

In news:

A recent study by Indian Institute of Technology (IIT), Delhi in collaboration with University of California in Berkeley, Urban Emissions, Delhi and the University of Illinois, Urbana-Champaign, has pointed out that the use of firewood, kerosene and coal in the households contributed to about 40% of the PM 2.5 pollution in the Gangetic basin districts.

Results:

- By eliminating household emissions the average outdoor air pollution levels could be reduced and brought within the national ambient air quality standards. As of early 2016, nearly half of the Indian population was reliant on biomass for household fuel.
- If all households transitioned to clean fuels, about 13% of premature mortality in India could be averted, which is equivalent to saving about 270,000 lives a year.
- In 2015, India's average annual air pollution level was 55 micrograms per cubic meter ($\mu\text{g m}^{-3}$) of fine particulate matter. Levels in New Delhi, by many estimates, the most polluted city in the world, often soared beyond $300 \mu\text{g m}^{-3}$.
- Using satellite data and chemical transport model simulations, the researchers pointed out that complete mitigation would bring down the country's average annual PM 2.5 air pollution to 38 microgram/cubic metre.
- India's national ambient air quality standard -**40 $\mu\text{g m}^{-3}$**
- World Health Organization (interim target 1) standard -**35 $\mu\text{g m}^{-3}$**

National Clean Air Programme (NCAP):

National Clean Air Programme (NCAP) was launched by Union Ministry of Environment, Forest and Climate Change. Overall objective of the NCAP is comprehensive mitigation actions for prevention, control and abatement of air pollution besides augmenting the air quality monitoring network across the country and strengthening the awareness and capacity building activities

Taking 2017 as the base year for the comparison of concentration, the tentative national level target of **20%–30% reduction** of **PM2.5** and **PM10** concentration **by 2024** is proposed under the NCAP

It will be a mid-term, five-year action plan with 2019 as the first year.

In addition, sectoral working groups, national level Project Monitoring Unit, Project Implementation Unit, state level project monitoring unit, city level review committee under the Municipal Commissioner and DM level Committee in the Districts are to be constituted under NCAP for effective implementation and success of the Programme.

Other features of NCAP include, increasing number of monitoring stations in the country including rural monitoring stations, technology support, emphasis on awareness and capacity building initiatives, setting up of certification agencies for monitoring equipment, source apportionment studies, emphasis on enforcement, specific sectoral interventions etc.

Note



National Air Quality Index:

National Air Quality Index (AQI) has been launched to disseminate air quality information.

The AQI has six categories of air quality, viz Good, Satisfactory, Moderately polluted, Poor, Very Poor and Severe with distinct colour scheme. Each of these categories is associated with likely health impacts.

AQI considers eight pollutants (**PM10, PM 2.5, NO2, SO2, CO, O3, NH3 and Pb**) for which short-term (upto 24-hourly averaging period) National Ambient Air Quality Standards are prescribed.

The Model Code of Conduct has been violated by several candidates during campaigning for the Lok Sabha elections. Does the Election Commission of India have the power to act?

The story so far: The run-up to the 2019 general election has seen several violations of the Model Code of Conduct. The Election Commission of India (EC) admitted to the Supreme Court that it was “toothless”, and did not have enough powers to deal with inflammatory or divisive speeches in the election campaign. On April 16, it imposed campaign bans, ranging from two to three days, on some political leaders, including Bahujan Samaj Party supremo Mayawati and Uttar Pradesh Chief Minister Yogi Adityanath. On Friday, April 19, the EC put a 48-hour ban on Himachal Pradesh Bharatiya Janata Party president Satpal Singh Satti for his derogatory remarks against Congress president Rahul Gandhi.

★ What exactly are the EC’s powers to ensure a free and fair election?

1. From where does the EC derive its powers and what is its extent? 1. The Election Commission of India is a creation of the Constitution(a constitutional body).
2. Article 324 says the **superintendence, direction and control** of all **elections to Parliament, the State legislatures**, and the offices of the President and Vice-President shall be vested in the EC.
3. The Article has been interpreted by courts and by orders of the EC from time to time to mean that the power vested in it is plenary in nature. It is seen as unlimited and unconditional in the matter of holding elections.
4. In other words, the EC can take any action it deems fit to ensure that elections and the election process are free and fair.

★ How is the independence of the EC Maintained? The independence of the EC is preserved by clauses in the Constitution that say the Chief Election Commissioner cannot be removed from office except in **the manner provided for the removal of a Supreme Court judge and that the conditions of his service cannot be varied to the incumbent’s disadvantage after appointment.**

Has the EC always been a multi-member body?

1. No, the Election Commission was helmed by a single Chief Election Commissioner for decades since the body was set up in 1950 based on the provisions of the Constitution.
2. It was on October 16, 1989, that two more Election Commissioners were appointed to expand the panel’s composition. Their tenure ended in 1990. Thereafter, two Election Commissioners were appointed in 1993. Since then, the EC has been a three-member panel, with a Chief Election Commissioner and two Election Commissioners.
3. Decision-making within the panel is by majority. While the CEC can

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only be removed in the manner set out for a Supreme Court judge, the other two Commissioners may be removed on the recommendation of the CEC.

- In 1995, the Supreme Court held that the Election Commissioners are on a par with the CEC and the latter is not superior in standing with the other Commissioners.
- The EC has been demanding that the protection and safeguards given to the CEC under the Constitution should also be extended to the other Election Commissioners.

★ What kind of control does the EC have over civil servants during an election?

- As the superintendence and control over all aspects of the election process is vested in the EC, it exercises direction and control over civil servants deployed for election-related work. This means that bureaucrats engaged in the administrative aspects of elections, including police officers with law and order duties, are also amenable to the EC's jurisdiction. This power enables the EC to monitor both the manner in which civil servants perform their election-related duties, and prevent activities which may be seen as partisan. The EC often cites its vast powers under Article 324 to transfer or suspend officials during election time, even though they normally come under the disciplinary purview of the government of India or the State governments.
- There have been instances of the EC transferring not only Returning Officers, but also Commissioners of Police and Superintendents of Police.
- The normal reasons cited are to prevent these civil servants from aiding any political party and to ensure a level-playing field for all contestants.

★ What are the possible actions it can take against candidates and parties?

- The EC monitors the adherence of political parties and candidates to the 'Model Code of Conduct'.
- The code is a set of norms laid down by the EC, based on a consensus among political parties, spelling out the dos and don'ts for elections. **However, it does not have statutory value**, and it is enforced only by the moral and constitutional authority of the EC.
- If the violations are also offences under election law and the criminal law of the land, the EC has the power to recommend registration of cases against the offenders.

★ **However, for some violations — such as canvassing for votes during a period when electioneering is barred, making official announcements while the MCC is in force, and making appeal to voters on sectarian grounds — the EC has the power to advise or censure candidates, in addition to directing registration of cases. In some cases, as recent incidents would show, the EC may bar candidates or leaders from campaigning for specified**



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periods. Asking individuals to leave a constituency or barring entry into certain areas are other powers that the EC may exercise. These powers are not necessarily traceable to any provision in law, but are generally considered inherent because of the sweeping and plenary nature of the EC’s responsibility under the Constitution to ensure free and fair elections. Extension of its powers:

Its powers extend to postponing elections to any constituency, cancelling an election already notified, and even to abrogate or annul an election already held. While postponement on the grounds of rampant bribery of voters has been done on a few occasions, the resort to the grave action of rescinding the notification for a Lok Sabha constituency happened in Vellore in the current general election. Earlier, by-elections had been called off on similar grounds. In March 2012, the Election Commission cancelled a Rajya Sabha election in Jharkhand after polling was completed, following the emergence of evidence that candidates were bribing voters.



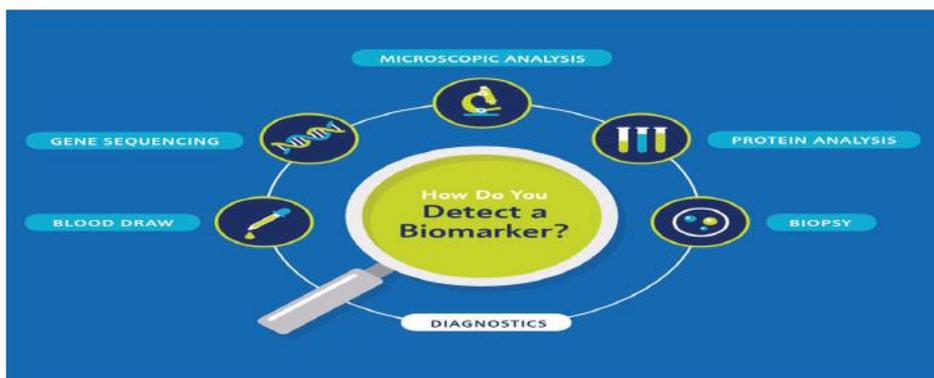
What are the limitations of the EC’s powers?

1. The EC does not have the power to disqualify candidates who commit electoral malpractices. At best, it may direct the registration of a case.
2. The EC also does not have the power to deregister any political party. However, the Constitution empowers the EC to decide whether a candidate has incurred disqualification by holding an office of profit under the appropriate government, or has been declared an insolvent, or acquired the citizenship of a foreign state.
3. When a question arises whether a candidate has incurred any of these disqualifications, the President of India or Governor has to refer it to the EC. The poll panel’s decision on this is binding.

Biomarker

- A biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process, or of a condition or disease.
- A biomarker may be used to see how well the body responds to a treatment for a disease or condition.
- It is also called molecular marker and signature molecule.
- In medicine, a biomarker can be a traceable substance that is introduced into an organism as a means to examine organ function or other aspects of health.
- For example, rubidium chloride is used as a radioactive isotope to evaluate perfusion of heart muscle.
- In cell biology, a biomarker is a molecule that allows the detection and isolation of a particular cell type.
- In genetics, a biomarker (identified as genetic marker) is a DNA sequence

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that causes disease or is associated with susceptibility to disease. They can be used to create genetic maps of whatever organism is being studied.

Indian bullfrog

Why in news?

- The Indian Bullfrog present in Andaman Islands is emerging as an Invasive species.

About Indian Bullfrog:

- It is also known as Indus Valley bullfrog or Asian bullfrog.
- It is a large species of frog found in mainland Myanmar, Bangladesh, India, Pakistan, Afghanistan, and Nepal.
- It has been introduced in Madagascar and India's Andaman Islands, where it is now a widespread invasive species.



About Invasive species:

- Invasive species can harm both the natural resources in an ecosystem as well as threaten human use of these resources.
- An invasive species can be introduced to a new area via the ballast water of oceangoing ships, intentional and accidental releases of aquaculture species, aquarium specimens or bait, and other means.
- Invasive species are capable of causing extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats.
- This can result in huge economic impacts and fundamental disruptions of coastal and Great Lakes ecosystems.

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