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Date: November 28, 2019

To

Justice Adarsh Kumar Goel,
Chairperson, National Green Tribunal (NGT)

Justice Amreshwar Pratap Sahi,
Chief Justice, Madras High Court

Justice K Ramakrishnan,
Judicial Member, NGT Southern Zone

Mr. K.C.Karuppannan,
Minister, Environment and Pollution Control, Tamil Nadu

Mr. Chandra Kishore Mishra,
Secretary (EF&CC), Ministry of Environment Forests and Climate Change

Mr. S P Singh Parihar,
Chairperson, Central Pollution Control Board

Mrs. Shruti Rai Bhardwaj,
Scientist E, Ministry of Environment Forests and Climate Change

Mr. Shambhu Kallollikar,
Principal Secretary to Government of Tamil Nadu, Environment and Forests Department

Mr. A.V. Venkatachalam,
Chairperson, Tamil Nadu Pollution Control Board

Subject: Requesting Chennai's inclusion in National Clean Air Programme

Dear Madam/Sir,

I write to you from Citizen consumer and civic Action Group (CAG), a 34 year old non-profit and non-political organisation that works towards protecting citizens' rights in environmental, civic and consumer issues and promoting good governance processes including transparency, accountability, and participatory decision-making.

In the National Clean Air Programme (NCAP), released by the Ministry of Environment, Forests and Climate Change (MoEFCC) in January 2019, India had its first ever national programme to address the air pollution issue. MoEFCC had said that in its current form, NCAP is a midterm programme and will be in effect from 2019 to 2024. The Central Pollution Control Board (CPCB) had then identified a list of polluted cities in which the prescribed National Ambient Air Quality Standards (NAAQS) have been violated.¹ These cities have been identified based on the ambient air quality data obtained between 2011-15 under the National Air Quality Monitoring Programme (NAMP) even though more recent data (up to 2017) was available.²

¹http://www.indiaenvironmentportal.org.in/files/file/NAAQMS_Volume-I.pdf

²<http://www.indiaenvironmentportal.org.in/files/file/airpocalypse-iii.pdf>

Trustees

Dr. Arjun Rajagopalan (*Surgeon*)
Dr. George Thomas (*Orthopaedic Surgeon*)
Dr. R. Hema (*Associate Professor*)

Dr. C. Rammanohar Reddy (*Economist and Editor*)
Mr. Sriram Panchu (*Senior Advocate*)
Dr. Suchitra Ramkumar (*Doctor and Teacher*)
Mr. Keshav Desiraju (*IAS, Retd.*)

Advisors

Ms. Tara Murali (*Architect*)
Mr. N.L. Rajah (*Senior Advocate*)



I would like to draw your attention to the fact that Chennai is the only major polluted city and one of the 12 cities with a population of more than a million to be left out of the non-attainment cities list.³ According to NAMP data available, there are 241 non-attainment cities in India. Not being on this list leaves Chennai out of the national discourse on air pollution and its mitigation.

The air quality in Chennai is affected by a variety of factors such as localised industrial pollution,⁴ vehicular emissions, dust pollution, and garbage burning. Manali is classified as critically polluted under CPCB's Comprehensive Environment Pollution Index (CEPI).⁵ Coal-fired power plants with a combined capacity of 3,360 MW while another 4,630 MW of coal-fired power plants are in the pipeline in the region between Ennore and Katupalli.⁶ The continued loss of city's green cover to make space for built infrastructure does not help keep Chennai's air free of pollution.⁷

Though Chennai is blessed with a coastline that mitigates a part of the air pollution, the city consistently breaches the permissible limits for criteria pollutants. According to the NAMP data for Chennai from 2004 to 2018, PM10 levels have consistently breached the permissible levels (figure 1).⁸ It is evident from this data that Chennai met the conditions to be included in the NCAP as the criteria for a city's inclusion in non-attainment cities is that the annual average levels of one or more of the twelve criteria pollutants exceed permissible limits for two consecutive years.⁹

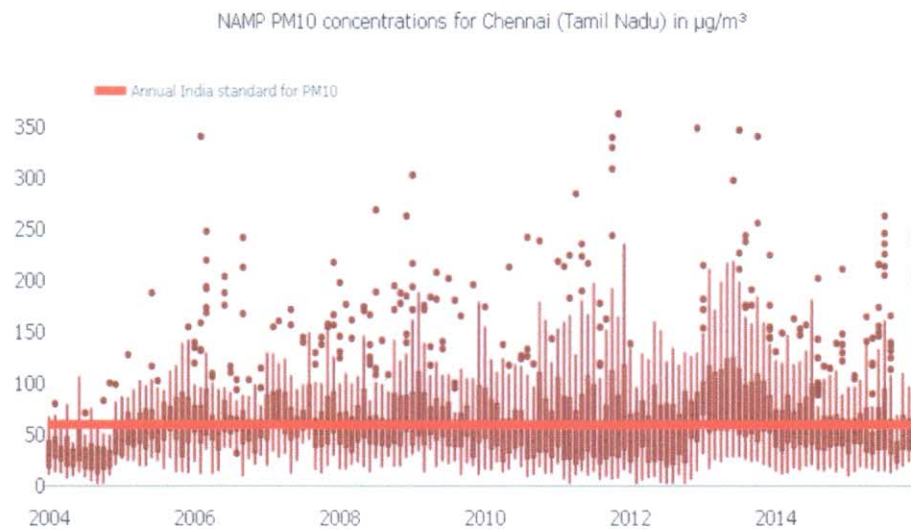


Figure 1: NAMP PM10 concentrations for Chennai in $\mu\text{g}/\text{m}^3$, 2004 to 2015
Source: <http://www.urbanemissions.info/india-apna/chennai-india/>

³<http://www.newindianexpress.com/cities/chennai/2019/jan/11/chennai-only-metro-city-not-in-natl-clean-air-plan-1923509.html>

⁴<http://manalipetro.com>

⁵<http://www.indiaenvironmentportal.org.in/files/file/Industry-pollution-CPCB-NGT-order.pdf>

⁶<https://storyofennore.wordpress.com/about/industries-and-developmental-projects/>

⁷<http://www.newindianexpress.com/cities/chennai/2019/aug/09/in-4-years-chennai-lost-11-breathing-spaces-to-concrete-structures-2016099.html>

⁸<https://www.tnpcb.gov.in/air-quality.php>

⁹ Section 5 of the National Clean Air Programme.



Air quality monitoring is the essential first step in curbing air pollution, enable stakeholders with crucial data to identify areas requiring attention, and measure the progress. In January 2019, CAG deployed outdoor air quality monitors (AQM) for continuous monitoring of PM10 and PM2.5 in five locations in Chennai - Alwarpet, Kovilambakkam, Anna Nagar, Ramapuram, and Kodungaiyur.¹⁰ The data from the monitors is correlated with the data recorded on the government monitors in Chennai.¹¹ Alwarpet and Kovilambakkam were found to exceed the limits specified under NAAQS on more than two consecutive days ten times or more just in the month of January 2019.

The data from four of our monitors in different parts of the city show that between 01 October 2019 and 17 November 2019, daily average of PM10 breached satisfactory levels on 18 days while daily average of PM2.5 breached satisfactory levels on 12 days (figure 2). PM10 levels were above satisfactory on more than two consecutive days for all 18 days, and PM2.5 levels were above satisfactory on more than two consecutive days for 11 days.¹² In the report titled "Unfit to Breathe III",¹³ released by Healthy Energy Initiative, PM2.5 levels were found to be above the prescribed limits under NAAQS, across all 15 sampling locations in Chennai. Heavy metals such as manganese, lead, nickel and crystalline silica, that are hazardous to human health, were found to be elevated in the report.

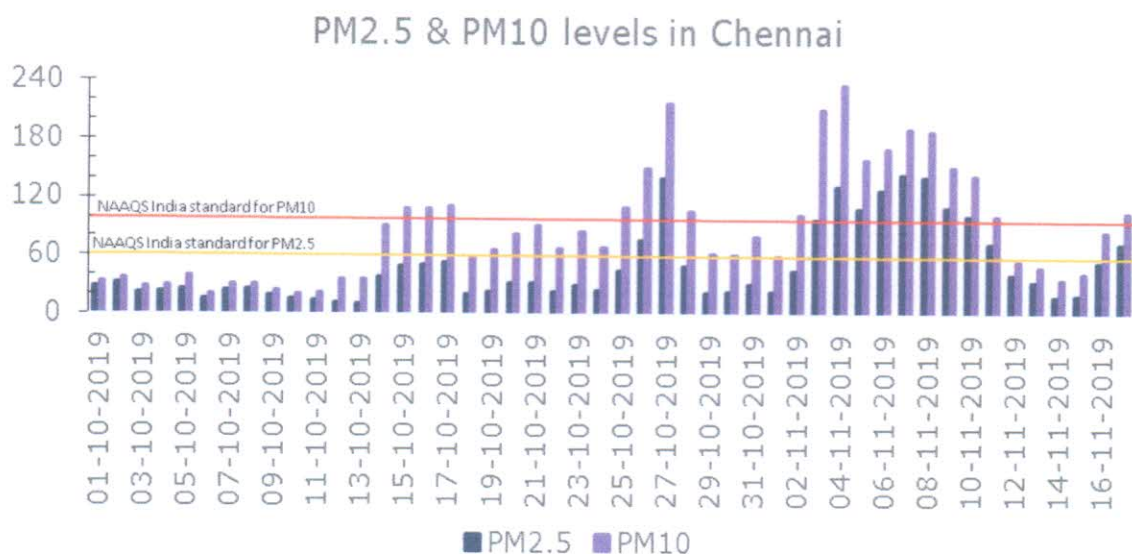


Figure 2: Daily average of PM2.5 and PM10 levels for Chennai from four AQM devices

CAG' AQMs measure two of the 12 pollutants listed in NAAQS. While drawing conclusions from the data, one needs to take cognisance of the fact that Chennai has just three official continuous air monitoring stations (CAMS) that report all the criteria pollutants and eight manual air monitoring stations that report data on PM10, NO₂ and SO₂. For proper representation of the sources and range

¹⁰<https://www.cag.org.in/blogs/trends-and-insights-air-quality-monitoring-chennai-and-cuddalore>

¹¹http://www.tnpcb.gov.in/pdf_2019/Bhogifestival2019.pdf

¹²This refers to number of days PM10 and PM2.5 levels were above safe levels for more than 2 consecutive days (please refer to figure 2).

¹³<https://storyofennore.files.wordpress.com/2019/11/unfit-to-breathe-iii.pdf>



of pollution in different regions of Chennai, the city needs a minimum of 38 continuous air quality monitors spread across the city.¹⁴

A 2013 study by Delhi-based Centre for Science and Technology (CSE) had found that though the annual average pollutant levels in Chennai were lower than that of the other big cities, they varied between moderate to critical, and without the coastal winds, it would be worse.¹⁵

Chennai ranked number two out of 14 Indian cities in terms of emissions and energy consumption for urban commute in a recent report by CSE titled "The Urban Commute".¹⁶ This report tracked emissions of CO₂, toxic pollutants, PM2.5, PM10, and NO₂ due to urban commute. Chennai was found to have the longest (distance) and highest (time) per capita trip, chiefly through private cars and two-wheelers, contributing to higher emissions of air pollutants. Thus, transport sector in Chennai is a crucial sector which tends to be overlooked but it contributes 25 per cent of PM2.5 emissions in Chennai.¹⁷

According to the global SO₂ emission hotspot database,¹⁸ Chennai is one of the major anthropogenic SO₂ emission hotspots in the country. Thermal power plants and other industries burning coal and oil are responsible for over two-thirds of these emissions. With power plants in Ennore and petrochemical clusters in Ennore and Manali, Chennai has consistently witnessed an increase in SO₂ emissions in the period between 2005 to 2015 (figure 3). SO₂ emission limits for coal-fired power plants were introduced for the first time in December 2015 by MoEFCC, but the deadline for the installation of flue-gas desulphurisation (FGD) in power plants has been shifted from 2017 to 2022. An article published in The Hindu in 2015, titled "The quality of air you breathe in Chennai is worse than in Delhi", highlighted that SO₂ and carbon monoxide (CO) were the prominent pollutants in Chennai.¹⁹ The same article mentions that in the period between January to June 2015, "a third of all days in Chennai were either of severe, very poor or poor air quality". SO₂ continues to be a growing threat to the public health, environment, and heritage buildings in Chennai.

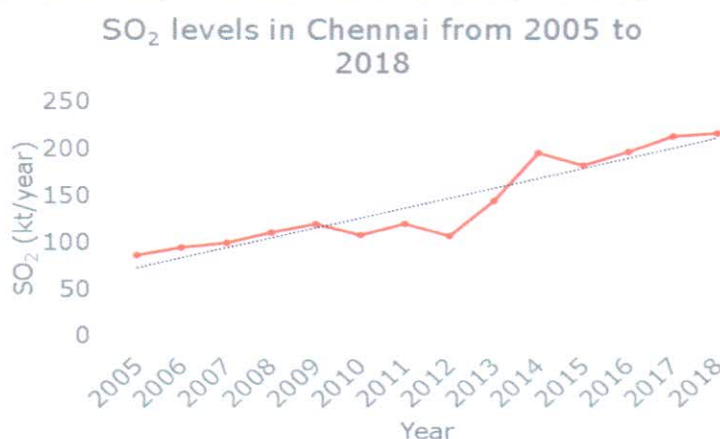


Figure 3: SO₂ levels in kilo-tons/year based on satellite images from NASA.
Reference: Data from Global SO₂ emission hotspot database

¹⁴<http://www.urbanemissions.info/india-apna/chennai-india/>

¹⁵<https://www.cseindia.org/chennai-faces-a-unique-pollution-challenge-pollution-levels-that-appear-to-be-low-or-moderate-but-are-not-so-5078>

¹⁶<https://www.cseindia.org/the-urban-commute-8950>

¹⁷<https://timesofindia.indiatimes.com/city/chennai/vehicles-emit-25-of-pm2-5-in-city-but-always-get-clean-chit/articleshow/72062431.cms>

¹⁸https://storage.googleapis.com/planet4-international-stateless/2019/08/e40af3dd-global-hotspot-and-emission-sources-for-so2_16_august-2019.pdf

¹⁹<https://www.thehindu.com/news/national/the-quality-of-air-you-breathe-in-chennai-is-worse-than-in-delhi/article7422559.ece>



Chennai needs national attention and concomitant efforts for air pollution mitigation. NCAP outlines monitoring guidelines and budgets for pollution mitigation in cities, and Chennai's exclusion will definitely have budget implications, as money will not be directly available to Chennai for air pollution mitigation. I therefore request that Chennai be included in the list of non-attainment cities and accommodated within the ambit of the national framework, thus providing much needed access to structured methods, knowledge, and finances to combat air pollution. This should be a part of the larger air pollution mitigation plan developed in consultation with all stakeholders including the general public.

Thanking you.

Sincerely,

Om Prakash Singh
Executive Director
Citizen consumer and civic Action Group



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

SPEED POST

A-19014/29/Misc/2019-20/AQM 10259

December 26, 2019

Shri Om Prakash Singh,
Executive Director,
Citizen Consumer and Civic Action Group
246, TTK Road (J.J. Road)
Alwarpet, Chennai, Tamilnadu -600018


Sub.: Request for inclusion of Chennai city in National Clean air Programme and in the list of Non-attainment cities (NAC).

Sir,

This has reference to your letter dated November 18, 2019, on the above mentioned subject. It is to inform that, as per the CPCB criteria cities exceeding annual National Ambient Air Quality Standards with respect to any one of the notified parameters for consecutively for five years and with adequate number of ambient air quality monitoring stations is considered for non-attainment cities (NAC) calculation (Minimum three (3) stations are considered as adequate number of monitoring stations in a city / town).

There are 11 Manual & 4 Continuous Monitoring Stations is installed in Chennai city, and out of five years (2014-2018), pollutant data for two years i.e., for 2014 & 2015 were within the National Standard limit, therefore the city was not included in the present list of NAC. However, list of NAC shall be updated every year as per the monitored data.

Yours faithfully,


Lo (V. K. Shukla)
Additional Director &
Head AQM Division