

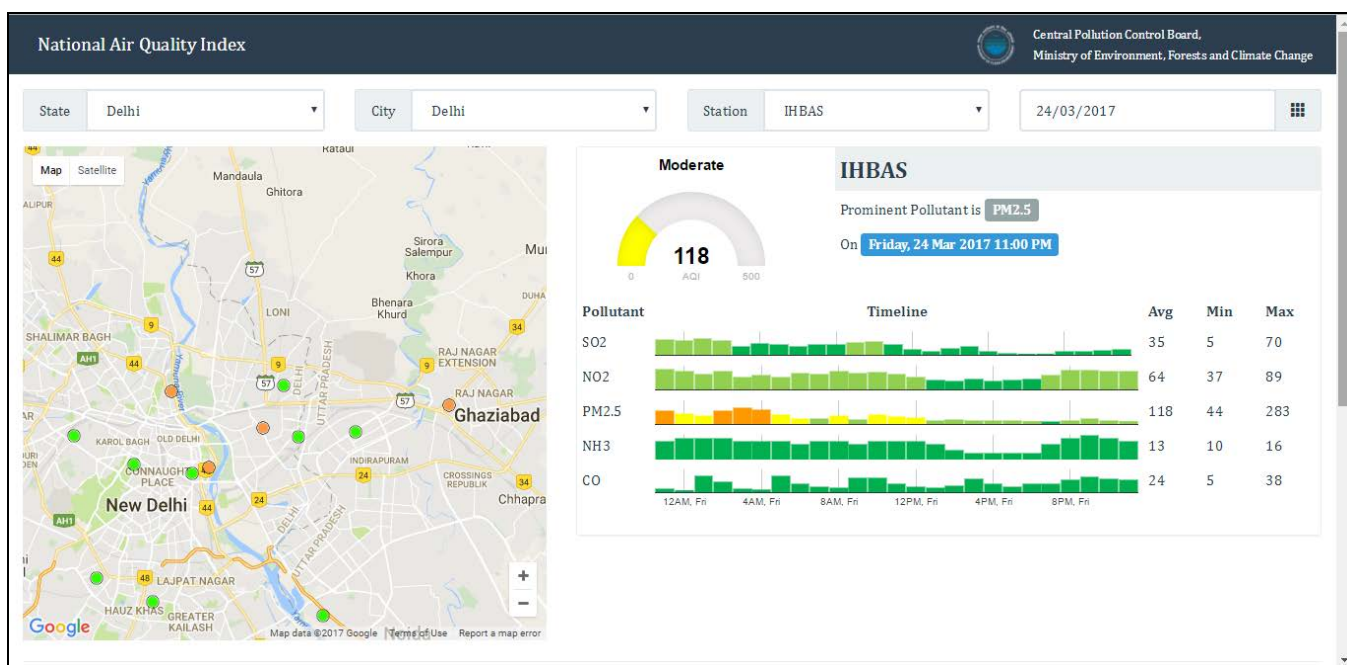
## Scientific & Technical Activity : (Information Technology)

### 3. Integrated Data transmission of Real-Time Systems from Continuous Ambient Air Quality Monitoring Stations (CAAQMS) to CPCB Servers

CPCB, SPCBs and PCCs are monitoring ambient air quality of different cities and publish real-time data in public domain in their respective websites, for taking corrective measures in time. CPCB has been relentlessly working on continuous operation and connecting data of these CAAQM stations on a network. The project is being executed to bring the data from all the operational stations to one place i.e. CPCB.

#### **Progress/Achievement made during 2016-17:**

In the beginning of the year, CPCB network had data connected from 40 stations in 22 cities spread in 11 States. A National Air Quality Index, which combines the effect of all air quality parameters and generates a single number, has been developed by CPCB. The National AQI communicates air quality in simple terms of one number and one colour for general public. **Air Quality Index (AQI)**, inaugurated by the Hon'ble Prime Minister of India, is being continuously published on a web portal of CPCB, updated on hourly basis.



The AQI software fetches the ambient air quality data from the CAAQM stations and publishes the values of AQI for each parameter at each station. There is no human

interference in the process of fetching the data and publishing it. This application has become very popular and has created awareness in the field of environment. Media has also started reporting the air quality in the country on day-to-day basis, especially in Delhi city. This network is expanding rapidly. By the end of March 2017, it integrated 58 stations located in 35 cities of 13 States.

**State-wise Status:** Following is the list of CAAQM stations installed at different states and data of these stations is being used to display the AQI by CPCB:

S. No.	State	City	Station Name
1	Andhra Pradesh	Tirupati	Tirumala
2		Visakhapatnam	GVM Corporation
3	Bihar	Gaya	Collectorate, Gaya
4		Muzaffarpur	Muzaffarpur Collectorate
5		Patna	IGSC Planetarium Complex
6	Delhi	Delhi	Anand Vihar
7			DTU
8			IHBAS
9			ITO
10			Mandir Marg
11			NSIT Dwaraka
12			Punjabi Bagh
13			R K Puram
14			Shadipur
15			Siri Fort
16	Gujarat	Ahmedabad	Maninagar
17	Haryana	Faridabad	Sector-16A, Faridabad
18		Gurgaon	Vikas Sadan
19		Panchkula	Sector - 6, Panchkula
20		Rohtak	MD University
21	Karnataka	Bangalore	BTM Layout
22			BWSSB Kadabesanahalli
23			Ciry Railway Station
24			Peenya
25			Sanegurava Halli
26	Maharashtra	Aurangabad	More Chowk-Waluj
27		Chandrapur	Chandrapur
28			MIDC Khutala
29		Mumbai	Bandra
30		Nagpur	Opp: GPO, Civil Lines
31		Nashik	Gangapur Road
32		Navi Mumbai	Airoli
33		Pune	Karvve Road Pune

34		Solapur	Solapur
35		Thane	Pimpleshwar Mandir
36	Punjab	Amritsar	Golden Temple
37		Mandigobindgarh	Punjab Agricultural University
38	Rajasthan	Jaipur	V K Industrial Area
39		Jodhpur	Collectorate, Jodhpur
40	Tamilnadu	Chennai	Alandur Bus Depot
41			IIT
42			Manali
43	Telangana	Hyderabad	Bollaram
44			ICRISAT
45			IDA Pashamylaram
46			Sanathnagar
47			Zoo Park
48	Uttar Pradesh	Agra	Sanjay Palace
49		Kanpur	Nehru Nagar
50		Lucknow	Central School
51			Lalbagh
52			Talkatora District Industries Center
53		Varanasi	Ardhali Bazar
54		West Bengal	Durgapur
55	Haldia		Haldia
56	Howrah		Howrah
57	Kolkata		Rabindra Bharati University
58			Victoria
<b>Total:</b>	13	35	58

### **Implementing organizations along with details of responsibilities:**

- 1. SPCBs/PCCs:** Installation and O& M of the CAAQM stations.
- 2. CPCB:** Installation and O&M of CAAQM stations of CPCB and integration of data from all the CAAQMS stations installed by different organizations on a single platform and generation of AQI.

**AQI Bulletin** containing the data for each city is published every day at 4:00 pm for further easy understanding of the citizens. The entire process of generating AQI values, publishing every hour, preparation of bulletin and uploading it on CPCB website, is automated. One of the recent AQI Bulletins (March 07, 2017) is displayed at Table-1.

**Table-1: AQI Bulletin**



**Air Quality Index on Mar 07, 2017 @ 04:00 PM**

*(Average of past 24 hours)*

City	Air Quality	Index Value	Prominent Pollutant	Based on number of monitoring stations
Agra	Moderate	175	PM <sub>2.5</sub>	1
Ahmedabad	Poor	226	PM <sub>2.5</sub>	1
Amritsar	Satisfactory	72	PM <sub>2.5</sub>	1 <sup>#</sup>
Aurangabad	Moderate	122	O <sub>3</sub>	1
Bengaluru	Satisfactory	56	PM <sub>2.5</sub> , NO <sub>2</sub>	4
Chandrapur	Moderate	113	PM <sub>10</sub>	2
Chennai	Satisfactory	61	PM <sub>2.5</sub> , CO	3
Delhi	Poor	228	PM <sub>2.5</sub> , PM <sub>10</sub>	9
Durgapur	Moderate	177	PM <sub>10</sub>	1 <sup>#</sup>
Faridabad	Poor	202	PM <sub>2.5</sub>	1
Gaya	Moderate	191	PM <sub>2.5</sub>	1
Gurgaon	Poor	227	PM <sub>2.5</sub>	1
Haldia	Moderate	127	PM <sub>10</sub>	1
Howrah	Severe	442	O <sub>3</sub>	1 <sup>#</sup>

**Possible Health Impacts**

Good	Minimal impact
Satisfactory	Minor breathing discomfort to sensitive people
Moderate	Breathing discomfort to the people with lungs, asthma and heart diseases
Poor	Breathing discomfort to most people on prolonged exposure
Very Poor	Respiratory illness on prolonged exposure
Severe	Affects healthy people and seriously impacts those with existing diseases

**Notes**

# Some stations have data available at 3 PM.

\* In case of a city with multiple monitoring locations, average value is used to indicate air quality. Air quality may show variations across locations, and averaging is not a scientifically sound approach. However, for the sake of simplicity this method is being followed. For AQI of monitoring locations, website (<http://cpcb.nic.in>) may be referred.



**Air Quality Index on Mar 07, 2017 @ 04:00 PM**

*(Average of past 24 hours)*

City	Air Quality	Index Value	Prominent Pollutant	Based on number of monitoring stations
Hyderabad	Satisfactory	98	O <sub>3</sub> , PM <sub>10</sub>	5
Jaipur	Moderate	125	PM <sub>10</sub>	1
Jodhpur	Poor	221	PM <sub>2.5</sub>	1
Kanpur	Very Poor	342	PM <sub>2.5</sub>	1
Kolkata	Moderate	152	PM <sub>10</sub>	2 <sup>#</sup>
Lucknow	Poor	213	PM <sub>2.5</sub>	3
Mumbai	Moderate	125	PM <sub>10</sub>	1
Muzaffarpur	Poor	219	PM <sub>2.5</sub>	1
Nagpur	Moderate	174	O <sub>3</sub>	1
Nashik	Moderate	163	O <sub>3</sub>	1
Navi Mumbai	Satisfactory	79	PM <sub>10</sub>	1
Panchkula	Satisfactory	63	PM <sub>2.5</sub>	1
Patna	Moderate	181	PM <sub>2.5</sub>	1
Pune	Satisfactory	63	PM <sub>10</sub>	1

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*(Average of past 24 hours)*

City	Air Quality	Index Value	Prominent Pollutant	Based on number of monitoring stations
Rohtak	Satisfactory	55	PM <sub>2.5</sub>	1 <sup>#</sup>
Solapur	Moderate	111	PM <sub>10</sub>	1
Thane	Moderate	165	PM <sub>2.5</sub>	1
Tirupati	Moderate	105	NO <sub>2</sub>	1
Varanasi	Moderate	192	PM <sub>10</sub>	1
Visakhapatnam	Satisfactory	66	PM <sub>10</sub>	1

PM<sub>2.5</sub>: Particulate Matter (<2.5 micron size); O<sub>3</sub>: Ozone; NO<sub>2</sub>: Nitrogen Dioxide; PM<sub>10</sub>: Particulate Matter (<10 micron size); CO : Carbon Monoxide

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Further, to create more informative to the common citizens, a mobile App “Sameer” has been developed and is available in Google Play Store. With this one can know the status of ambient air quality handy of his desired location. By enabling the GPS Location of Mobile, the user can also get the alert messages about the AQI of his nearest location. It is also provisioned in the Sameer App that anyone can lodge the complaint against air pollution by providing proper information such as source of pollution, location’s landmark, his contact details etc. to address the issue by the concerned departments.



    
Ministry of Environment, Forest & Climate Change

**An Initiative of CPCB & Ministry of Environment, Forest and Climate Change**

CPCB launches an mobile App where public can view the Ambient Air Quality in its neighborhood and can submit complaint of open burning at any location

**Come together and be part of Clean India Drive**

Use App and prevent man made pollution by reporting it to controlling authorities directly

**FEATURES**

- ✓ Current Air Quality Index
- ✓ Air Quality Bulletin
- ✓ Report Open Burning and Air Pollution Related Issue

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