

**RECOMMENDATIONS OF THE WORKSHOP ON
REQUIREMENT, PRACTICES, GAPS AND CHALLENGES IN AIR QUALITY
STUDY FOR PREPARATION OF EIA REPORT**

ORGANISED BY IAAPC (DC) ON AUGUST 27, 2016

The workshop was organised by IAAPC(DC) and more than 100 QCI accredited consultants and experts working in the field of air quality monitoring attended. The following experts have given technical presentations in this workshop.

1. Prof. A.L. Aggarwal,
2. Dr. J.K. Moitra,
3. Dr. D. Saha,
4. Dr. S.D. Attri,
5. Dr. G.V. Subrahmanyam
6. Dr. Mohit Roy,
7. Dr. J.S. Sharma,
8. Dr. Bhasker,
9. Mr. Rajesh Kanungo,
10. Mr. Sameer Kadam,
11. Dr. Rajendra Prasad.

Dr. C.K. Varshney, Dr. G.V. Subrahmanyam, Dr. Nalini Bhat, Dr. Attri and Dr. Rastogi chaired and co-chaired various technical sessions.

Based on deliberation the following recommendations are made to be sent to MoEF / CPCB / QCI for consideration:-

1. Only industry specific pollutants (Not all 12 parameters given in NAAQS) to be monitored for generation of baseline data for EIA study. For example:- for Thermal power plants (except hydro and natural gas fired) only PM₁₀, PM_{2.5}, SO₂, NO₂, and BAP, As, Ni and Pb in PM₁₀ shall be monitored in ambient air. Monitoring of other parameters are not required. MoEF / CPCB may issue necessary guidelines for all categories of industries requiring EC.
2. Number of monitoring stations to be setup for baseline data generation should be indicated in TOR. Basis of identifying the locations of monitoring stations should be based on modelling studies (using met data from IMD) and consideration of sensitive receptors in the study area. CPCB may issue guidelines for the same. The proponent / consultant can source the meteorological data from nearby IMD met. station. This data can be used to produce monthly wind rose. Based on the site and period specific wind rose 70-80 % time of wind direction(s) can be easily projected. Then covering about 70-80% of time the upwind or downwind direction can be projected. A guideline should be given for each sector of development project such as:

Total Number Monitoring Locations= Number of sensitive receptors + Number for monitoring locations for different pollutants (depending upon the impact zone and scale of project and pollutant of relevance)

Frequency of monitoring: Continuously for maximum 1 week in any representative season (7 set of data synoptically obtained at all the monitoring locations for all the parameters)

3. It should be clearly stated in TOR that simultaneous monitoring at all the monitoring locations are necessary for baseline data generation. MoEF may be requested to advise Centre/ State Expert Appraisal Committees that TOR should clearly specify that simultaneous (synoptic) measurement of air quality parameters is necessary (i.e. measurement at all sites to be carried simultaneously) for generating baseline air quality data for EIA study. Also a detailed account of ecological / social features, including receptor(s) identification, prevailing at each monitoring site to be provided.
4. Once the emission data and met. data (project specific and location specific) is available then simple modeling can be used to calculate the location (zones) of maximum GLC for different major categories of wind speeds. The locations can be prioritized and fixed accordingly
5. SCREEN3 can be used to estimate ambient impacts from point, area, and volume sources and flares to a distance of 10 km at 100% of emission load (with and without proposed controls). There should be Significant Impact Threshold (SIT) which can be given under TOR (guidelines can be easily developed based on regional pollution levels) for worst met conditions (F Stability). The set of 54 worst-case meteorological conditions are built in to these SCREEN models.

SCREEN3 simply demonstrating that the maximum predicted impacts (without the addition of background concentrations) are below the acceptable adverse impact levels.

In case the worst case GLC is exceeding the SIT then comprehensive modelling based on ISCST3 can be applied.

6. CPCB / MoEF should issue sampling and analysis procedures/ standards for parameters like Hg, VOC, NMHC, CH₄ etc. for which no Indian standards exist.
7. In case of expansion projects, where industry is maintaining CAAQMS data, MoEF should allow to use such data for EIA study.
8. CPCB/MoEF may be requested to prescribe "calibration protocol" to be followed for instruments used for ambient air quality monitoring.
9. ~~CPCB / MoEF should come up urgently with a certification scheme for air quality monitoring instruments required for EIA study. QCI to issue a guideline that CPCB (or any other agency certified by CPCB) accredited instrument should only be used for EIA study.~~
10. QCI may consider to issue a set of guidelines for minimum cost of EIA study, considering the expenses on air quality monitoring for example:- cost of filter paper, chemicals, requirement of field equipment etc. In this case also CPCB

costing on air quality monitoring should be considered. The EIA consultant/study executer should have adequate fund for the study to carry out proper field investigation/modelling etc.

11. There should be a portal maintained at MOEFCC, where in the baseline data monitored/reported under the respective project should be posted at the project latitude/longitude of the site with time lines for the project under EC process. The subsequent post project monitoring data (as reported by project proponent at the frequency of six monthly reports) should also be posted at the same latitude/longitude. By maintaining such a portal the spatial & temporal trend of air quality levels could be monitored and checks and balances could be traced for other projects that are planned for future. This could also serve the secondary data base for future projects also and national scenario can be generated.
12. Monitoring of SO₂ using Mercuric Chloride in absorbing media should be reviewed (as mercury bearing reagent disposal is an issue). Similarly monitoring of NO₂ using Sodium Arsenite in absorbing media should be reviewed. CPCB should introduce new methods for monitoring these 2 pollutants.
13. Monitoring of CO may be insisted only when residential areas are located close to major traffic intersections or Highway and there is going to be more addition of traffic due to a project.
14. It was suggested that IAAPC (DC) should organise orientation programme for expert members of EAC / SEIAA on air quality monitoring for baseline data generation for EIA Study.
