



WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2022

**TOWARDS A RESILIENT PLANET:
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE**

February 16-18, 2022 (Virtual)



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WRI INDIA

CSTEP
CENTER FOR STUDY OF
SCIENCE, TECHNOLOGY & POLICY

Evidence Based Action Planning to Achieve Clean Air

THEMATIC TRACK SUMMARY

Venue: Hemis

Date: February 16, 2022

Time: 03:30 PM - 05:00 PM (IST)

Suggested Citation

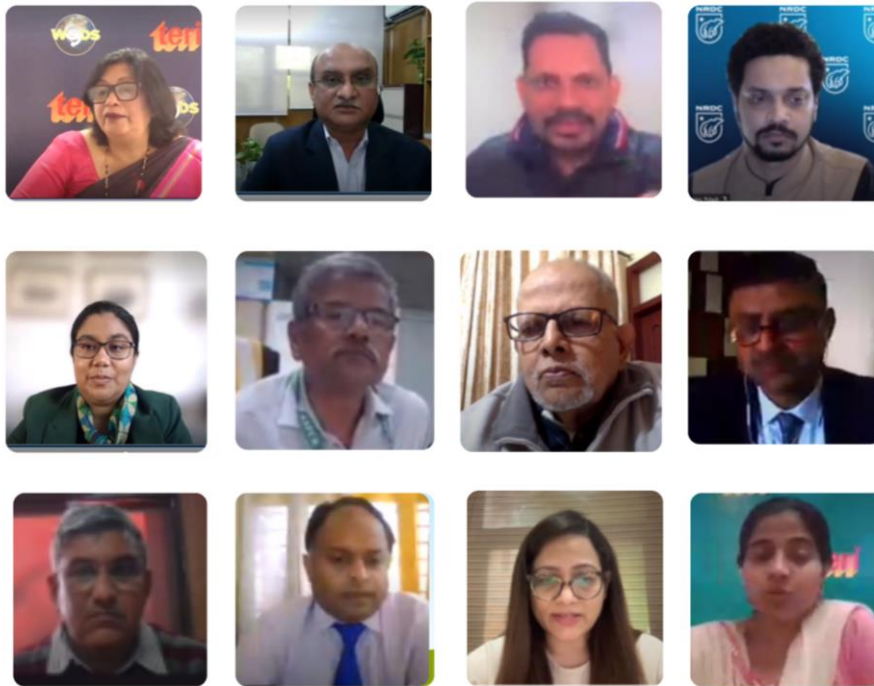
World Sustainable Development Summit (2022), Evidence Based Action Planning to Achieve Clean Air, Thematic Track Summary (Rapporteurs: Md Hafizur Rahman and Prabhat Sharma), New Delhi: The Energy and Resources Institute.

Actionable Messages

Message 1: Collaboration of stakeholders, government regulatory bodies and institutions will lead to achieve National Clean Air Program (NCAP) objectives.

Message 2: Scientific evidence through studies and micro level interventions will help to understand air pollution better.

Message 3: Evidence based action plan should be implemented by taking an airshed approach which should be further strengthened through public engagement and stakeholder involvement.



Narrative

The Thematic Track deliberated on **Evidence based action planning to achieve clean air**. The objectives of this event was to discuss key low-hanging interventions for immediate and medium term air quality gains, learning's which can be used to effectively manage the air quality in similar Indian cities, major challenges faced by the regulatory agencies and the learning's from the experiences of other countries and cities in tackling the problem of air quality. Along with objectives discussions, studies were shared and reports were launched during the event.

Dr Vibha Dhawan, Director General, TERI, delivered welcome note for the session "Evidence based action planning to achieve clean air" and welcomed all the speakers and panelists. She emphasized on collaborative efforts made by institutions to conduct source apportionment studies in different non-attainment city identified under National Clean Air Program (NCAP). **Dr Dhawan** also talked about efforts to identify and quantify the air pollution from different activities like crop residue burning during the month of October and November. She thanked WRI, CSTEP and other state pollution control boards for their participation and contribution to archive the NCAP objectives for Non-attainment cities.

Dr Prashant Gargava, Member Secretary, Central Pollution Control Board inaugurated the session. He pointed out some efforts made by CPCB and DPCC to improve air quality in Delhi and talked about DTC buses fuel transition event happened in 2000. **Dr Gargava** emphasized over visible smoke reduction after implementation of green buses transition and shutting down of the power plants within the Delhi city. He also elaborated the need of collaborative efforts by stake holders, government agencies and institutions to obtain the NCAP objectives. He also talked about micro action plans need for hotspots within the cities and importance of their evidence to track the potential of developed action plan.

Dr Anju Goel, Fellow, TERI, presented the outcomes from Source apportionment study conducted by TERI in Surat city. She showed the multi pollutants emission inventory for different sectors. She talked over action plan developed based on dispersion and receptor modelling outcomes. Alternated and BAU scenario were also discussed in the presentation. **Dr Anju Goel** revealed the 20 intervention for alternate scenario to mitigate the air pollution in Surat city.

Dr Ajay Nagpure, Program Head - Air Quality, WRI explained the role of WRI in the source apportionment study of Surat city. He showed emission inventory prepared by TERI in his presentation. **Dr Ajay** talked about some key works which have been done by WRI during the study. Clean construction guidelines handbook, identification of hotspots for waste burning and quantification of emissions from restaurants and small eateries are some key works which he shared during his presentation. He emphasized over the role of primary surveys and stakeholders interaction of each socio economic group for concerned sectorial intervention of technology or policies. He also shared the CREDAI, Surat has distributed thousands of copy of construction handbook to the people belongs to construction industry and also expressed his believes that stakeholders interaction and social awareness will help in greater extent to mitigate the air pollution.

Dr Pratima Singh, Research Scientist, Air pollution-Lead, CSTEP presented the findings of source apportionment study for the city of Bangalore. She stated that previous Bangalore was known as garden city, however, the air quality have deteriorated since last few years with rapid economic development and vehicular growth. Source apportionment study for city of Bangalore carried out using receptor and dispersion approach at a grid scale of 1x1 km². Manual based monitoring was done at different locations covering residential, commercial, kerbside, industrial and background locations. The emission inventory of different sectors revealed that Transport (58%) is a major contributor to particulate matter (PM) followed by Road dust (16%) and Construction and Demolition dust (11%). Across the city, higher PM emission from slum areas could be attributed to use of kerosene fuel for cooking. For transport related emission, higher PM was estimated from movement of 2-Wheeler and 4-Wheeler diesel vehicles. IT hubs and ring roads were identified as hot spot areas due to higher concentration of PM. Throughout study period the load of organic carbon in PM was higher during winter compared to summer. Further, she added that implementing high emission reduction scenario could reduce the PM emissions by 25%. Taking initiatives such as switching over to EVs, end to end road pavement, scrapping of older vehicles, replacing diesel generators with solar roof tops, LPG penetration in slum area etc could improve the air quality of Bangalore city.

Dr R J Pandya, Advisor, Surat Municipal Corporation, thanked TERI and WRI for carrying out source apportionment study for Surat city and helping to identify and quantify the air pollution problem. He talked about initiatives taken by Surat Municipal Corporation to address air pollution such as fleet conversion to EV, developing action plan for waste management, launching of construction activity handbook etc.

Dr Ashok Ghosh, Chairman, Bihar Pollution Control Board thanked TERI for carrying out source apportionment study for Patna city. He mentioned that in Patna, contribution of air pollution is more from outside the city boundary. He stated that in the last few years the Bihar government has taken number of initiatives to improve air quality such as providing subsidies for CNG, PNG and EVs, ban on use of fossil fuel and furnace oil in the industries. Apart from stakeholder interventions, public participation is important for achieving cleaner air.

Mr Shanth Avverahalli Thimmaiah, Chairman, Karnataka State Pollution Control Board stated that initiatives have been in Bangalore since 2003 to address air pollution problem. Widening of roads, phasing out older vehicles, developing green cover belt, switching over to EVs are some of the initiatives under by Karnataka government. Also, Karnataka government has prepared 44 action points involving 11 departments to mitigate air pollution.

Dr K S Jayachandran, Member Secretary, Delhi Pollution Control Committee mentioned that sound monitoring is carried out by DPCC in addition to air quality monitoring. 13 hot spots were identified based on PM10 and PM2.5 concentration. Also, initiatives such as winter action plan, installation of smog tower, introduction of mechanical sweepers and spraying of bio-decompost on paddy residue have been taken by DPCC.

Mr Polash Mukerjee, Lead, Air Quality and Climate Resilience, NRDC spoke about international experience on air quality management. He discussed about evidence based action plan for China and California. He mentioned that public participation and stakeholder engagement will help to track the effectiveness of action plan. He also discussed the need of Local, State and National level air quality management cell to tackle the problem properly and effectively. He gave an inspiring example of US economy that has been increased drastically along with lesser environmental damage and good health index. This is the result of their past investment, efforts and concerns about environmental damages due to development. Increased productivity, good health and good air quality are some factors were discussed by **Mr Polash** as return in long term in USA.

Mr D M Thakar, Deputy Environment Engineer, Gujarat Pollution Control Board (GPCB) shared his experiences over source apportionment studies in Surat and in other cities of Gujarat. He also showed interest in early warning system using satellite based data for specific source or for specific time period to reduce air pollution by applying action plan strictly. **Mr Thakar** emphasized on air shed approach and focused on micro action plan for Gujarat cities.

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“Walk Street” a unique initiative by KSPCB to reduce air pollution in Bangalore city.

Mr Shanth Avverahalli Thimmaiah
Chairman, Karnataka State Pollution Control Board



Collaboration of stakeholders, government regulatory bodies and institutions will lead to achieve NCAP objective.

Dr Prashant Gargava
Member Secretary, Central Pollution Control Board



Implementation of 20 sectoral interventions can reduce air pollution in Surat city.

Dr Anju Goel
Fellow, TERI



Scientific evidence study and micro level interventions will help to understand air pollution problem

Dr Ajay Nagpure
Program Head - Air Quality, WRI



Bangalore city has transformed from garden city to concrete jungle.

Dr Pratima Singh
Research Scientist, Air pollution-Lead, CSTEP



Raising social awareness will help to reduce emission from waste burning.

Dr R J Pandya
Advisor, Surat Municipal Corporation



Social participation is the key factor to mitigate air pollution.

Dr Ashok Ghosh
Chairman, Bihar Pollution Control Board



191 charging stations has been installed in Delhi to strengthen the fleet modernization into EV.

Dr K S Jayachandran
Member Secretary, Delhi Pollution Control Committee



Evidence based action plan should be implemented through public engagement and stakeholder involvement.

Mr Polash Mukerjee
Lead, Air Quality and Climate Resilience, NRDC