



सत्यमेव जयते



# NCAP

## NATIONAL CLEAN AIR PROGRAMME



Ministry of Environment,  
Forest & Climate Change  
Government of India





# NCAAP

## NATIONAL CLEAN AIR PROGRAMME



Ministry of Environment,  
Forest & Climate Change  
Government of India





© Ministry of Environment, Forest & Climate Change  
Government of India, 2019

Material from this publication may be used for  
educational purposes provided due credit is given.

Material from this publication can be used for  
commercial purposes only with permission from the  
Ministry of Environment, Forest & Climate Change.

**Edited by:**

Shri Nikunja K Sundaray and  
Dr. Shruti Rai Bhardwaj

**Ministry of Environment, Forest & Climate Change**

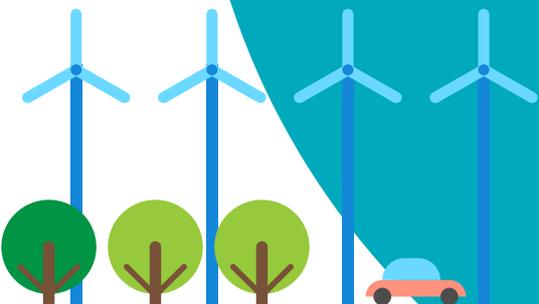
Indira Paryavaran Bhawan, Jor Bagh Road

New Delhi-110 003, INDIA

Phone: +91-11-24695135 Fax : +91-11-45660670

Email: [js.nksundaray@gov.in](mailto:js.nksundaray@gov.in), [shruti.rai@nic.in](mailto:shruti.rai@nic.in)

Website: [www.moef.nic.in](http://www.moef.nic.in)





डॉ. हर्ष वर्धन  
Dr. Harsh Vardhan



सत्यमेव जयते



भारत सरकार  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्री  
GOVERNMENT OF INDIA  
MINISTER OF ENVIRONMENT, FOREST &  
CLIMATE CHANGE

### MESSAGE

Air Quality failing to meet the prescribed national air quality standards is recognized for causing adverse health impact on human health, agricultural production and ecosystem. Rapidly expanding economy and migration of people to urban centers in India is a significant factor for the deterioration of ambient air quality, particularly in metropolitan areas in the country. In order to combat the challenge of unhealthy air quality in regional and urban areas in India, Government has taken number of significant positive measures which inter-alia include setting and revising of national ambient air quality and industrial emission standards, establishment of National Air Quality Monitoring Programme, stringent regulation of vehicular emissions and introducing fuel quality norms, enhanced penetration of LPG etc. to name a few. These measures are expected to curb the escalating pollution levels to an extent. However, with the availability of monitoring data from increasing number of non-attainment cities, the need was felt to intensify the efforts for well-planned technological actions and solutions for improving the air quality in the country.

Moving forward in this direction, the Ministry of Environment, Forest and Climate Change, Government of India has come up with this National Clean Air Program (NCAP) as a national-level strategy document prescribing the actions for reducing the levels of air pollution at city and regional levels in India. Acknowledging the Trans boundary impact of air pollution, actions are also proposed for evolving effective regional and global coordination mechanism.

Effective air pollution reduction plan will be formulated on the basis of source apportionment studies for 102 non-attainment cities of the country and will be implemented through a stringent enforcement mechanism. Collaborative, multi-scale, inter-state and cross-sectoral coordination between the relevant central ministries, state governments and bodies forms the crux of the programme. NCAP incorporates several measures for effective monitoring, assessment and control of air pollution in India. The approach for expediting implementation under NCAP is through mainstreaming and integration into the existing policies and programmes of the Government of India.

I commend all those who have put intensive efforts in formulation of this national programme.

Date: 31.12.2018

  
(Dr. Harsh Vardhan)

Paryavaran Bhawan, Jor Bagh Road, New Delhi-110 003  
Tel.: 011-24695136, 24695132, Fax : 011-24695329

show that as DG Sets get older, they might emit 11 times the standards set for the manufacturers. Overall, DG Sets contribute to 7-18% to the ambient air pollution in non-attainment cities. As the current norms only address new generators and a limited population of old generators, it becomes crucial to address emissions from older in-use generators. Accordingly, it is proposed to formulate a notification on control of pollution from diesel generators in-use to include control and mitigation measures related to these generators. In addition to the formulation of standards by the CPCB, this may include following:

Users would be required to a. Shift to gas-based generators either by retrofitting existing generators for partial usage of gas (a mixture of diesel and gas) or buying new gas-based generators b. Use retro-fitted emission control equipment with diesel generators having a minimum specified particulate matter capturing efficiency of at least 70%. This would be the lower cost solution to consumers with a cost less than 10% of the generator set.

The retrofit emission control devices/ gas retrofits can be certified by one of the following institutions (CPCB approved institutions which also provide emissions approval for diesel generators at manufacturers' stage): (a) Automotive Research Association of India, Pune (Maharashtra); (b) International Centre for Automotive Technology, Manesar (Haryana); (c) Indian Oil Corporation, Research and Development Centre, Faridabad (Haryana); (d) Indian Institute of Petroleum, Dehradun (Uttarakhand); and (e) Vehicle Research Development Establishment, Ahmednagar (Maharashtra). These institutions can be authorized to carry out such tests, for giving certificates of Type Approval and Conformity of Production to emission control equipment manufacturers or products. The Compliance and Testing Procedure, as published by the CPCB for diesel engines, can be followed."

## Action Points

1. Introduction of gaseous fuels and enforcement of new and stringent SO<sub>2</sub>/NO<sub>x</sub>/PM<sub>2.5</sub> standards for industries using solid fuels.
2. Stricter enforcement of standards in large industries through continuous monitoring.
3. Full enforcement of zig-zag brick technology in brick kilns.
4. Elimination of DG set usage by provision of 24x7 electricity.
5. Control by innovative end of pipe control technologies.
6. Evolve standards and norms for in-use DG sets below 800 KW category.
7. For DG Sets already operational, ensure usage of either of the two options: (a) use of retrofitted emission control equipment having a minimum specified PM capturing efficiency of at least 70%, type approved by one of the 5 CPCB-recognized labs; or (b) shifting to gas-based generators by employing new gas-based generators or retrofitting the existing DG sets for partial gas usage.
8. Utilize the Gujarat case study for a compelling case for other states to adopt third-party audits for polluting industries for enhancing implementation(States)



Sl. No.	Component/Activities	Level for Funding	Level For Implementation	Agencies	Timeline (Year)
1.8.9	For the DG sets already operational, ensure usage of either of the two options:  (i) Use of retrofitted emission-control equipment with a minimum specified PM-capturing efficiency of at least 70%, type approved by one of the five CPCB-recognized labs.  (ii) Shifting to gas-based generators by employing new gas-based generators or retrofitting the existing DG sets for partial gas usage.	State	City/State	SPCB, CPCB	2022
1.8.10	Utilize the Gujarat case study for a compelling case for the other states to adopt third-party audits for polluting industries for enhancing implementation.	State	City/State	SPCBs, CPCB	2021
<b>1.9</b>	<b>TRANSPORT SECTOR EMISSION</b>				
1.9.1	Stringent implementation of BS VI norms all over India by April 2020.	State	City/State	MoRTH, D/o Transport, SPCB	2020
	Green Mobility				
1.9.2	Stringent implementation of the national biofuel policy with respect to ethanol and biodiesel blending target of 20% and 5%, respectively by 2030.	Centre	State	MoP, MNRE, MoA	2030
1.9.3	City action plans to review the extension of Mass Rapid Transit (MRT) in cities/towns.	Centre	City/State	MoRTH, D/o Transport, CPCB	2024

