

NCAP SERIES

**REVIEW OF ACTION PLAN
FOR IMPROVING AIR QUALITY**

DHANBAD



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Introduction

The Central Pollution Control Board (CPCB) has identified a list of polluted cities, which refers to cities which violate standards prescribed by the National Ambient Air Quality Standard (NAAQS, 2009). The identification is based on the ambient air quality data obtained under the National Air Quality Monitoring Programme (NAMP) during the period of 2011-2015⁰¹. In 2018, a total of 102 cities were identified as “non-attainment cities” in India based on the non-compliance to the NAAQS 2009⁰².

The city of Dhanbad is synonymous with coal and the story of India's coal industry is incomplete without Dhanbad. The Dhanbad-Jharia coal-fields host some of India's oldest coal mines, some dating back to 125 years⁰³. As of August 2021, the state of Jharkhand contributed to 16% of India's coal production⁰⁴. The city of Dhanbad is surrounded by about 112 coal mines with a total production of 27.5 million tonnes, generating an annual income of 7,000 crores⁰⁵. Some of the biggest mine operators in the region include Bharat Coking Coal Limited (BCCL), Eastern Coal-Fields Limited (ECL) and Tata Iron and Steel Company (TISCO)⁰⁶. The region also hosts 8 coal washeries, 3 captive thermal power plants, 126 beehive coke oven plants, 118 brick kilns, 72 refractory plants and 25 soft coke plants⁰⁷.

Alarming levels of pollution in the region has had its human costs. According to a study by the Energy Policy Institute at the University of Chicago (EPIC), improving the air quality to the WHO guideline value of 10µg/m³ could extend the life expectancy of citizens in Jharkhand by 7.3 years⁰⁸.

In other words, the residents of Dhanbad and Jharia are losing 7.3 years of their life span due to air pollution.

In addition to this, chronic health problems like stunted growth, upper respiratory tract infections, cancers etc. persist among the population severely impacting the quality of life.

In terms of economic losses due to the human health impacts of air pollution – the Lancet's Global Burden of Disease Study estimates that the state of Jharkhand suffered a loss of US\$543 million in 2019 alone (see Box 1 for methodology)⁰⁹. Given this context and the urgency of the air pollution crisis in the region, it is important to understand the proposals laid out in the Action Plan for Improving Air Quality in Dhanbad to assess the efficacy of the plan in improving air quality of Dhanbad city.

01. Chapter 5 of National Clean Air Programme – Non Attainment Cities
02. List of 132 Non-attainment/ Million plus cities in India under NCAP, CPCB - https://cpcb.nic.in/uploads/Non-Attainment_Cities.pdf
03. Developing Ecological Restoration Model in the Mine Spoils at Tetulmari under Sijua Area of BCCL Mine, Forest Research Institute, Dehradun, 2015 - https://bcclweb.in/files/2011/02/FDI_Report2015.pdf
04. Monthly Statistical Report, August 2021, Ministry of Coal <https://coal.gov.in/sites/default/files/2021-10/srn-Aug-2021.pdf>
05. District Mineral Foundation Trust, Dhanbad, Annual Report 2018-19 - <https://dmfdhanbad.in/public/dist/documents/RE1GVERoYW5iYWRBbm5lYWxSZXBvcnQyMDE4LTE5RmluYWwtbWVvY2ZkLnBkZg==200814083431.pdf>
06. List of Coal Mines in Dhanbad, District Administration of Dhanbad achieves as accessed on October 12 2021 (page print available)
07. Action Plan for Clusters of Dhanbad, JSPCB - <https://cpcb.nic.in/displaypdf.php?id=REhBTkJBRC5wZGY=>
08. Air Quality Life Index, India Report, EPIC University of Chicago, September 2021 - https://aqli.epic.uchicago.edu/wp-content/uploads/2021/09/IndiaFactSheet_2021_EnglishIndiaVersion.pdf
09. Health and economic impact of air pollution in the states of India: the Global Burden of Disease Study 2019, The Lancet Planetary Health, Published December 21 2020 - [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(20\)30298-9/fulltext#seccestitle170](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30298-9/fulltext#seccestitle170)

Lancet's Global Burden of Disease Study 2019 Methodology

The assessment is based on the estimated exposure to ambient particulate matter pollution, household air pollution, and ambient ozone pollution, and their attributable deaths and disability-adjusted life-years (DALY)* in every state of India. The economic impact of air pollution was estimated as the cost of lost output due to premature deaths and morbidity attributable to air pollution for every state of India, using the cost-of-illness method**.

*One DALY represents the loss of the equivalent of one year of full health. DALYs for a disease or health condition are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population.

**The cost-of-illness method includes estimation of direct costs of health care as well as indirect costs, measured as the loss of output due to premature mortality and morbidity.

The broad agenda of the Action Plan for Improving Air Quality in Dhanbad (herein after referred to as Action Plan) is to implement a Graded Response Action Plan (GRAP) with a list of actions most of which are regarding implementation of existing laws. The plan provides no clarity on the allocation of resources to carry out these actions which have otherwise remained unenforced for decades

Action Plan Snapshot

- ❑ The Key Interventions of the Dhanbad City Action Plan
- ❑ Vehicular pollution management through measures like ban on old vehicles, inspection of vehicle health, awareness raising, traffic management etc.
- ❑ Dust pollution management through cleaning, water sprinkling, maintenance of potholes, road widening, expressway construction etc.
- ❑ Control of emission from the construction and demolition by enforcement of C&D Waste Management Rules 2016.
- ❑ Control of emissions from waste by preventing open burning of municipal waste.
- ❑ Control of emissions from industry by banning or shifting polluting facilities, ensuring compliance to emission standards and shifting to cleaner technologies.
- ❑ Strengthening ambient air quality monitoring

The Dhanbad City action plan presents a series of interventions across sectors. Out of the 35 actions 23 have already been implemented. The remaining 8 have a target of 2020 and 2 have a target of 2021 and 2022 each. Most sections barring the one on control of road dust have no budgetary allocation. In fact the plan states that "as the budget for the aforementioned program will be finalised by the concerned departments it will be conveyed to the concerned authorities and will be incorporated in the action plan".

Overall Observation of the Dhanbad Action Plan



- 1. The action plan** has referred to the old National Ambient Air Quality Standards of 2009 (NAAQS, 2009) which are no longer relevant.
- 2. Separation of Dhanbad and Jharia:** While this is an action plan for Dhanbad, it is impossible to separate it from the Jharia coalfields which lie just 7 kms (aerial distance) from the city of Dhanbad. There are only 10 references to Jharia in the document but no concrete strategies to address the pollution from various sources. Jharia and Dhanbad topped the list of most polluted cities (PM 10, 322 and 264 respectively) according to an independent analysis of data generated by 745 monitoring stations across India in 2018¹⁰. Hence, the exclusion of Jharia from the Dhanbad city action plan is a major lacuna from the perspective of good environmental governance practice. This segregation of plans with geographical boundaries is counter intuitive to the efforts of controlling air pollution.
- 3. Some concrete ideas but no vision:** The Action Plan starts with some concrete outlines as seen in perhaps what is the most useful section of the action plan in the Source Identification section, wherein the various pollution sources have been identified across locations in the city. Although, limited in its perspective, such an approach offers a broad overview of the various hotspots in the city and could help streamline interventions. Unfortunately, the action plan document abandons this line of thinking and steers the discussions in the following sections towards mundane observations on issues like “tendency of overtaking by vehicles” leading to dust pollution; followed by a 10 point wish list of ideas from launching of National Clean Air Mission for Multiscale and Cross-Sectoral Coordination to developing business models for agricultural waste and deployment of emission trading scheme for polluting industries. While one can argue over the relevance of these ideas, the action plan does not offer any concrete follow up on any of these ideas in the subsequent sections of the report.
- 4. Recycling ideas – no action:** Certain interventions like adoption of clean technology for bee-hive coke oven plants have been proposed by the JSPCB pursuant to a public interest litigation, Vishal Kumar Vs Union of India (W.P -PIL No.2663/2011) where in relief was sought against the ongoing pollution from bee-hive coke oven plants and the fly ash pollution caused by the Maithon Power Limited¹¹.

10. Airpocalypse, Assessment of Air Pollution in Indian Cities and National Ambient Air Quality Monitoring Programme (NAMP), Greenpeace India, 2018 - <https://www.greenpeace.org/static/planet4-india-stateless/2020/01/aeef07e3-airpocalypse-iv.pdf>

11. Vishal Kumar Vs Union of India I.A No. 6161/2013 and W.P (PIL) No.2663/2011 - <https://www.casemine.com/judgement/in/5ac5e3974a93261a1a76caa3>

Furthermore, the pollution caused by industries has been part of the regulatory policy discussion for decades. The commitments made in the action plan are similar to those made by JSPCB in two other documents – the vision and [strategic vision document 2012-2017](#)¹² and the [action plan for clusters of Dhanbad](#) formulated for Critically Polluted Areas under the Comprehensive Environmental Pollution Index (CEPI) project in 2009-10¹³ (see relevant sections below for more details).

Comparison of the Strategic Vision Document 2012-2017 and Action Plans under CEPI 2009-10

Industrial sources will have to be at the heart of any air pollution mitigation plans in the region. A comparison of three documents developed by the JSPCB over the past two decades reveals that the nodal agency for pollution abatement has just been recycling ideas and in some cases blatantly copying from old documents.

A definitive indication of the pollution in different regions of the country is the Comprehensive Environmental Pollution Index (CEPI) project undertaken by the Central Pollution Control Board (CPCB) in 2009-10. Under the CEPI project a total of 88 industrial clusters were analyzed of which 43 were declared as Critically Polluted Areas (CPAs). The region of Dhanbad was ranked 13, following which the Ministry of Environment and Forest (MoEF) imposed a moratorium on further industrial expansion in January 2010. However, the moratorium was lifted in September 2013 based on the pollution mitigation proposals presented by the Jharkhand State Pollution Control Board (JSPCB) in an action plan¹⁴.

A quick comparison of the air pollution mitigation elements of the 2009 CPA action plan and the Action Plan submitted by JSPCB under NCAP 2019 is relevant for this analysis (See Image Cluster below). The comparison shows that both the documents are identical in language except for the time targets – from 2011 in the CPA action plan to 2020 in the NCAP Action Plan.



12. Vision Document 2012-2017 and Strategic Planning, Jharkhand State Pollution Control Board -- <https://jspcb.nic.in/upload/uploadfiles/files/VISION%20of%20JSPCB%202017.PDF>

13. Action Plan for Clusters of Dhanbad, Jharkhand State Pollution Control Board - <https://cpcb.nic.in/displaypdf.php?id=REhBTkJBRC5wZGY=>

14. MoEF Office Memorandum No. J-11013/5/2010-1A.II (I), dated 17 September 2013.

Similarly, the state Strategic Vision 2012-2017 of the JSPCB enlists a series of targets for prevention and abatement of air pollution during the above-mentioned time period¹⁵. The wish list of interventions includes:

1.	Providing online air quality monitoring stations and networking in all non-attainment cities and Municipal Corporations by 2012 and in other district headquarters by 2017.
2.	Manual AAQM stations in all district headquarters by 2012 and remaining nagar palikas by 2017.
3.	Preparation and implementation of the Action Plan for all chemical estates and other critically polluted areas by 2012 and clusters having industries with major emissions by 2017.
4.	To carry out source apportionment and health impact studies in all non-attainment cities by 2012 and other major cities in Jharkhand by 2017 (it is not clear how the use of the term non-attainment before 2016 has been applied for projects in 2012 since the concept was only established in 2016).
5.	Comprehensive EIA of existing dumpsites and disposal of municipal waste as per MSW Rules 2000 in the cities of Ranchi, Dhanbad, Hazaribagh and Bokaro by 2010.
6.	Providing infrastructure and complete network for Clean Fuel Programme in all non-attainment cities namely Dhanbad, Jamshedpur, Jharia, Sindri and all Municipal Corporations by 2012 and in other district headquarters by 2017.
7.	Adoption/Augmentation of public transport on cleaner fuel based on development of CNG infrastructure in all municipal corporations by 2012 and in all major cities namely Ranchi, Jamshedpur, Dhanbad, Bokaro, Dumka, Deoghar & Hazaribagh by 2017.

The glaring similarities between these documents spanning over two decades is reflective of the fact that these interventions have been part of the regulatory strategy for long but have remained unimplemented. This raises several questions over the added value of such repeated exercises when the crux of the problem is the poor implementation capacity and will of the state administration.

15. Vision 2012-2017 and Strategic Planning, Jharkhand State Pollution Control Board - <https://jspcb.nic.in/upload/uploadfiles/files/VISION%20of%20JSPCB%202017.PDF>

IMAGE CLUSTER

CPA – Action Plan for Cluster of Dhanbad

Summary of proposed action plan for collieries			
SN	Action point	Action plans for stake holders	Date of completion
01	The ambient air of the collieries remains dusty due to pliance of uncovered trucks and those too on kutcha haul roads and on OB dumps and due to drilling & blasting and uncontrolled emission of their boilers	<p>(a) The covering of loaded transport vehicles will be compulsory.</p> <p>(b) All haul roads will be made pucca, by. New haul roads will be taken in use after making it pucca,</p> <p>(c) All OB dumps will be enclosed by pucca boundary wall to prevent entry through them..</p> <p>(d) All drillings shall be done with dust containment and suppression systems, from. The fixed type sprinklers will be installed in all dust prone areas.</p> <p>(e) The prudent operational practices will be adopted to control.</p>	<p>31.03.2011 (ST)</p> <p>30.06.2011 (ST)</p> <p>30.06.2011 (ST)</p> <p>30.06.2011 (ST)</p> <p>31.03.2011 (ST)</p>

Action Plan for Improving Air Quality in Dhanbad, NCAP

Ensuring emission standards in industries.	<i>Long Term</i>	March 2020	<p>(III) The covering of loaded transport vehicles will be compulsory.</p> <p>(IV) All haul roads will be made pucca, by. New haul roads will be taken in use after making it pucca,</p> <p>(V) All OB dumps will be enclosed by pucca boundary wall to prevent entry through them.</p> <p>(VI) All drillings shall be done with dust containment and suppression systems, from. The fixed type sprinklers will be installed in all dust prone areas.</p> <p>(VII) The prudent operational practices will be adapted to control.</p>
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CPA – Action Plan for Cluster of Dhanbad

Summary of proposed action plan for bee-hive coke oven plants			
SN	Action point	Action plans for stake holders	Date of completion
01	The ambient air of the premises of bee-hive coke oven plants remains dusty due to pliance of uncovered trucks and those too on kutchha haul roads and due to uncovered processing of coal. The chimneys of plants too emit dust.	(a) The covering of loaded transport vehicles will be compulsory, from. All haul roads will be made pucca, by. (b) New haul road will be taken in use after making it pucca, from.	31.03.2011 (ST) 30.06.2011 (ST)
50			
		(c) The space of processing of coal or coke will be kept covered. (d) All plants will be modified to ensure emission of particulate matter to below 150 micro gm per cubic meter.	30.06.2011 (ST) 30.03.2011 (ST)

Action Plan for Improving Air Quality in Dhanbad, NCAP

Bee Hive Coke Oven Plants (Hard coke units)	(a) The covering of loaded transport vehicles will be compulsory, from. All haul roads will be made pucca, by. (b) New haul road will be taken in use after making it pucca, from. (c) The space of processing of			a) All the Bee Hive Coke Oven Plants (Hard Coke Units) b) JSPCB will be giving directions in this regard to all the Bee Hive Coke Oven Plants (Hard Coke Units).
	coal or coke will be kept covered. (d) All plants will be modified to ensure emission of particulate matter to below 150 micro gm per cubic meter. (e) The plantation of saplings for creation of tree and forest cover of local species.	Mid term	<i>March 2020</i>	

GRAP for Dhanbad

The document states that "based on present level of air pollution and trends observed in last five years, the GRAP points given below have been incorporated in the Action Plan":

a.	Periodic mechanized sweeping of roads having heavy traffic and water sprinkling on unpaved roads.
b.	To stop use of diesel generator sets in case of "Emergency" status of AQI.
c.	Strict vigilance and no tolerance for visible emissions, impounding or imposing heavy fine on plying of visibly polluting vehicles.
d.	Strict enforcement of PUC emission norms.
e.	Stringent enforcement of rules for dust control in construction activities.
f.	Deployment of traffic police for smooth traffic flow at identified vulnerable traffic cross section areas.
g.	Strict enforcement of Hon'ble Supreme Court directions dated 23.10.2018 on use of fire crackers.
h.	Stringent enforcement of ban on open burning of garbage etc., covered movement of vehicles carrying construction material, MSW etc.



The inefficacy of GRAP for cities where average pollution levels remain high year-round has been demonstrated from a scientific and public policy point of view. A detailed analysis of the air quality data from Delhi's expansive network of monitors showed that the levels of particulate matters remained high throughout the year¹⁶. In effect, GRAP had not led to any change in Delhi's air quality even after more than four years of its implementation. In order for GRAP to succeed in Dhanbad, the enlisted action points such as – stopping the use of diesel generators, road sweeping and water sprinkling would have to be implemented all year round. Moreover, activities like stopping open burning of garbage, traffic flow management, enforcement of PUC norms for vehicles and strict enforcement of C&D Waste Rules for construction sector have to be enforced throughout the year as mandated under various laws. It would have been useful if the plan had outlined details of additional resources and personnel allocated to carry out these enforcement activities which have otherwise remained unenforced for decades. In this context, terms like "strict vigilance" and "no tolerance" are meaningless.

Aspirational ideas but no vision or follow up

The action plan also includes a general observation section wherein the authors offer an aspirational list of ideas like:

- Launching a National Clean Air Mission for Multiscale and Cross-sectoral Coordination
- Develop business models for collection, transport, and storage of agriculture residues and farm manure
- Convert agriculture residues and farm manure to electricity for rural power and biomass pellets for women who depend on biomass stoves
- Deploy National Emission Trading Schemes (ETS) with cap and trade for power generation and other large polluting industries.
- Implement stringent emission standards to control fine particulate (black carbon and fly ash) emissions from both power plants and big industries.
- Recovery of methane from landfills

None of these activities appear in the operational part of the action plan raising several questions about their relevance for the purpose of this document. The document then goes on to make the following observation: "India's effort to meet its Paris INDCs (Intended Nationally Determined Contributions) will significantly reduce air pollution due to the nexus between air pollution mitigation and climate mitigation." While this is a valid observation, there is no clarity on its relevance for a document whose mandate is to offer specific target oriented action points.

16. Grappling with Air Pollution, How the GRAP has failed to Clean up the Air, LIFE 2021.

Vehicular Pollution

In order to control vehicular pollution, the action plan proposes a range of enforcement actions such as launching extensive drives against polluting vehicles, good traffic management and ban on 12 years and older commercial vehicles among others. These action points are vague as they do not offer any targets but are part of routine traffic police administration. Furthermore, in the absence of any details regarding additional resources or personnel, it is hard to assess the efficacy of these interventions.

There is also a proposal to set up PUC centres 60 to 70 petrol pumps by the end of December 2019. This action point has been achieved as per the information on Parivahan website – the city of Dhanbad has 164 official pollution testing centres.

The plan provides no other concrete measures beyond this – for instance plans to reduce unauthorised parking or promotion of alternative forms of transports like cycling or improvement of public transport. On the issue of public transport, the plan only offers a critique (see below) of the problem without dwelling into solutions which is the purpose of an action plan.

“Traffic density and carrying capacity of roads are required to be looked into with optimal transport network with effective movement of traffic and minimal traffic congestion with the taming and training of commercial vehicles / matadors (Public Transportation) drivers, who have no concern for specified and designated stoppages for mini buses, and use already congested and narrow roads for stopping vehicles as and when required on “I Stop My Bus Stop” thinking, forcing traffic movement at a snail pace, road blocking, thereby, resulting emissions in large quantity. Besides this, unauthorized parking adds on to the traffic congestion which further results in deterioration of air quality in city. The traffic police to ensure good traffic management and enforcement of rules (sic).”



Credit: Gautam Dey

16. Grappling with Air Pollution, How the GRAP has failed to Clean up the Air, LIFE 2021.

Road Dust Management

The issue of road dust management has attracted the most budgetary allocation under the action plan. The problem of dust suppression in all non-attainment cities has seen procurement of road sweepers and water sprinklers and Dhanbad is no exception. The Dhanbad Municipal Corporation (DMC) has procured 3 truck mounted street sweepers and 2 smart sweepers (for narrow roads). In addition to this, there is a proposal to procure 6 mobile water sprinklers in FY 2019-20. The JSPCB sanctioned an amount of **Rs.10 crores** for purchase of sweepers and water sprinklers and other gears. This is basically the approved fund of Rs 10 Crore for the first year, which was approved for 28 out of 102 non-attainment cities¹⁷.

However, the plan provides details of only 3 localities viz; Housing Colony, Memko to Puja Talkies and Luby Circular Road where sweeping machines will operate. There are no details on the kind or technology these machines will use or scientific assessment of their efficacy on the city roads. The efficacy of street sweepers depends on the condition of roads. Pot holes or poor road quality renders such machines ineffective. Furthermore, studies have shown that mechanical sweeping often contributes to the local pollution load by resuspending particulate matter and contributing to the diesel emissions. A detailed assessment on the efficacy of mechanical sweeper provides several arguments on the issue¹⁸. Water sprinkling can be useful in dust suppression however, there is no clarity on how often the two sprinklers that the city proposes to procure will operate especially during extremely dry eastern Indian summers and winters.



17. Dhanbad starts using sprinklers to curb air pollution, The Telegraph Online, January 19 2021 - <https://www.telegraphindia.com/jharkhand/dhanbad-starts-using-sprinklers-to-curb-air-pollution/cid/1804161>

18. Swept Under the Carpet, Rethinking Investment on Mechanical Sweepers, Legal Initiative for Forest and Environment (LIFE) - <https://thelifeindia.org.in/swept-under-the-carpet/>

The plan also proposes a 20 km road widening project from Kanko Chowk to Memko Goal Building at the cost of Rs.375.4 crores to ease congestion. the project will sound a death knell for 5088 trees on the 20 km stretch¹⁹. Trees have also been felled for several other road widening projects across Dhanbad earlier²⁰. Such large scale destruction of the city's green cover and that too in the guise of air pollution mitigation is not just counter-intuitive but criminal. A recent report by the American policy think tank, Transportation for America, has found that the practice of expanding roads or building new ones to curb congestion has resulted in billions of dollars in wasted spending and has made congestion worse on city street. Between 1993 and 2017, the United States added 42% more roads in the 100 largest urbanized areas and saw congestion increase by 144%²¹.

Furthermore, there is an inherent contradiction behind the idea of cutting trees under the clean air plan? NCAP's focus in several cities across India has been on tree plantation in polluted stretches how does one justify felling of trees in polluted stretches.

In order to compensate for the deteriorating green cover in the city, there is a proposal to develop 5 city parks under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) at the cost of 10 crores. There is no clarity as to how these parks will compensate for the loss of green cover caused by road widening projects.

On the issue of maintaining pot hole free roads and black topping of roads the plan only refers to two letters from the Urban Department and Housing Department to the Dhanbad Municipal Corporation (DMC) followed by a declaration that these activities are being implemented through the engineering cell of the DMC. However, pot holes remain a persistent problem in the city as per news reports^{22, 23}.



19. Coal town hacks green for more cars, The Telegraph Online, June 2 2019 - <https://www.telegraphindia.com/jharkhand/coal-town-hacks-green-for-more-cars/cid/1691692>
20. Coal town residents worried over lack of green cover, The Telegraph Online, March 31 2021 - <https://www.telegraphindia.com/jharkhand/coal-town-residents-worried-over-lack-of-green-cover/cid/1811134>
21. [The Congestion Con](#), Transportation for America, March 2020.
22. Underground cabling turns Dhanbad roads into pothole zone, The Telegraph Online, July 6 2021 - <https://www.telegraphindia.com/jharkhand/underground-cabling-turns-dhanbad-roads-into-pothole-zone/cid/1821374>
23. More than 200 potholes in Dhanbad-Sindri 25 km long four lane road, becoming deadly due to water filling after rain, News JoJo, July 8 2021 - <https://www.newsjojo.in/more-than-200-potholes-in-dhanbad-sindri-25-km-long-four-lane-road-becoming-deadly-due-to-water-filling-after-rain-25-200/>

Control of Pollution from C&D sector and Waste Burning

The action plan acknowledges the role of bad construction and demolition practices as a major contributor to the deteriorating air quality in Dhanbad. The only intervention to address the pollution from C&D sector is the implementation of the C&D Waste Rules 2016. There is no further information on the implementation strategy given the fact that the rules have remained unimplemented since 2016. As per the latest [Dhanbad District Environment Management Plan](#) prepared in response to the order of the National Green Tribunal in O.A. No-360/2018, dated 26/09/2019 – while the DMC has established C&D waste deposition centres no such recycling plant for C&D has been established²⁴.

On the issue of waste burning the proposal only aspires to improve the monitoring/penalty system to prevent open burning of waste. In addition to this the DMC has been directed to implement segregation, transportation and scientific disposal of waste as per Solid Waste Management Rules 2016 via its implementing agency Dhandbad Integrated MSW Ltd.

24. Dhanbad District Environment Management Plan - <https://cdn.s3waas.gov.in/s337f0e884fbad9667e38940169d0a3c95/uploads/2021032210.pdf>



Industrial Pollution

The main critique of the ideas to tackle the pollution from the industrial sector have been presented in the initial sections of this report (See Recycling Ideas – No Action). The operational section of the action plan lists activities like:-

1. Installation and operation of air pollution control devices in industries
2. Ensuring emission standards in industries
3. Introduction of Clean technology in industries and
4. Shifting and ban on polluting industries

All these activities are to be implemented on a “continuous basis” hence no timelines have been introduced. This leaves the little scope for accountability in the long term. On the issue of “ensuring emission standards in industries” a time target of March 2020 has been mentioned with the aim to have “All industries causing Air, Water and Noise pollution compliant w.r.t causing emission levels with the standard as are issued by SPCB.” This raises several concerns about the implementation of these emission norms before March 2020.

No Health Action Plan

In the introductory section of the action plan, the authors make a mention of the Lancet Commission Report linking air pollution to human mortalities. However, the plan itself offers no further thoughts on including health based planning to address the issue of air pollution. Health offers a useful metric not just to measure the impacts of policy interventions but also to plan better policies. The issue of health should be central to all the air pollution mitigation strategies and solutions. A recent report titled Building Breathable & Cities co-produced by LIFE and partners lays out the following strategies for health based planning²⁵:

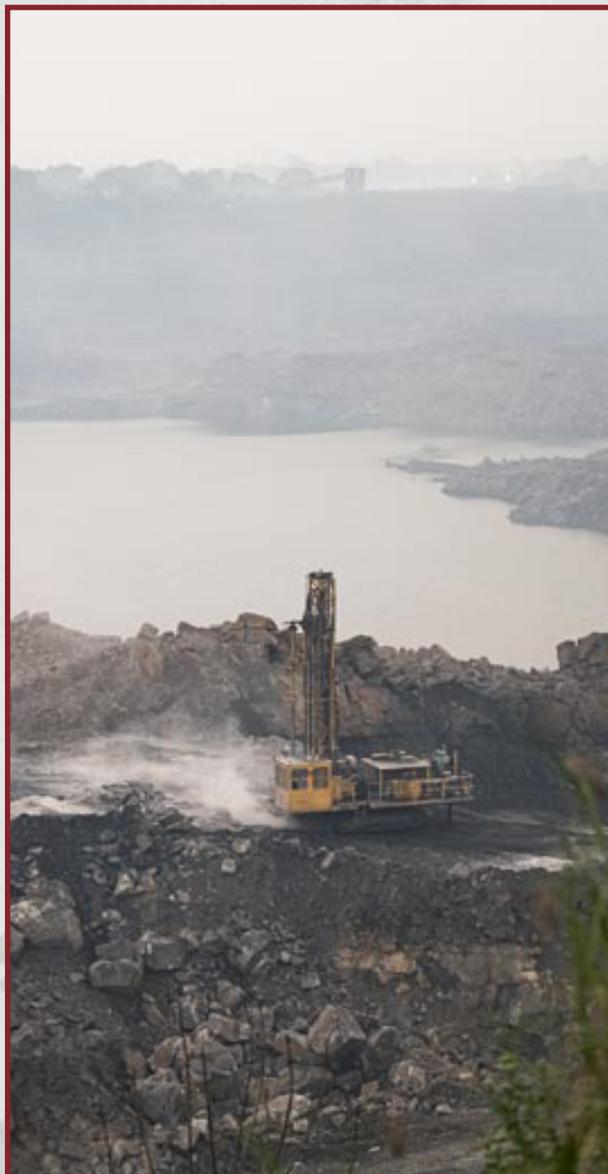
1. Pan- City Air pollution monitoring with low-cost real-time sensor-based technology.
2. Pollution and health vulnerability mapping across zones of ULB, develop disease calendar and sensitive areas.
3. Air pollution and health communication to promote co-benefits of clean air
4. Air pollution research, training and capacity building of the ULB and health staff.
5. Upgradation of health centers for targeted health service delivery.
6. Ensuring strict compliance and enforcement of norms controlling point sources of air pollution and emissions from industries while avoiding unscientific, false and end-of-pipeline solutions
7. Proactively implement policies that promote co-benefits of clean air

25. Building Breathable and Healthy Cities, What Should Cities do to Protect Public Health from Air Pollution as part of their City Action Plans?, Healthy Energy Initiative, State Health Resource Center, Chhattisgarh, Legal Initiative for Forest and Environment, Atmos Urban Sciences, Sensing Local - http://chennaiairquality.com/wp-content/uploads/2021/08/Building-Breathable-and-Healthy-Cities--Report_August2021-1.pdf

Source Apportionment

The JSPCB proposes a source apportionment study by NEERI sponsored by Bharat Coking Coal Limited (BCCL). There is no clarity on how the findings of such a study will contribute or add value towards pollution mitigation plans especially when the key sources of pollution and the pollution hotspots have already been mapped in the action plan. Not to mention the obvious conflict of interest as BCCL is one of the major polluting industry in the region.

Coal Dust



The city and its surrounding regions are intensely mined and experience pollution from the entire life cycle of coal. While there are a few references to coal dust with reference to the surroundings of coal washeries that see heavy flow of coal trucks carrying uncovered consignments of coal. However, the only remedy the plan proposes is the covering of trucks and enclosing the washery reject dumps with walls. There is no strategy for the utilisation of the millions of tons of washery rejects.

The coal washery capacity in Dhanbad-Jharia region in 2019-20 was close to 10 million tons of raw coal utilisation, as per the Coal Directory 2012-13 of the Ministry of Coal²⁶. Even with 20 percent of the feed resulting as rejects, the washeries would generate about 2 million tons of rejects every year. Planning Commission's Working Group for the 12th Five Year Plan (2012-17) for coal noted that the main impediment in obtaining environmental clearance for washeries was the lack of "utilisation of washery rejects in an environmentally-friendly manner."²⁷

Other dust suppression interventions include laying of pucca roads on all hauling and transport routes, enclosing overburden dump sites with boundary walls, covering of transport trucks, installing electro-static precipitators in boiler chimneys and developing green belts. Such activities are already part of the Environmental Clearance conditions of all

26. Coal Directory of India 2019-20, Coal Statistics, Ministry of Coal - <http://www.coalcontroller.gov.in/writereaddata/files/download/coaldirectory/CoalDirectory2019-20.pdf>

27. Report of the Working Group on Coal & Lignite for Formulation of 12th Five Year Plan, Ministry of Coal, November 2011 https://niti.gov.in/planningcommission.gov.in/docs/aboutus/committee/wrkgrp12/wg_Coal1406.pdf

mines and power plants. There is no explanation as to why such activities should be funded by money received under NCAP when they are part of the legal obligations of the mines and plant operators.

Conclusion

The action plan for improving air quality in Dhanbad is a hit and miss and fails in fulfilling the objectives laid out by the NCAP. The most concerning aspects of the document is the sections that have been recycled from documents like critically polluted area action plan or the 2012-2017 vision strategy document, while none have been sincerely implemented and so have no track record of success. The lack of proper time lines and budgetary allocation is also a major gap. The city administration needs to reconsider its road widening spree that is causing severe depletion of the green cover in the city – especially since such projects are being carried out to reduce air pollution.

Furthermore, the entire plan is silent on the issue of public transport. The exclusion of Jharia from the Dhanbad city action plan is a major lacuna as well. Health based planning is something that the city administration can consider given its several demonstrable co-benefits. Industrial pollution especially from the coal and allied sectors call for very bold interventions which the action plan fails to offer.



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