



**KNOWLEDGE SHARING WORKSHOP ON IMPLEMENTATION
PROGRESS OF NATIONAL CLEAN AIR PROGRAMME (NCAP) IN
WEST BENGAL**



4th SEPTEMBER, 2021

KOLKATA

ABOUT THE WORKSHOP

The issue of increasing air pollution in West Bengal is a cause of concern not only because of the health impacts of air pollution, which have been scientifically proven and accepted by now, but also due to the lack of attention being paid upon the issue by the State government of West Bengal. The National Clean Air Programme (“**NCAP**”) was launched in 2019 with the object of cleaning up the air of cities identified as non-attainment cities. In West Bengal, the cities of Kolkata Howrah, Barrackpore, Haldia, Durgapur, Asansol, Ranigunj were identified under the NCAP with the idea that along with a State Action Plan, City Action Plans for each of these cities would be prepared to combat air pollution at various levels. Unfortunately, the implementation of the NCAP has been severely lacking in West Bengal. The report prepared by LIFE, “*Neither Action Nor Plan*” identified some of the lacunae in the implementation of NCAP which was the lack of state wide action plans to combat air pollution as had been contemplated by NCAP.

This workshop was organized by Legal Initiative for Forest & Environment (“**LIFE**”) in partnership with organizations with the similar common goal of reducing air pollution in West Bengal and to ideate on policies and methods to do so.

INTRODUCTION & OVERVIEW OF THE MEETING

SPEAKER – MR. RITWICK DUTTA, FOUNDER AND MANAGING TRUSTEE, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Mr Ritwick Dutta, eminent environmental lawyer and Founder and Managing Trustee of LIFE began the proceedings with an introduction to LIFE as an organization, its vision and ideas. He emphasized the urgency of the issue of air pollution facing the country. He expressed disappointment that the efforts to combat air pollution in India seem to be largely focused on Delhi and the NCR Region. He pointed out that the latest notification regarding the issue of air pollution was also centred around Delhi. He further pointed out that the NCAP was largely concerned with steps to be taken in non-attainment cities while ignoring the real and present issues related to air pollution in rural areas, particularly those where mining related activities take place. He observed that instead of taking steps to implement the NCAP, the government had realised that they had already missed their deadlines and that there was a buzz that the

Central Government also was planning on renaming the NCAP as a new mission and setting further extended deadlines.

INTRODUCTION OF THE PARTIES

A round table introduction of all attendees to the workshop was done where every attendee gave their name, their organization and a brief glance into the work done by them.

OVERVIEW OF THE NATIONAL CLEAN AIR PROGRAMME AND ITS IMPLEMENTATION STATUS

CHAIR: AARTI KHOSLA, DIRECTOR, CLIMATE TRENDS

The first session of the workshop was chaired by Aarti Khosla where four presentations on NCAP were discussed. The speakers in this session were Mr. Ritwick Dutta, Dr. Dipankar Saha, Mr. Dharmesh Shah, Dr. R.K. Singh who gave an overview of NCAP and identified the lacunae in the plan as well as implementation.

1. NATIONAL CLEAN AIR PROGRAMME: WHAT DID WE AIM? WHAT DID WE ACHIEVE?

SPEAKER – MR. RITWICK DUTTA, FOUNDER AND MANAGING TRUSTEE, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Mr. Dutta pointed out that the NCAP was a legally enforceable document which was capable of being taken to courts and having it implemented. He expressed anguish that rather than being treated as a statutorily binding obligation upon various state authorities, the NCAP was instead treated as more of a guidance document whose implementation was left discretionary. He mentioned that LIFE was also taking steps to enforce certain parts of the NCAP by approaching the National Green Tribunals (“NGT”) across the country. Mr. Dutta also pointed out that the NCAP had set wrong targets in that it was disproportionately focused on the non-attainment cities. He pointed out the defect in this approach in that to identify the non-attainment cities, the Central Government had only monitored 378 cities out of which they chose 122 cities as non-

attainment cities while in India there are more than 4000 cities. Thus, most areas over the country were not even monitored and any plan or programme founded on the idea of tackling air pollution in non-attainment cities would not truly capture the breadth of the issue all over the country. States like Gujarat and Tamil Nadu, which are industrial states and contribute significantly to air pollution in the country, did not even properly monitor the air pollution in their territory and thus the NCAP is largely based on unreliable data. He also pointed out that the total number of monitoring stations used in this process were only 703 which is not sufficient to cover a country like India which is vast, heavily populated and has diverse terrains requiring specific actions. Mr. Dutta demonstrated the fallacies in this approach while noting that a state like Himachal Pradesh, which has a significant amount greenery and less industrialisation, has 8 non-attainment cities within its territory while states like Tamil Nadu, which is a heavily industrialised state, or Jharkhand, which is a major centre for mining activities, both have only 1 non-attainment cities identified.

Mr. Dutta further pointed out that even within the highly suspect NCAP the timelines which were laid down had not been followed by any state authority. Under the NCAP, the Central Pollution Control Board was supposed to frame guidelines for various states to prepare state specific action plans to deal with air pollution, however, as on date of this workshop the Central Pollution Control Board had not framed any such guidelines. This deficiency and delay had a cascading effect in that even though states were supposed to have state action plans to combat air pollution by 2020, till date not a single state had a state action plan to combat air pollution prepared let alone any implementation of such plans starting in 2021. Mr. Dutta emphasized the necessity of state-wide and state specific action plans to combat air pollution and highlighted the steps taken by LIFE in this regard. LIFE had filed applications under the Right to Information Act, 2005 to various State Pollution Control Boards seeking copies of such state action plans which revealed that no state had prepared any such state action plan, rather they had prepared some city action plans targeting only the non-attainment cities and even these city action plans were not sufficient to address the issue of air pollution in these cities. LIFE had thereafter initiated litigation on the issue before the NGT and had obtained significant success. The Central Pollution Control Board had sought 2 months' time from the Southern Zone Bench of NGT undertaking to prepare guidelines for various states to prepare state action plans to combat air pollution. The Eastern Zone

Bench of the NGT had also issued notice to the Central Pollution Control Board and to various states and State Pollution Control Boards within its jurisdiction seeking their response to the application filed by LIFE seeking enforcement of the NCAP and directions to the states to prepare state action plans to combat air pollution.

Mr. Dutta further highlighted other deficiencies in the NCAP and its implementation such as the arbitrary and poor allocation of budget under the NCAP. Mr. Dutta said that not enough resources had been budgeted to deal with the problem of air pollution rather most budgetary allocation seemed to be wrongly assigned to even more source apportionment studies which would not provide any new answers. He also noted that large source of air pollution such as construction and demolition activities were not covered by the NCAP despite them being a large source of air pollution particularly PM10 and PM2.5 particles among other pollutants. Further, emission standards for power plants had also not been prepared. He expressed frustration that the NCAP largely dealt with PM10 and PM 2.5 particles as major air pollutants while ignoring other pollutants which have adverse health effects on the people.



Mr. Dutta concluded his address by discussing the way forward and emphasizing that any state action plans which would be prepared under NCAP should entail proper and robust public consultation, discussion and participation.

2. **AN OVERVIEW OF THE KEY ASPECTS OF NCAP AND WHAT HAVE BEEN THE FUNDAMENTAL CHALLENGES IN THE IMPLEMENTATION OF THE PLAN**

SPEAKER – DR. DIPANKAR SAHA, (RETD.) ADDITIONAL DIRECTOR, AIR POLLUTION MONITORING & MANAGEMENT, CENTRAL POLLUTION CONTROL BOARD

Dr. Saha presented a review of the NCAP and pointed out deficiencies in the programme. He pointed out that a major deficiency in the NCAP was that a lot of the plan under the NCAP are limited to municipal boundaries on non-attainment cities and thus did not address air pollution issues arising out of the boundaries of non-attainment cities or cross-border air pollution.

Dr. Saha also explained that a major aspect of air pollution in India is its seasonal nature. Air pollution in India peaks during winters and is at its lowest during monsoon. Dr. Saha emphasized that any plans to tackle air pollution have to consider this aspect. He pointed out how the NCAP refers to cities such as Shanghai while discussing methods of combating air pollution and seeks to emulate the steps taken in other places outside India. He criticized the approach of using foreign data of places with different characteristics to prepare plans in India. Dr. Saha submitted that any plans to tackle air pollution in India ought to be based on Indian data and with India specific strategies. He further noted that the unique geography of India has to be taken into account before formulation of any plan or a programme like NCAP to combat air pollution. He pointed out that the Indo-Gangetic plains have unique characteristics which need to be considered.

Dr. Saha took the attendees through the targets set by NCAP for reduction in air pollution and increase of air quality. He pointed out that despite laying down plans and setting targets there was a doubling of air pollution between the years 2020 and 2021 evidencing a failure on part of the authorities to adequately deal with the issue of air

pollution. Dr. Saha also noted that the NCAP primarily deals with PM10 and PM2.5 particulate pollution without taking into account the other air pollutants which have significant adverse health impact.

Dr. Saha lamented that even though the bureaucratic structures for planning and implementation of plans is in place at the state, city and local levels, still there is lack of action being taken at these levels or even regular meetings taking place to monitor implementation and take stock of further actions to be taken. He emphasized that action is a continuous process requiring constant training, monitoring, data analysis all of which seems to be absent. He recommended a strengthening of the institutional framework to deal with air pollution with mandatory activities and meetings being made a part of the framework.

Dr. Saha also criticized the confusing source apportionment studies and methodologies that were difficult for the public to understand and which acted as a barrier to public participation and consultation in the discourse surrounding air pollution.

3. OBSESSION WITH SOURCE APPORTIONMENT STUDIES

SPEAKER – MR. DHARMESH SHAH, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Mr. Shah began his presentation with a historical perspective on policy and legal actions for combating air pollution. He touched upon the Smoke Nuisance Acts based by the British in Bengal (in 1905), in Bombay (in 1920), and by the Indian Government in Gujarat (in 1963). He also briefly touched upon the first study on air pollution done in India which was published in the Indian Journal of Meteorology and Geophysics in 1958 after studying Calcutta. He demonstrated how Calcutta and Bengal have always been leaders while combating air pollution.

Mr. Shah took the attendees through a timelines of source apportionment studies to demonstrate how over the past decade there has been a tremendous increase in source apportionment studies in India. He pointed out India's first "source inventory" study for air pollution was carried out in Mumbai in 1968 by the National Environmental Engineering Research Institute, who also carried out similar source inventory studies

in Mumbai, Delhi and Calcutta in the 1990s. Since then, there have been 73 source apportionment studies which were carried out between 2001 and 2017 by various academic institutions and agencies. Mr. Shah compared findings of studies done in 1982 with studies done later and the solutions arrived at in 1982 and the solutions proposed as of 2021 to show that these studies identify the same sources and provide similar target interventions viz. reduction in number of cars, necessity of an efficient public transport system, ban on old cars and mandatory regular maintenance of cars, efficient traffic management etc. Mr. Shah pointed out that such source apportionment studies which are repeating the same issues and solutions in 2021 are a drain on public resources. These source apportionment studies are funded by various pollution control boards with public money and each study can cost upwards of Rs. 80 Lakhs and the total cost of these studies itself takes up almost 20% of the NCAP budget. Mr. Shah lamented that even the NGT had fallen into the trap of these source apportionment studies without going into socio-economic factors behind the rising air pollution. He argued that many source apportionment studies seem to vary wildly in outcomes, bringing into question the value and validity of such studies. He also argued that more source apportionment studies did not lead to an increase in implementation of existing measures and policies even though the sources, the problems and the target interventions remain the same.

Mr. Shah also raised the issue that environmental issues including air pollution receive scant interest from the authorities which is evident from the fact that in the FY 2020-21, the Central Government allocated Rs.3,100 Crores to the Ministry of Environment, Forest & Climate Change out of a request of Rs. 4,295 Crores being a shortfall of Rs. 1,200 crores. He further noted that even the NCAP budget had barely increased evidencing the seriousness of the government regarding air pollution. He lamented that the state agencies handling air pollution are bedevilled with a lack of funds, skills, manpower, motivation and accountability and concluded that NCAP would be better off spending their limited resources on pollution mitigation initiatives rather than continuous funding of repetitive studies.

4. HOW NCAP FAILS TO SET UP A CREDIBLE SYSTEM FOR MONITORING AIR QUALITY

SPEAKER – DR. R.K. SINGH, TRUSTEE & IN-CHARGE OF RESEARCH DIVISION, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Dr. Singh commenced with a background of NCAP and discussing the targets laid down therein viz. to reduce air pollutants, with an emphasis on PM10 and PM2.5 particulate matter, by 20-30% by 2024 in the non-attainment cities in NCAP. He took the attendees through the data to show that there was an increase in the number of manual stations monitoring air quality from 703 to 1500 across 4000 cities, 150 new real time Continuous Ambient Air Quality Monitoring Systems had been installed in 40-50 cities lying in the Indo-Gangetic Plains, 1000 low cost sensors had also been installed and in each city a mobile Continuous Ambient Air Quality Monitoring System had been deployed. However, only 100 monitoring stations were installed in rural areas and the monitoring in rural areas was significantly lacking.

Dr. Singh first picked up the issue on the need for air quality data and said that displaying raw data, time series plots, statistical analysis and complex findings were not useful for the general public and he introduced the concept of an Air Quality Index developed by many nations which also found purchase in India and detailed studies on the same were conducted in India. However, in India there are limitations to AQI such as that AQI does not take into account the presence of lead in the air and requires PM10 and PM2.5 particulate matter to be a part of any AQI reading.

Dr. Singh spoke about the increase in manual monitoring stations but the necessity of even more monitoring stations in the Indo Gangetic plain in particular. He emphasized on the necessity of more real time monitoring of ambient air quality in non-attainment cities where such monitoring is lacking and more so in the rural areas so that a better picture on air quality in the nation can be gathered. He detailed the benefits of CAAQMS over manual monitoring stations and presented a cost benefit analysis to show how CAAQMS were more cost effective in the long run. He also said that CAAQMS are also useful in gathering meteorological data, is less error prone and provides real time data rather than delayed data from manual stations. Dr. Singh also discussed limitations of low cost sensors which are in vogue these days. He said that such sensors are new technology which haven't been studied for too long, they give

unreliable data and cannot be considered a replacement of CAAQMS or even manual monitoring stations.

Dr. Singh concluded his address by pointing out that NCAP was further limited in that it did not envisage a greater area being covered by monitoring stations rather was limited to non-attainment cities only.



5. OPEN DISCUSSION

CHAired BY AARTI KHOSLA

The floor was opened to an open discussion between the presenters and the attendees. Dr. Saha took the floor and discussed his experience with CPCB in various cities across India and provided valuable insights into the working of government authorities.

Further, discussion was initiated by Aarti Khosla on the requirement of monitoring stations. The group unanimously concluded that based on Dr. Singh's presentation and recommendation CAAQMS should be used to monitor ambient air as opposed to more number of manual monitoring stations. The group was convinced by the cost-benefit

analysis of Dr, Singh that even though CAAQMS might have an initial capital cost however it served to be more economical in long run requiring less running costs.

Further discussion occurred on low cost sensors and Dr. Singh's presentation on the same was discussed. The group concluded that such sensors were still unreliable and did not provide the necessary data which could be used to make policies or conduct research. It was agreed that they had some use to give a general idea of air quality to the public but it was no replacement for proper CAAQMS or even manual monitoring stations.

CITY LEVEL CHALLENGES

CHAIR: DR. M.P. CHENGAPPA, PROFESSOR, WEST BENGAL NATIONAL UNIVERSITY OF JURIDICAL SCIENCES

The second session of the day was chaired by Dr. Chengappa of West Bengal National Law University of Juridical Sciences. This session was focussed on the challenges being faced in Kolkata specifically and steps that could be taken. Dr. Chengappa gave an opening address where he spoke about his experience as an environmentalist in Kolkata. He spoke about the growing acceptance of electric vehicles in the city and the small steps that citizens could take to combat air pollution.

1. NCAP TRACKER AS A PLATFORM FOR KNOWLEDGE SHARING

SPEAKER: AARTI KHOSLA, DIRECTOR, CLIMATE TRENDS

Ms. Khosla introduced the attendees to the online platform known as NCAP Tracker which provides air quality and pollution related data that can be utilized for policy tracking, air quality data analysis, budget allocation among other uses. She gave a presentation demonstrating the platform and urged that it was usable by people with diverse backgrounds such as air quality professionals, researchers, healthcare workers, journalists and common citizens to keep up to date.

Ms. Khosla moved onto West Bengal specific discussion and showed that the platform could be used to garner a lot of information while also showing its limitations. She showed that most monitoring sites, which the NCAP Tracker relies

upon, were based in Kolkata and not in other cities or towns. In fact many of the other monitoring stations were not always functional and thus did not provide continuous data. The stations at Durgapur and Haldia recorded an uptime of 41% and 31% respectively. However, all the monitoring stations in West Bengal were generally online. She clarified that the NCAP Tracker only considers PM10 and PM2.5 particulate matter air pollutants and does not track the others.

Ms. Khosla then showed an analysis of the air quality during the lockdown and immediately thereafter. It showed a drastic reduction in air pollution initially however, then the air pollution levels rose back to levels pre lockdown demonstrating that even though there was a possibility of reduction of air pollution when economic and industrial activity was low it was not a sustainable model.

Ms. Khosla moved on to discuss air quality trends and identified the seasonal patterns and issues. She showed that Kolkata and Howrah remained highly polluted. She also pointed out that Siliguri, despite being a non-attainment city, did not have any monitoring stations.

She went on discuss the pollution mix in Kolkata and explained that though the average air pollution in Kolkata was lower than national levels it still remained higher than limits deemed permissible by the CPCB. She pointed out the hotspots in West Bengal based on monthly averages through the NCAP Tracker and demonstrated the ease with which hotspots could be identified and the data could be used to tackle issues as monitored on a daily basis. She emphasized about how the NCAP Tracker as a tool could make conversation around air quality mainstream and contribute to an increase in public outreach and education,

Ms. Khosla explained the NCAP Tracker website and demonstrated the dashboard. Various tools were demonstrated such as metrics of budget trackers which showed utilization of budget under NCAP and disbursal. The pollution levels tracker was demonstrated through the continuous air quality monitoring dashboard.

Dr. Chengappa opened the floor for a discussion on the presentation of Ms. Khosla. The attendees discussed the tracker and its usage and marvelled at the versatile

utility of the tool. Questions were raised about the possibility of its adoption by regulatory authorities as well and Ms. Khosla clarified that the same was a work in progress. Dr. R.K. Singh specifically mentioned that the NCAP Tracker ought to take into account variation values rather than just mean values for a correct statistical picture.

2. COMPREHENSIVE CITY ACTION PLAN IN DEALING WITH AIR POLLUTION MITIGATION

SPEAKERS: KANKANA DAS, SUBHRAJIT GOSWAMI, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

The speakers commenced the address with a brief introduction to the history of the city action plan for combating air pollution in Kolkata and the orders of the NGT dated October 8, 2018 after which the Air Quality Monitoring Committee was constituted on December 5, 2018 for the preparation of an Air Quality Action Plan for Kolkata.

The speakers continued to discuss the key features of the Air Quality Action Plan for Kolkata. They highlighted that there were 5 CAAQMS which covered the entire city of Kolkata and the focus that the plan made on industry, transportation improvement and traffic management and an increased focus on utilization of inland waterways. They emphasized that these stations do not cover the major areas in Kolkata where air pollution was rife. They further highlighted the lack of monitoring stations in Barrackpore and Raniganj, despite the same being non-attainment cities. They also pointed out that Asansol, Durgapur and Haldia, which are all major industrial centre, have only one CAAQMS for the entire cities leading to a lack of correct data.

They began their critique by pointing out that plan was vague and without any committed timelines leading to a lack of accountability. The plan lacked any guidelines or framework on street design, plans for increase in green cover in the city or planned assessment of areas where action was required. Further, there was a complete omission of agencies identified to deal with the issues. They showcased the lack of quantifiable targets in the plan and vagueness and lack of specificity. In

particular they showcased the ambiguity in budget allocation such as lack of any provision in the budget for increase of green cover or setting up on additional CAAQMS. They further highlighted the air pollution issues due to constructions and the lack of a construction and waste disposal facility. They continued to critique the policy for mechanized sweepers and pointed out that such machines are a cosmetic solution and most of them lie un-operational and even those that were operational could not be used in many lanes and streets in Kolkata. They criticized the usage of coal tar for various road building and other construction purposes as coal tar usage was a major source of air pollution.

The speakers moved on to statistical analysis showing areas in Kolkata with a high concentration of PM10 and PM2.5 particulate matter. They discussed the situation in the other non-attainment cities and pointed out that the State of Environment Report of Durgapur and Haldia had said that the monitoring locations in those areas had been un-operational for two years giving a lack of data. They moved on to an overview of cities with reference to PM10 and PM2.5 particulate matter and highlighted the various non-compliances by the state government.

The speakers concluded with a discussion on the way forward and proposed budgetary allocation towards more CAAQMS in the city as well as in the state, improvement in the public transport infrastructure in Kolkata, enforcement of existing guidelines related to construction and related pollution, budgetary allocation towards public education on air pollution, health assessment studies for the persons most affected by air pollution. They recommended revival of pollution free methods of transportation such as trams and provisioning of non-motorised transport such as cycles and better traffic management.



TRANSPORTATION SECTOR AS A SOURCE OF POLLUTION AND URBAN MOBILITY

CHAIR: MS. REEMA BANERJEE, PROGRAMME DIRECTOR, CEE

Ms. Reema Banerjee opened this session with a statement on transportation and resulting pollution from the industry. She focused on the health impacts of air pollution due to transportation and discussed cross sector implications of policy interventions in transportation sector.

1. NATIONAL CLEAN AIR PROGRAMME AND SHIFT TO CLEANER TRANSPORT – PERFORMANCE OF WEST BENGAL

SPEAKER: DHARMESH SHAH, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Mr. Shah prefaced his presentation by stating that the City Action Plans of non-attainment cities in West Bengal were highly ambitious and unlikely to succeed.

He discussed the city action plan for Kolkata and pointed out in just Kolkata in the transportation sector there were 25 interventions planned. Many of these assessments were unverifiable such as parking removal. He also pointed out the misguided approach in utilisation of inland waterways for coal transportation cautioning against the possibility of riverine pollution.

He showed that similarly there were 72 action points to tackle air pollution in Asansol many of which were merely statements seeking stricter implementation of existing laws rather than any new steps. Issues like imposition of fines and penalties for offenders, and additional fines for off lane parking are all measures which are already on paper. There is clarity on how they will be enforced more strictly as compared to any time prior to the plan when such measures also existed.

Addressing the two plans, Mr. Shah showcased how all the action plans for the non-attainment cities in West Bengal seem to have similar issues identified and similar solutions offered. He also pointed out that most of these action points are extremely vague without any specifics on budget, timelines, any additional efforts that would be required. He further criticized them for being copies of each other without taking into account local factors in each city which contribute to air pollution. He lamented the lack of discussion in the plans on coal belt areas of Raniganj, Haldia etc.

He pointed out that there were unnecessary additions of unconnected issues to air pollution such as additional bus stops being set up under the plan. This unfocused approach seeks to conflate unconnected points and leads to poor budgetary allocation.

He pointed out the over ambitious timelines, the progress made and the unlikelihood of the timelines being met. He pointed out the lack of any plan to combat fuel adulteration despite there being a fixed time to prepare the same. Further, he pointed out that the plan envisaged setting up of electric vehicle infrastructure in one year which is unachievable by any standards. Further, the action points on large vehicles do not provide steps which will be taken to meet the

deadlines laid down. Further, public participation was emphasized in the process.

Open Discussion: An Open Discussion followed the presentation. The attendees agreed that Action being taken is often stymied by infrastructural issues. Unreasonable timelines set out in the plan evidence a lack of seriousness about the plan itself. The group decided that an identification of actionable areas in the city action plans was required to see where there was a possibility of legal intervention.

2. PROVISION OF CYCLING AS POLLUTION FREE MODE OF TRANSPORT

SPEAKER: SATANJIB GUPTA, KOLKATA CYCLE SAMAJ

Mr. Gupta began with an introduction of the Kolkata Cycle Samaj. He then moved on to demonstrate, using statistical data, that cycling was a green mode of travel due to reduced carbon usage. He showed figures showing that cycling saved 250g of CO₂ emission per kilometer travelled.

He then went into the history of cycling in Kolkata, including in cultural depictions. Kolkata has a culture of cycling and in 1998 cycling was more prevalent than motorized vehicles. Even as far as 2008 trips by cycle outnumbered by cars/bikes. He pointed out that as per the Comprehensive Mobility Plan 23% households in Kolkata had cycles. He pointed out that post 2011 there was a slow decline in cycling due to increased risk in roads where cars/bikes/buses also ply. He also pointed out orders of Kolkata Police and Traffic Authorities post 2014 which discouraged cycles from plying on roads and restricted their movement. He thereafter pointed out provisions of West Bengal Motor Vehicles Rules, 1989 according to which there should have been a provision made for cycling tracks across the city however it was instead used to restrict cycling. Mr. Gupta raised daily issues where cyclists were harassed by Kolkata Police by indiscriminate fining which has led to a psychological aversion in the minds of people to cycle.

Mr. Gupta showed details of the NGT judgment which suggested adoption of cycling and construction of cycling tracks through the city which even led to a Comprehensive Bicycle Plan for Kolkata in 2019 as KMDA declared a plan to promote cycling.

Mr Gupta reiterated issues created by Kolkata Police and also highlighted other problems faced by cyclists such as rash bus operators and bus lobby, street parking which leads to congestion of main roads and further of small lanes and byways which could be used by cyclists. He concluded by proposing that a cultural change is required in road usage where preference is given to cyclists over motor vehicle users in road usage.

Open Discussion: The presentation was widely appreciated. A suggestion was given to deal with the issue of indiscriminate police fines on cyclists, to create a Cycle Fine Insurance Fund by members of Kolkata Cycle Samaj which would be used to pay fines imposed upon cyclists.

3. SCOPE FOR REVIVAL OF TRAM NETWORK

SPEAKERS: DEBASHISH BHATTACHARYA, CALCUTTA TRAM USERS ASSOCIATION

Mr. Bhattacharya commenced the address with an introduction into the history of Calcutta Tram Users Association and its founding in 1992 by Roberto D'Andrea, a tram conductor from Melbourne, and the purpose of CTUA to create pro-tram mass awareness and petitioning to the government.

Mr. Bhattacharya then continued to explain the various routes for trams to shuttle along with city plans. He proposed that there was tremendous scope for full utilization of trams to provide end to end connectivity to commuters. It is a dense network which can be used to manage a well-integrated mass transit system including railway, metro, ferry and bus services.

He expressed disappointment that the unplanned closure of vital routes has led to the slow death of tram systems. From 45 routes being operational, now only

3 routes are operational due to closure of tram depots. Various routes were specifically discussed and reasons for their closure were highlighted including lobbying by various pressure groups of auto drivers, taxi drivers, bus operators, motor vehicle manufacturers, police and traffic department etc. He pointed out that as near as in 2011 there were 37 tram routes operational while in 2021 there are only 3 operational.

Mr. Bhattacharya then spoke of the various issues faced by tram users such as the de-reservation of tram tracks. It was submitted that Kolkata Police, Transport Dept, Kolkata Municipal Corporation have been working in tandem to slowly destroy reserved tram tracks under pressure from car owners. Further, Tram boarding has become dangerous due to allowing cars to encroach over exclusive tram areas and on tram stops.

Other issues plaguing the tram system in Kolkata were showcased such as the slow erosion of staff which has also led to decline of tram maintenance, driving and subsequently usage. The single Driver Training School for tram operators is also closed and conductors and drivers been shunted to other departments.

Grievance against Kolkata Police was reiterated and it was submitted that Kolkata Police is anti-tram in general and they have taken various arbitrary steps against trams such as stoppage of trams for any reason. Trams are arbitrarily stopped for political rallies, metro construction taking place in unconnected areas, collapse of infrastructure unrelated to trams, increase in vehicular traffic etc. The solution to most of the issues was trams and yet Kolkata Police acted counter intuitively. Further, grievance was raised against civic bodies which termed Trams a “polluting agents” claiming that trams cause congestion which leads to more carbon emissions. Such classification is against scientific principles and also actions of developed nations where trams have been used, upgraded and revived. Details provided of cities in developed countries where tram usage is common and popular.

Further grievances were raised against political compulsions and pressure from automobile industry, autorickshaw unions, CTC Bus lobby which have further

led to the decline of trams in Kolkata. Specific details provided to show economic viability of trams and how they outperform buses on the long term and require less maintenance.

4. PUBLIC TRANSPORT

SPEAKERS: DR. MEHULI KAR, MR. ARNAB ROY, KOLKATA BUS-O-PEDIA

The speakers began their address with a glimpse into the history of public transport in Kolkata. They emphasized that for a population of 14,035,959 (as per 2011 census) around 950 bus routes operated across Kolkata metropolitan area. Out of these 40% were operated by state transport units and remainder by private operators.

The speakers then gave a classification of buses operating in Kolkata based on who was operating them. There are multiple operators and multiple types of buses operating in Kolkata. The government runs public buses through WBTC, SBSTC, NBSTC and aside from that there are private bus operators as well.

The speakers gave a comparison of the qualities of public and private buses and emphasized the strengths of each. Public buses are advantageous in that they are widely available during office hours, they follow a real fare structure, they provide connectivity to areas where there are no private operators, are outfitted with GPS trackers and have modern qualities where fare payment can be online and even AC versions are available. Private operators provide a larger number of buses throughout the day which are available even at late hours, they have excellent frequency across popular routes and they are better maintained.

The speakers also addressed the problems faced by private buses such as high fuel price, high price of BS VI compliant vehicles, COVID-19, lack of drivers and conductors etc.

The speakers also raised concerns about the contribution of buses to air pollution. Many buses were only compliant with BS-III and BS-IV emission

standards and some were still operating on BS-II standards. These buses have a poor fuel economy and operate on diesel. They mentioned that Kolkata has recorded the highest amount of PM and NOx emissions per 0.1 million of vehicular pollution. These buses are also major contributors to Co2, CO, SO2, NOx etc aside from PM.

The speakers then addressed a discussion on future of electric buses in Kolkata and concluded that private operators were unlikely to switch to electric buses due to high initial capital investment.

5. GRADED RESPONSE ACTION PLAN

SPEAKER: DR. R.K. SINGH, TRUSTEE & IN-CHARGE OF RESEARCH DIVISION, LEGAL INITIATIVE FOR FOREST & ENVIRONMENT

Dr. Singh commenced with a background of GRAP viz. that it was notified around January 2017, under the Environment (Protection) Act, 1986 primarily to address the issue of air pollution in Delhi based on AQI. He explained that GRAP deals primarily with PM2.5, PM10 categories. It categorizes action based on severity of concentration of PM2.5, PM10 particulate matter in ambient air.

Thereafter, he explained his study's methodology and objectives. He then showcased the findings of his research. His findings show that year to year, statistically, there has been no reduction in PM2.5 and PM10 in the years between 2018-2021. Further, even if seen season wise the study concluded that there was no change in pollution during winters across years in both PM2.5 and PM10. Dr. Singh further delved into winter season related statistics since it is the period of time with the highest air pollution in Delhi. His study found that even after the implementation of GRAP Delhi did not see a single day of clean air during winters in any year.

Dr. Singh continued his critique of GRAP saying that there is a contradictory and confused action plan of GRAP which does not lead to action on ground. Further, it appears that GRAP is only truly operational during winter though

there is severely poor air quality in all seasons except monsoons. Further, GRAP ignored AQI related to other air pollutants beyond PM2.5 and PM10 particulate matter to the detriment of the health of citizens and to the entire plan to combat air pollution.

Open Discussion: The presentation was followed by an open discussion on the facts and conclusions brought forth by Dr. Singh and the attendees agreed that there is a lack of linkage between GRAP and source apportionment studies to target the source of air pollution which makes it ineffective in the fight against air pollution.



6. WAY FORWARD

An open roundtable discussion was conducted to discuss probable action points pursuant to the workshop, led by Mr. Ritwick Dutta. The following points were proposed for further action –

- a) Integrated ticketing systems to synergize different public transport modes

- b) Strong media campaign to increase public awareness and public discourse around air pollution
- c) Rebranding of trams as the original e-vehicle without battery waste
- d) Promotion of cycling as a mode of transport over short distances
- e) Pursuing legal alternatives – identification of actionable areas and bringing challenges in court
- f) Ideation of implementable policies and plans
- g) Creation of issue based groups to discuss and contribute with synergy

SESSION CLOSED FOR THE DAY



5th SEPTEMBER, 2021

KOLKATA

Overview:

A two day workshop was organized by LIFE on air pollution related issues in West Bengal, Jharkhand and Odisha. The main objective of the workshop was to review the implementation of the National Clean Air Plan (“NCAP”) while we are in the middle of the implementation deadlines in NCAP.

The second day of the workshop was devoted to discussion on various environmental issues in West Bengal, Jharkhand and Odisha, with a focus on landscape level intervention for restoration of ecology and protection of the health of the communities affected by pollution and environmental degradation.

A variety of issues were pointed out during presentations on a state-wise discussion pursuant to an introduction by Mr. Ritwick Dutta (LIFE). Issues related to West Bengal were showcased by Mr. Swaraj Das (Project Affected Peoples Association) and Mr. Subhrajit Goswami (LIFE). Environmental issues in Odisha were highlighted by Mr. Sankar Pani (Advocate), Mr. Prafulla Samantray (Environmentalist). Issues related to Jharkhand were presented by Dr. R.K. Singh (LIFE), Mr. Ameya Vikram (Advocate), Mr. Praveen Kumar Singh, Mr. Arun Rai and Mr. Anshul Sharan from the Damodar Bachao Movement. Information was provided about health impacts of air pollution by Ms. Punita Kumar and Ms. Vishvaja (SHRC) and by Dr. Manas Ray and Dr. Prabir Chatterjee

Pursuant to presentations there was an open discussion on the issues highlighted and action points discussed.



Issues Identified:

Coal Mining in Raniganj: Indiscriminate mining is leading to landslides in the Raniganj area of West Bengal. Old underground mines have not been mapped out and slowly they are flooding and collapsing leading to landslides. The old mining tunnels also contain deposits of methane gas which are prone to catching fire. Areas are being converted for open-cast mining without paying heed to already existing underground tunnels leading to loss of stability of earth and landslides. Local communities are facing the brunt of hardships and harassments by state authorities and political interests. Degradation of agricultural land, forest land, villages and settlements around mines was highlighted. Issues were discussed related to the Electric Vehicles Policy leading to a greater demand of coal driven thermal power plants which is causing tremendous environmental degradation and adverse health impacts upon communities in areas around the mines. There is misutilization of funds in the Peripheral Development Fund and Disaster Management Fund which are necessitated under Environmental Clearance.

Coal Mining in Birbhum: New project in Birbhum district of West Bengal through exploitation of the Deocha-Pachami coal mine has begun. Similar issues to those faced by communities in Raniganj also affecting Birbhum district which is home to tribal population

who are suffering from exploitation by State government and mining corporations. The projects are not leading to any tangible benefits to local communities and most people have not received employment or increase in quality of life. It was further discussed how Deocha-Pachami coal mine has inferior and poor quality of coal which is also being mined and the usage of which will lead to tremendous environmental degradation. The environmental clearance of this project has not been found in public domain though work has commenced. Local communities suspect that in the garb of coal mining, actually stone mining is being done. There is tremendous adverse health impact of local communities due to stone quarrying and mining. Many of these communities affected are Scheduled Tribes and Schedules Castes.

Subarnarekha river issues: Chandil Dam and Garudih Barrage on Subarnarekha river have led to flooding in the region. It has also led to degradation of small lakes (“**Dahas**”) in the floodplains which are conducive to fish growth. Fisherfolk in the region are forced to illegally extract gravel from riverbed due to lack of fishing opportunities due to the destruction of these *Dahas*. There river is also suffering from rampant illegal sand mining on the river bed. These issues are also reducing fish numbers, caught by fisher folk and hence impacting their livelihood. There is a bridge being constructed on the river where the construction has been continuing for 5 years which has reduced water levels in Subarnarekha river and also depleted fish stocks in the river. Pollution from Jharkhand has also been flowing into the river leading to further ecological damage. Most of the sand mining on Subarnarekha is without a District Survey Report and without appropriate clearance from Central Pollution Control Board (CPCB) or respective State Pollution Control Board (SPCBs). It was pointed out that the NGT has taken cognizance of the issue and orders have been passed restraining sand mining on the river.

Non-attainment Cities in Odisha: There are only 2 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in public places in Odisha. Despite being Critically Polluted Area, Talcher and Paradip have not been identified as non-attainment cities.

Issues in Paradip: Paradip is a Critically Polluted Area. In 2010 there was a moratorium passed on mining activities in Paradip, Ib Valley and Angul, however the moratorium has now been lifted leading to tremendous pollution and environmental degradation. No CAAQMS being installed in Paradip either. Paradip has not been classified as a non-attainment city despite vehicular pollution, fertilizer plants and other industrial units in the area.

Issues related to Steel Plants in Odisha: Steel Plants are discharging toxic effluents into agricultural fields and into the Brahmini River.



Issues related to abandoned mines in Odisha: The landscape is criss-crossed with abandoned mines. These sites have been abandoned by industries that used to be there and toxic pollutants are seeping into the water. Lack of accountability highlighted around abandoned mines. There are issues related to legal classification of abandoned mines due to which non-working mines have not been classified as abandoned since that would require costs for reclamation process. Other abandoned mines also seem to have bypassed reclamation process.

Issues around Rourkela: Rourkela is suffering from environmental degradation on account of mining and industrial pollution however it does not find any mention in the various plan to combat pollution.

Mining in forest lands and biodiversity rich areas in Odisha: Numerous instances of violation of environmental laws and procedures in Odisha discussed. New auctions for mining purposes are being permitted on forest land. Mining in biodiversity rich areas is being permitted by reducing the area of forests and wildlife sanctuaries through notifications by Central and State governments. Difficulty is also faced in raising awareness and organizing protests due to lack of good local political leaders and an increase in real estate prices leading to temporary

benefits which are being used to induce local people. There are numerous areas where iron ore mining, bauxite mining are prevalent leading to environmental detriment. Projects related to cement, coal rolling, captive power plants etc in violation of environmental norms are also being set up. The auction process is also rife with corruption and being conducted in a fraudulent manner to benefit vested interests. The deaths in Gopalpuram, attributable to violation of environmental safeguards, was discussed.

Mining in Northern Jharkhand: The area is full of coal and mica and large scale mining of the same is conducted here. Numerous mica mines have been shut down and abandoned but no data is available on the same. Hills sacred to locals have been destroyed by indiscriminate mining.

Issues in McCluskieganj: The area is well developed with significant natural beauty and a substantial population, however, numerous brick kilns in the area have severely and adversely affected the environment and the health of the local communities. There is a severe water shortage in the area because of over-use of water by brick kilns. NGT was approached against 2000 illegal brick kilns where Jharkhand SPCB and State mentioned that 917 brick kilns existed out of which 317 were legal. Since then, numerous information was sought from various department using Right to Information (RTIs), but no response from Jharkhand SPCB or any Jharkhand Government has been received. There is a high level of opacity and lack of transparency. Reports are not uploaded, various authorities are also lying defunct leading to further lack of accountability. By their own admission in an response to an RTI query, Jharkhand government never did any study to find environmental pollution and degradation in non-industrial areas. There is a necessity of community mobilization. The area also suffers because of lack of experts who can analyse EIA Reports and other statutory report and easily explain the same to the affected communities so that any action can be taken. Numerous mango orchards have also been destroyed by pollution. Mangoes do not grow, and those that do grow are smaller and require excessive usage of pesticides to harvest.



Issues with Bokaro Steel Plant: There is a lack of functional Water Treatment Plant in the Bokaro Steel Plant. Water Treatment Plant is now installed however the issues persist. Jal Jagruti Abhiyan was organized to address lack of clean water. Quantities of arsenic, fluoride and other toxic pollutants in drinking water, which have had deleterious effect on human health, were found in the water around the plant.

Issues in Dhanbad: Mining and industrial pollution are major causes of pollution through drilling, blasting, transportation as found from the discussion. Further issues related to waste management, air pollution, sewage, water also pointed out. Regarding air pollution, the Dhanbad City Action Plan under NCAP is also not yet implemented. The city has a lot of traffic and congestion as well leading to high pollution. Steps were taken by local activists and advocates to address the issues through legal methods, public awareness and campaigning which brought some respite. Orders have since been passed to prevent heavy vehicles within Dhanbad urban city limits. Dhanbad has public transportation issues as well and buses do not run in the city. Mortality due to TB, bronchitis, asthma is also on a rise in Dhanbad. Dhanbad is also completely surrounded by mining areas which leads to increase in pollution.

Issue in Maithan: Maithan is suffering from severe water pollution due to fly ash leakage which is also polluting drinking water in the area. Corporations like MPL, BPPL despite notice from State Government have denied responsibility. The area also faces massive deforestation

which is replaced through plantation of saplings which is insufficient and does not offset the environmental loss. Necessity for community awareness and mobilization is required, especially since most government authorities are hand in glove with polluters due to endemic corruption.

Sabri River Issue: Brick kiln in the middle of a delta/island in the middle of the river. Huge variance between official records, documents and ground reality and tremendous institutional apathy coupled with corruption.

Patrapur Power Station: Fly ash leakage issues in the power station.

Chandrapur Power Station: Is not compliant with environmental laws and standards.



Issues in Charhi coal belt area: Health complaints in the area were found to be chronic in nature with causal agents being environmental rather than microbial as per study conducted. Respiratory issues, skin issues, musculoskeletal complaints were alarmingly also detected in young age groups. Mental health impact is required to be assessed. Any compensation should be linked to primary health centre at the first stage. Training of local communities is required for assistance in dealing with the environmental issues plaguing the area. The area also suffers from rampant fly ash dumping and there is a complete lack of coordination between the various government bodies.



Action Points

- Data on agricultural land being converted for mining purposes in Raniganj and Birbhum has to be collected.
- SC/ST Commission to be approached regarding exploitation of communities and divestment of their rights in Raniganj and Birbhum.
- Field visit by team of LIFE to Harishpur area and surrounding villages to investigate effects of poorly planned mining, its effect on local communities and lack of compensation.
- Scientific research required to investigate link between coal mining in Raniganj, Birbhum and Asansol and landslides in the region.
- Gaurav Agarwal Report to be studied and Action Points to be identified.
- Research into CAT case on coal fires across India to identify Action Points
- Research needs to be done to determine minimum flow of Subarnarekha River to take action
- Intensive research in Paradip area proposed as it is located in an estuary and is of great importance with respect to mangroves and biodiversity

- Regarding air pollution in Odisha, it was proposed that a look at Central Government Office Memorandums to polluting industries mandating presence of ambient air monitoring systems linked to CPCB be researched. A study of the Supreme Court order mandating presence of systems can be studied to determine additional grounds for action.
- Suggestion to write to Centre for Science and Environment regarding classification of Odisha PCB as most performing, most transparent SPCB in view of numerous lapses and opacity.
- Keonjhar and Sundergarh district require a white paper to discuss environmental issues.
- Identification of lapses in health assessment and critical analysis of factual conditions needs to be done.
- Conduct a study on mica bearing areas in Jharkhand where mining has lapsed.
- Requirement of an NBWL accredited water laboratory in Jharkhand and around Bokaro.
- Community awareness and mobilization in McCluskieganj, Dhanbad, Maithan
- Damodar river protection should be linked with Namami Gange Programme.
- Investigation in Lorna area and massive fires in the location.
- Possible steps to utilize CSR to set up sewage treatment plans linked with Swachh Bharat Abhiyan in Odisha
- State level meetings of attendees and other environmentalists is required and further meetings at local level to identify key issues
- Capacity of Yugantar Bharti with respect to laboratory etc can be harnessed for health study training
- North Karanpura action plan committee report to be used and carrying capacity studies are required
- Plan for long term outlook with high quality studies is required in order to get proper unassailable health assessments that can be used to determine compensation and approach judiciary for redressal. There is a necessity for linking of health assessment with coal affected communities and to create a proper plan to take further steps rather than moving in ad hoc manner
- Public outreach necessary to educate communities about the necessity for phasing out of coal. In this regard, regional workshops, media training are also tools to be utilized.

- Benchmarks need to be laid down to identify issues and how to approach them.
- Urgent intervention in Jharkhand is required and emphasized.
- More studies required to create linkages between pollution and health impact.
- Create a quick response team for fly ash breach, oil spillage which can react within 5-6 days to an event to collect evidence quickly before it is destroyed due to natural reasons in order to get enough evidence for judicial intervention.
- Emphasis supplied that it is time for doctors, scientists and lawyers to coordinate and take action. Necessity to build scientific capacity and evidence to buttress cases.
- Move the monazite case ahead with Mr. Prafulla Samantray with a fixed timeline