Climate Resilient Maharashtra

Recognising the urgency of climate decade, Maharashtra gears up to launch its Electric Vehicle policy

Final Report & Compilations of all Recommendations from the Town Halls

Conducted: Online

ALL TOWN HALLS HOSTED BY

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Climate Voices is a collaborative made up of Asar, Climate Trends and Purpose, aimed at engaging key stakeholders on climate change and amplifying solutions to achieve sector and state leadership on climate resilience and reach new audiences. We are working with state-specific strategies across Maharashtra, Tamil Nadu, Kerala and Bihar.

Climate Voices through its **Climate Resilient Maharashtra - Communications Hub** aims to engage new and important constituencies in Maharashtra in a conversation about climate, to amplify solutions to the state's climate issues, and to encourage key stakeholders to invest in them. Our focus is to bring in new voices, mobilize them to participate in the climate discourse, and leverage their untapped power to challenge state and city policies which have climate impacts.

OVERVIEW

Climate Resilient Maharashtra through the Town Hall events aimed to create a movement among various stakeholders including citizens, government bodies, NGOs, researchers who led inclusive and active climate debates to safeguard the concerns most affecting the environment. It sought to strengthen the climate narrative by building a sustainable roadmap through focused recommendations.

The Town Halls were informal public meetings around shared subjects of interest that acted as an important tool for informing citizens about emerging climate issues. It also helped gauge where a community stands on certain subjects and served as a platform to identify and suggest implementation solutions to key issues.

Aligned with this aim, citizens and subject matter experts came together to invoke both civilian and government action towards:

- Preserving the rich biodiversity across both urban and rural zones in Maharashtra.
- Addressing the impacts of climate change
- Building a green economy
- Protect valuable ecological resources

- Conserve our natural environment for current and future generations

The four Town Halls discussed the following issues over 5 months:

- Air Pollution - March 2, 2021
- Waste Management - April 8, 2021
- Electric Mobility - May 27, 2021
- Mangroves and Wetlands - July 26, 2021

OUTCOMES

The discussions helped draw up a clear set of **recommendations** and present crucial inputs for the **State's Climate Action Plan** to improve air quality, waste management, enhance electric mobility and the state's new policy, and finally increase awareness and protection for mangroves and wetlands.

It further attempted to serve towards **efficiently communicating messages** out to the public, **generate news media coverage**, and **commence local advocacy efforts** both by the State and citizens.

Connecting with key stakeholders including academicians, lawyers, doctors, scientists, researchers, & civil society representatives working on air pollution, waste management, & electric mobility in the course of Town Halls; and bringing their recommendations to the state government.

Building a network of journalists and equipping them with simple and effective content that has enhanced their understanding, resulting in an eagerness to report on complicated aspects of climate & air pollution issues.

Simplifying complicated issues: The town halls helped create public awareness and also provided a wider spectrum of ideas and information to those who were part of the discussions on complicated issues like Air Pollution, Waste Management, Electric Mobility and Mangroves & Wetlands. It also helped create a

strong ongoing media narrative on climate change issues across state, especially in regional media.

OUTPUTS & IMPACT

On-ground impact

- **Longevity of the events:** A permanent art installation- Agla Station Mumbai 2.0 was placed at Bandra, which is the heart of the city. The installation depicts the impact of flooding in Mumbai and the need for climate resilience. It is also serving as an awareness tool for citizens to envision climate solutions - biodiversity and green spaces protection and transition to renewable energy as long term goals for the city.
- **On-ground activation**: A first-of-a-kind innovative Climate walk was designed and organised, which successfully proved out to be an innovative, new tactic in taking the message of climate resilience beyond the campaign cycle.
- **Amplifying views of Civil Society:** The Town Hall has served to support local green groups as a leverage to speak on climate activism and action.
- **Voices from the ground:** Town Halls provided a unique space and platform for unheard voices who represent various citizen representatives and stakeholders directly working on issues and presented their experiences on how they have managed to protect the ecosystem through their unique efforts.

Media Reach of the Townhall

- **Media Coverage:** A total of over **210 media stories were published in Marathi, Hindi & English** across major cities of Maharashtra on the discussions/recommendations and important announcements from the 4 town halls held between March and July 2021.
- **Social Media Campaign:** All four town halls saw a major social media campaign not only pre-event but also live tweeting while the town hall was

underway as well as post event. Hashtags like #MahaClimateVoices, #ClimateResilientMaharashtra were created along with dedicated creatives for each of the four town halls. The tweets were Retweeted and liked by influencers as well. Similar campaign was also run on facebook as well as Instagram.

Digital metrics:

- Over **25 million people reached** online through campaign hashtag #MahaClimateVoices and partner dissemination channels.
- Over **12K people engaged** directly with the campaign messaging
- 300+ comments and messages from audiences demonstrating interest on the subject
- Amplification of messages by **10+ influencers** including hyperlocal digital media platforms and a mix from Bollywood to arts and culture, and hyperlocal media outlets.

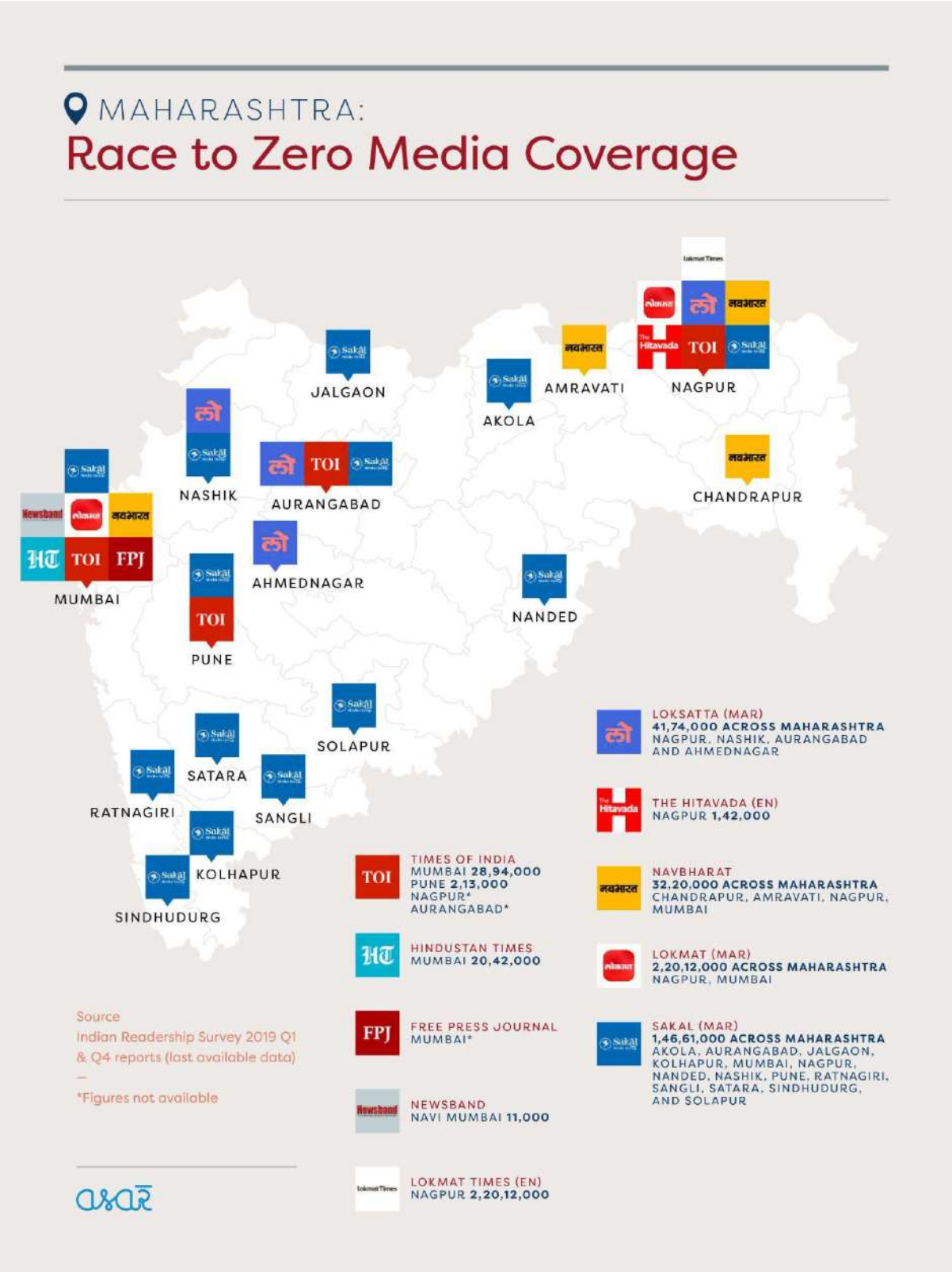
Race to Zero Coverage

Environment Minister Aaditya Thackeray announced 5 Maharashtra cities joining Race to Zero in an exclusive interaction with Climate Voices ahead of the Global Leaders Summit on Climate Change, with the announcement covered widely by the media. Race To Zero is a global campaign to rally leadership and support ahead of COP26 mobilizing the largest ever alliance of actors committed to achieving net-zero carbon emissions by 2050.

Aaditya Thackeray, Cabinet Minister (Environment & Tourism), Government of Maharashtra & Guardian Minister, Mumbai

"I strongly believe that climate mitigation and adaptation will not remain an option anymore. It is unavoidable and urgent. We need to make the language simple, take it to the common man, and make it a part of mainstream politics. It also needs to be part of every level of governance, legislation, judiciary, and corporate structure,"

5 cities joining Race To Zero resulted in **coverage by 9 major media houses with an overall reach of 50 million across Maharashtra.** This was followed by numerous follow up stories and final announcements by individual municipal corporations from these cities.



IMPACT STATEMENTS:

Manisha Patankar-Mhaiskar, Principal Secretary, Maharashtra Environment and Climate Change Ministry, Govt of Maharashtra

"All the Town Halls conducted so far under #ClimateResilientMaharashtra has been key to garnering inputs in the decision making process. The third installment of the Town Hall, which was on Electric Mobility, saw all the discussions and key recommendations becoming a part of Maharashtra's Electric Vehicles Policy 2021 and was approved by the State Cabinet in July.."

Sudhir Srivastava, Former Chairman, Maharashtra Pollution Control Board

"These Town Halls have been an eye-opener highlighting key issues in the climate space affecting Maharashtra state, ideated & recommended important inputs in collating a holistic climate action plan. Such engaging discussions are the need of the hour for passionate citizens to be part of the movement for joint call to action."

Virendra Tiwari, Additional Principal Chief Conservator of Forest, Mangrove Cell (Maharashtra Forest Department)

"The platform provided by the town hall during the discussion on Mangroves & Wetlands proved not only to be a very efficient way where government authorities as well as civil society could engage and present their views but also showed how passionately people support conservation of mangroves and wetlands."

Nandkumar Gurav, Regional Officer (Headquarter), Maharashtra Pollution Control Board

"We are in the process of bringing the informal sector in the ambit of the formal sector to enhance e-waste recycling. It is also a major recommendation from our end to be added to the State Climate Action Plan. Maharashtra Pollution Control Board has built its own action point agenda based on recommendations from the Waste Management Town Hall for statewide implementation, especially on hazardous and e-waste."

Recommendations from the Air Pollution Town Hall

March 2, 2021. 11:00 am to 1:30 pm

Total Participants: 87 through Zoom Link & 3,800 views through Majhi Vasundhara Facebook Live

Highlight

Addressing the Town Hall, Manisha Mhaiskar, Principal Secretary, Maharashtra Environment and Climate Change Department, Govt of Maharashtra highlighted how the ministry recognises the decade 2021- 2030 is possibly the last decade for positive climate action, which can help slow down the impacts of climate change. This is why the government launched a 360-degree campaign on Majhi Vasundhara, engaging over 700 cities across the state.

1) **Improving air quality monitoring and pollution source assessment**

Expanding real-time monitoring of air pollution grids across the state by having a good grid design. Increasing source identification and emission inventory studies by enabling a regional approach to mitigation. Setting up rural and peri-urban air quality monitoring, using satellite data to assess regional air quality, and assess the use of low-cost sensor-based monitoring. Having a daily air quality public information system linked to the national air quality index and more capacity for pollution forecasting. Having a more focussed approach through scientific studies for assessing city or town-wide scale of air pollution. Finally ensuring quality control of data and trend reporting to address the economic burden and state GDP due to pollution impact.

2) **Strong compliance strategy on action against Industrial Pollution**

Promotion of clean fuels by adopting either a state-specific or district-specific policy with strong compliance, action on the violation, and industry-wise penalty program. Enforcement of emission regulations at all industrial sites with mandatory compliance with standards for different pollutants (SOx, NOx and PM) followed by making MPCB's Continuous Emissions Monitoring System (CEMS) data accessible (with quality control). Ensuring non-hazardous industrial waste management to prevent open burning. Implementing the Mahul model of controlled fugitive emission from the material transfer, handling, industrial process, and roads common for state clusters. Making the Maharashtra star rating programme transparent.

3) **Focus on up-gradation of air pollution control system for Power Plants**

Push for the implementation of new thermal power plant standards in all power plants by 2022, and shut down older, more polluting plants by moving to cleaner fuels. There is a need to incentivise the push for cleaner plants. Ensure plant-wise action plan for implementation of emissions standards along with installation and up-gradation of air pollution control systems including flue gas desulphurisation, regular audit of stack emissions, ash bund management etc. The overall plan for utilisation of fly ash. Power plants belonging to MahaGenco like Chandrapur, Koradi, Bhusaval, etc as well as some private ones in Maharashtra are on the verge of missing the March 31, 2021 deadline to install flue-gas desulphurisation (FGD) technology to reduce sulphur dioxide emissions. Maharashtra could become the first state to implement the FGD technology installation for its power plants, setting an example across India.

4) **Emission management to arrest vehicular pollution**

Need for pollution under control (PUC) reforms by upgrading existing systems for testing of all required parameters and new norms. The mechanism to monitor and check harmful pollutants such as particulate matter and oxides of nitrogen. Regular audit and strong oversight of PUC centres by ensuring 100% compliance and levying penalties for fraudulent practices. Maharashtra to have centralized inspection test centres (presently only one in Nashik). Using advanced technology such as onboard diagnostics and remote sensing across major cities for on-road emission management. Having state/district specific urban freight traffic management plans where local and regional trucks can shift to LNG or CNG or introduce electrification of city-based freight. Having a state-specific scrappage policy and proper enforcement of the green tax.

5) **Clean air plans with mobility action through public transport lens**

While bigger cities like Navi Mumbai, Nashik, Nagpur, Pune have detailed plans for public transport, there is a need for more effective plans for smaller cities along with plans for all street users and street activities. A big focus is needed on road design and encroachment free roads to address traffic congestion for traffic movement. Bus fare policy for affordable commuting as well as augmenting bus fleet and bus network based on route rationalization is recommended. Bigger cities like Mumbai need to have multi-modal integration apart from improving and creating zonal network plans for pedestrian and cycling infrastructure. Adopt a parking management area plan (PMAP) to demarcate comprehensively all legal parking spaces for all modes and other activities in an area along with variable parking pricing and penalising illegal parking.

6) **Promoting Electric Mobility through time-bound policy interventions**

Set up a time-bound target for electrification and creating a holistic policy. Promoting battery-operated vehicles by adding new buses for public transportation and providing a tax exemption for encouraging E-buses. Targeted electrification of the delivery fleet (leased by e-commerce industry) for two-wheeler, three-wheeler etc by incentivising it. Prioritising the setting up of the charging infrastructure and linking it with parking and building based parking areas.

7) **Management of Construction and Demolition waste with effective dust mitigation strategies.**

Implement stringent dust control measures and on-site recycling of material by categorising type of construction and demolition waste (concrete, bricks and mortar, steel, wood and sand/soil). Urban local bodies have a recycling target - percentage by value/weight of construction materials from a reused or recycled waste. Building a network for collection and transportation for such waste by having more collection sites and using GPS tracking systems for waste hauling fleets. Establishing more waste treatment centres. Apart from sprinkling of water (to arrest dust) or use of mechanical/vacuum-based street sweepers, there is a need for a complete street design by auditing major dust pollution hotspots, paving of all haul routes, and having truck loading guidelines. Overall, the greening of a city needs to be done to control the urban heat island effect and carrying out dust resuspension.

8) **Strict compliance to curb emission from waste and open burning**

Under the waste management action plan, redesigning the entire waste collection network covering all hotspots across cities/towns. Identify garbage vulnerable points at the municipal level to undertake segregation, collection and processing. Setting up decentralized facilities for treatment of wet and dry waste within wards of a city or local level of a town to reduce operating expenditure on transportation and vehicle emission. Having a roadmap for a zero-landfill policy by using dumping grounds only for inert waste and reclaiming existing landfills through bioremediation technology. Integration of the informal sector in the waste value chain by having incentives for waste segregation at the household level while the penalty for mixed waste collection.

9) **Increasing overall dependency on Clean fuels and Renewable energy**

Limiting the use of solid fuel like wood, coal for cooking purposes and allowing a shift to liquified petroleum gas at the household level across cities and towns either through fresh state-specific incentives or existing policies from the Centre. Reducing dependency on coal for

electricity generation by pushing renewable energy at the grid level, across households and offices by having state-level subsidies.

10) Public action to empower change

Information and awareness on air pollution, its health impacts and clean air action plans are important. This can be achieved by providing transparent and accessible data, demystify science, and disseminate health information to, for and by citizens. Building a citizens' network including all change-makers and vulnerable groups to connect with the problem and solutions. Following NGT directive there has to be a toll-free helpline, public announcement in polluted hotspots. Citizens to assist the policy decisions to ensure difficult and ambitious solutions for clean air are implemented. Media and social media communication will play a key role for informing and strengthening public understanding and narrative on air pollution.

11) Impact of Public Health on Air Pollution in Maharashtra

Recognising the impact of indoor air pollution as a source of air pollution and understanding its impact on public health. Building awareness on health impacts due to air pollution caused while using day to day things like cooking using biofuels, mosquito coils etc through campaigns under Majhi Vasundhara and providing alternatives. Encouraging setting up of a State level Doctors' collective to build awareness on air pollution. Doctors should be encouraged to gather data as well as notify the collective about health hazards, cause of death or post mortem analysis (showing pollution impact on health) as a regular practice. The collective to facilitate studies to ascertain and verify health and economic impact burden on Maharashtra citizens due to air pollution.

12) Transparency on implementation of city-wise clean air action plans & utilisation of funds

The district committee set up for every non-attainment city in Maharashtra under the National Clean Air Programme (NCAP) should have citizen representatives in the form of NGOs, citizens forum along with elected representatives to assert accountability. Maharashtra could also play a leading role in India by having a dedicated portal or feature on the Maharashtra Pollution Control Board (MPCB) website that will help track all updates on clean air action plans city-wise along with the breakdown of the utilization of funds at the local level. Urban local bodies provide weekly/monthly updates to MPCB on use of funds allocated under the NCAP or 15th Finance Commission to them.

13) Identifying regional approach to clean air mitigation

A regional approach is needed to be able to reduce pollution from different sources across a region. Mitigation efforts cannot be confined to the municipal boundary of a city since pollution moves within boundaries. Rather than just focussing on a city alone the regional approach should include pollution from neighbouring areas. For example, when it comes to Mumbai city alone the entire Mumbai Metropolitan Region needs to be included, which would consider pollution from areas like Kalyan, Ulhasnagar, Navi Mumbai, Panvel belt too. This will also help identify pollution sources that are widely dispersed and are not within a city limit. For example, sources such as brick kilns, small industrial units, stone crushers, mining activities, ready-mix-concrete plants. While they may not be within city limits, they are part of the regional contribution to poor air. More coordination among municipal bodies is needed on pollution load impact across districts/cities/towns. Emissions from within a region but coming from outside a city carried by wind direction changes needs to be studied using satellite data.

14) State-level interdepartmental coordination & acceptance of air pollution as a crisis

The successful execution of the clean air action plan rests on specifying the roles, responsibilities, and commitments of various government departments. Similarly, each institution and/or department will have to commit to certain actions related to the applicable points in the plan relevant to them. To have a dedicated state-level committee under the Environment Minister with government officials as well as experts, scientists, researchers to report and monitor the progress of statewide clean air action plans and accountability of each department. MPCB could submit a list of activities underway/completed to this committee and on its website for transparency.

15) Developing Emergency pollution control plans for Maharashtra & specific cities

Similar to a disaster management plan, to avoid untoward incidents near industrial clusters close to residential areas that would lead to emergency air pollution situations (blasts, power plant explosions etc.), there needs to be an immediate response plan from MPCB to the local municipal body to implement key actions ensuring zero casualties and least number of health impacts to citizens arising from hazardous emissions in the area. The plan should be prepared using inputs from medical practitioners and each civic body should have an air pollution control officer.

Recommendations from the Waste Management Town Hall:

April 8, 2021. 11:00 am to 1:30 pm IST

Total Participants: 157 through Zoom Link & 4600 views through Majhi Vasundhara Facebook Live

Highlight

The Maharashtra Pollution Control Board highlighted how hazardous and electronic waste posed a huge threat to the environment and the need to enhance the collection and treatment mechanism. The Environment Ministry said they recognised that engaging the community will be extremely crucial to manage all kinds of waste successfully in the State. The administration from towns and cities should engage with the community. While the Maharashtra government has sufficient funds and plans, now all that was needed was will for implementation.

1) **Strengthen Collection, Segregation & Processing systems**

Through the use of technology, the amount of waste collection, percentage of segregated waste collected, and processed needs to be monitored daily. Monitor progress to strengthen collection and processing of segregated waste through designated nodal officer/s to monitor the progress of segregation, collection, transportation, processing and disposal. Alleviate processing capacities by adoption of decentralized or semi-decentralised waste management systems. Convert collection points to dry waste sorting stations or decentralised composting centres, and provide jobs to the informal sector for maintenance. Push bulk generators for decentralised processing such as schools, colleges or 3 star and above hotels and restaurants with over 50 seating capacity to have a Zero Waste Policy, to compulsorily treat wet waste at source. There is a need to encourage home composting by empanelling home composter kit manufacturers to avoid confusion on which technology is effective.

2) **Policy Level Changes**

Producers need to be incentivised to minimise waste and take responsibility for the reuse and/or recycling used products. At the moment 90% waste is handled by the informal sector and there is a need for policy, which will recognise their inclusion in the value chain. A system of landfill tax needs to be created to reduce dependence on land, and dis-incentivise dumping in land to make sure dumping grounds are not overburdened. There needs to be heavy fines for littering and non-compliance. Bulk generators and others should be liable to pay heavy fines for creating littering nuisance. Responsibility of the market associations/group of shop-owners needs to be

ensured so that there is no littering. In case of occurrence of any such event, local authority shall impose heavy fines.

3) **Incentivising Private Participation**

To ensure waste is looked at as a resource rather than discarded, the larger public must understand its value through incentivisation (cash, rebate in property tax, awards, certificates etc). Incentivises must be in place for citizens to send less waste reaching the dumpsite. Local bodies must push/incentivise segregation at source by rewarding and recognizing households/slum settlements/villages. Tipping fees needs to be given for segregating and collecting waste, which shall not only be related to the quantum of waste supplied to the operator but also to the efficient and regular collection of segregated waste. Popularisation of Harit, a brand to make it easier for the societies to distribute and sell the compost they generate for increasing and having a holistic approach to best from waste. Incentives should be made public with names on state websites and on social media tied up with the Majhi Vasundhara program.

4) **Capacity Building of Waste-pickers**

Waste pickers need to be integrated from the informal sector into the system. There is a need for organising training for Waste-pickers, which should include techniques for segregation as well as importantly ensuring their personal protection while working considering the impacts of the pandemic. There has to be incentives for Waste-pickers collecting waste door-to-door, which could include allowing them to sell the recyclables they collect. There should be proper training and safety measures for this.

5) **Behavioural Change**

Amongst citizens, elected representatives and decision-makers need to minimise overall waste generated and maximise reuse and recycling. Proper collection of waste at the household/slum level followed by segregation into basic dry, wet and biomedical waste to ensure mixed garbage does not reach the dumping grounds. Community involvement to ensure waste recycling at source through composting and reuse of waste within societies or guided by the urban local body within slum settlements.

6) **Zero Waste Burning State**

State leadership needs to take a decision to declare Maharashtra as a ‘Zero Waste Burning State’ by initiating a complete curb on any kind of waste burning, and stopping illegal waste discards. This will need mass awareness concentrating on the health impacts of waste burning, setting up strict fines, and also making sure effective waste collection is carried out by local bodies and municipalities. There needs to be strict action including heavy fines on industries or industrial estates that indulge in open burning of hazardous waste and both MPCB and urban local bodies

need to crack down against violators.

7) **Zero Waste Colonies**

Ensuring housing societies, slum settlements or large complexes strictly follow waste segregation, compost organic waste at home, and send only their dry waste to recycling centres and minimal discards to city dumping grounds. Local bodies or municipalities need to make this a mandate in the development control regulations or guidelines (if it has not been done already) and popularise it through different media. Existing zero waste colony concept needs to be made part of the building code and clearances issued to developers constructing new housing projects across Maharashtra through policy. Stringent measures to ensure that if guidelines are disobeyed then the local body has the right to refuse collection of waste.

8) Tackling E-waste

A full fledged awareness campaign will have to be taken across the State along with NGOs and other important stakeholders to push for safe and proper e-waste collection and recycling. Pan-Maharashtra e-waste collection centres needed under the State's existing guidelines with timely collection, popularised mechanism, and compulsory recycling of e-waste monthly through extended producer responsibility (private companies to be made responsible for the recycling). Guidelines have to incorporate all major electronic stores, large housing complexes, corporate offices to undertake monthly e-waste collection drives. Anybody failing to meet guidelines is liable to be penalised. State's guidelines need to make electronic goods producers and electronic store operators responsible for the need to have cash incentives for refurbishments of e-waste.

9) **Resolving Land Issues Causing Challenges in Waste Collection**

To improve waste processing and scientific waste recycling for every municipal corporation/councils, especially for smaller urban local bodies and zilla panchayats, a certain section of land has to be allocated (away from residential settlements) for the sole purpose of waste collection and treatment. However, efforts must be made to ensure that the area is not left just as landfill, and existing models of scientific waste treatment as implemented across Vengurla, Karjat, Pune, and Aurangabad are replicated as a blanket guidelines across Maharashtra. Dedicated plant space needs to be provided for treating construction waste across cities. Land identified should be cleared of all litigation, disputes or encroachments by the concerned government body.

10) **Monitoring and Data Collection of Waste**

All kinds of waste generated at the city, district, town or urban local body level needs to be collected and monitored on a weekly to monthly basis. This can be done by using modern tools and technology such as remote sensing, global information system, web-based applications, and

mathematics optimization. To achieve effective waste treatment, the ULB's needs to incorporate the 'BOTRAM' process. B- Baseline Assessment, O- Onboarding & Orientation, T - Training & Route-mapping, R- Resource Recovery, A- Awareness Campaign & M- Monitoring & Maintenance. This process helps generate green jobs, enhance better waste processing, & diverts 90% of waste materials from landfills.

11) **Inventorisation, Auditing of Hazardous, Construction & E-waste**

Environmental audits of hazardous waste, construction/demolition waste, and e-waste disposal and treatment facilities need to be carried out. The pollution control board should build a common platform where waste generators, transporters and recyclers are all added to ensure wastes are disposed of in an environmentally acceptable manner and also increase more players in the formal sector. The audit and inventorisation procedure would be carried out by the State Urban Development Department, Maharashtra Pollution Control Board, and members of the urban local body responsible for waste management. Lapses during auditing should result in heavy penalties for all stakeholders.

12) **Technology Inclusion & Training**

Enhancing accountability and transparency not just from the perspective of the State but even citizens, through management information systems (MIS), global positioning system (GPS), global information system (GIS) models at the society, ward, and zilla panchayat level through interactive web-based or mobile applications incorporating all stakeholders on one platform. Separate technology tools need to be developed for different types of waste keeping generators, transporters, and recyclers in mind. Training programs should focus on the existing status of waste management in Maharashtra, major provisions of the 2016 Rules and their status of compliance, role and responsibility of different stakeholders, inventorisation and EPR, decentralised waste management by urban local bodies, impact on behaviour change, and site visits for best practices. Digital technologies, mobile apps can bring in that transparency and enable direct payments to the informal sector.

13) **Popularise Innovative Models for Waste Management**

There are several very successful initiatives, which have been taken up at the urban as well as rural level for waste management. The learnings could be compiled in a form of manual of best practises as well as be available online via the State government website. Some of these successful case studies could be made available in audio-video format (documentaries) that can be shared with local authorities, wards, and zilla panchayats to adopt best practices. A panel of waste management experts for Maharashtra can be developed, which is a one point resource system to aid any efforts across specific areas of the state. This panel will include citizen-government-industry representatives with their contact details publically available for support.

14) Bridging Gaps for Recyclers

Since recyclers suffer from inconsistent and erratic supply, there is a need for more collection centres at the ward level and appropriate infrastructure associated with it. Apart from ensuring waste pickers are brought into the formal sector by scaling up technology use and connecting right stakeholders, a deposit return system (DPR) must be introduced as a potential system to collect waste (especially plastics) and this has to be through legislation with support from large brands or major producers. DPR can be enhanced along with scaling up the extended producer responsibility (EPR) system, connecting the right stakeholders. To benefit the informal sector, DRS should be able to monetize the unclaimed deposits and earn extra revenue in the recycling sector. A State Waste Exchange Online Portal is needed to channelize collected plastic wastes to registered recyclers that will link collection centers, recyclers to monetize and make centres self-sustainable.

15) Strengthening Complaint Redressal Mechanism

With regular feedback from citizens about lack of proper as well as quick channels to lodge complaints with MPCB, the pollution control board needs to be more proactive with a better response mechanism and responding to complaints and completing cases through emails and social media. To ensure grievances are addressed properly with publicly available information, a State Level Complaint Cell needs to be developed that can relay faster information sharing across urban local bodies for action. This can be done by the MPCB accessible on their website. MPCB must also ensure penal action against violators, notices against failed complaints, and active social media engagement.

Recommendations from the Electric Mobility Town Hall

May 27, 2021. 11:00 am to 1:00 pm IST

Total Participants: 217 participants through Zoom Link & over 7,000 views through Majhi Vasundhara Facebook Live

Highlight

The Maharashtra State Transport Department announced key highlights of the draft Electric Vehicles (EV) Policy 2021, which was subsequently approved factoring in recommendations from the event. Welcoming the announcements by the Maharashtra Government, Industry experts complimented the States vision and offered their recommendations to ensure smooth transformation to electric mobility.

1) Need for a **credit guarantee scheme** to bring down the interest rates on purchasing EV related infrastructure

2) To **create and incentivise policy** for 2 and 3-wheeler uptake for commercial use

3) Charging infrastructure design and planning has **to be scientific** using special analytics, research etc.

4) To make Maharashtra the emerging leader in EV manufacturing by **creating local domestic demand.** Maharashtra to take the lead on **giant manufacturing facilities for enhanced infrastructure** in this sector

5) Focus on a few cities to enhance public transport, especially buses, to go in for **100% electrification and combination of BS-VI**

6) **Build consumer awareness through awareness outreach programs** at the city level (similar to Switch Delhi campaign) to convince more citizens to opt for EV

7) High utilisation of EV across specific cities but **keeping ecological footprint in mind while introducing policy**

8) Ensuring **leadership and coordination of multiple government departments** towards the electric mobility ecosystem to promote specifics of the policy involving all stakeholders in the ecosystem

9) Allowing the policy to encompass initiatives across housing societies, office complexes, campuses to have **more charging infrastructure**

10) Concerted effort on **market segmentation through policy** with an overall focus on larger awareness plans (through advocacy) with an attempt to increase vehicle registrations across specific cities

11) **Vehicle segment prioritization** with an eye on cost ownership viability, which is crucial for India's EV transition. Considering the higher proportion of smaller vehicle segments in India the transition should begin with 2-Wheeler, followed by 3-Wheeler, and then 4-Wheeler (which will include public transport like buses and cars).

12) To promote EV adoption, incentives on the demand side should include **optimally assigning State GST** on EVs and charging stations (initial waive off and gradual collection once scale is achieved), **incentives on the scrappage** of internal combustion engine (ICE) fleet needs to be linked with EV adoption, **ease financing process**, and promote **retrofitment across vehicular segments**

13) For manufacturers and industry, **incentives on the supply side** to include capital subsidy, subsidy on cost of land, exemption on land registration and stamp duty charges, and subsidy for reduction of water supply cost

14) **Ease of doing business:** Ensuring a single clearance window, applying for power, registering the manpower, factory license, State Pollution Control Board approval and others with a turn around time of 30 days

15) **Increase adoption in 2-wheelers through incentive schemes** for ease of exchange for delivery agents (E-Commerce and Online Food Delivery) to give some incentives to adopt EVs. Need for **Goods vehicles/freight to migrate** to the EV ecosystem parallelly.

Recommendations from Mangroves & Wetlands Town Hall

July 26, 2021. 11:00 am to 1:30 pm IST

Total Participants: 211 participants through Zoom Link & over 1000 views through Majhi Vasundhara Facebook Live

Highlight

The State's commitment to ensure protection to all existing mangroves and also plant mangroves wherever possible to develop an 'Emerald Necklace' around Mumbai Metropolitan Region (MMR). The environment department will be setting up a task force to conduct a fresh exercise to identify, demarcate, and preserve wetlands across Maharashtra left out of coastal zones and inland areas under the chairmanship of Honourable Minister Aaditya Thackeray. MMR will soon get its first Ramsar site as the State mangrove Cell has proposed Thane Creek Flamingo Sanctuary (TCFS) as Ramsar site - a wetland of international importance.

1. **Nominating a State Agency to take charge of wetland protection**

The 2017 wetland rules made it mandatory for states to nominate an agency for identifying and protecting wetlands. Presently no state agency in Maharashtra has overall control over wetland protection on ground. Ensuring that one department is handed the responsibility to monitor, declare, and protect wetlands rather than having multiple agencies partaking in the overall process.

2. **Using Science to Enhance Protection**

With the availability of data and resources from the National Wetland Inventory Atlas, Global Information System (GIS) Maps, satellite imagery from national and international agencies, and even from the state water resources department along with scientists from numerous state, central and independent agencies to identify, protect and restore crucial destroyed wetlands (also under wetland atlas) and mangrove patches from the perspective of climate resilience.

3. **Encouraging citizens to file more complaints**

By identifying a mechanism to recognise civil society representatives within cities and local residents in rural zones as mangrove/wetland scouts or warriors and providing them with an incentive to highlight cases of mangrove and wetland destruction and also build a network in their area, a faster grievance redressal plus action oriented approach can be adopted for conservation. Overall campaigns by the environment and forest department to encourage more

citizens to come forward and file complaints without fear. The Forest and the Environment Departments should also send a written response to the complainants in a time bound manner.

4. **Scheme for Transfer of Mangroves Areas on Private Land to State**

For better protection of mangrove areas under private land and securing more mangroves for climate resilience, the Maharashtra government must come up with a state specific scheme to incentivise the transfer of private mangrove areas under the forest department's jurisdiction, and also expedite transfer of mangrove areas under control of various state agencies.

5. **Formation of a Maharashtra Wetland Cell**

Maharashtra is the only state in India to have a dedicated Mangrove Cell and given the fact that state is working on climate resilience, it is time to have a dedicated cell for wetland protection and management. This department can function under the state environment department.

6. **Wetland Research & Advocacy**

Similar to the existing Mangrove Foundation of the Mangrove Cell that pushes research and advocacy to various topics associated with Mangroves. The State must develop a multi-disciplinary institution or foundation for wetland conservation research and advocacy, which also works with sub-national, national and international partners factoring in global developments pertaining to wetlands.

7. **Integrate Action Plan for Mangroves/Wetlands with State Climate Action Plan**

Factoring in all crucial aspects of the natural ecosystem including biodiversity, there needs to be an action plan to ensure holistic conservation of wetlands with a specialised focus on mangroves, mudflats etc. This needs to be further integrated with the state or district level climate action plans for enhanced conservation and management efforts. No further mangroves should be permitted to be destroyed until such time as the compensatory reafforestation for all the mangroves that have been destroyed so far is completed.

8. **Protection through Participation**

Universities, Schools & Colleges, Government & Corporate offices as well as other civil society representatives, located near Mangrove forests or crucial wetlands, should be encouraged to work closely with the State authorities for Conservation and Management of Wetlands and Mangroves.

9. **Brief Documentation of Wetlands every 6 months**

District administrations should play a proactive role in identifying Wetlands/Mangroves and Brief Documentation (key details of each wetland) of the same needs to be done every six months to ensure such sites remain protected and kept free from development. This needs to be done through better inter-departmental coordination between Environment, Irrigation, Fisheries, Revenue, & Forest.

10. **Empowering & Working with local communities**

Participation and awareness should be an integral part of each and every program for conserving natural areas. Programs of Regeneration, Rehabilitation, Restoration and Reforestation (for Mangroves) should be made into a People's Movement. It should be linked to livelihood benefits such as aquaculture, beekeeping, fishing, eco tourism etc. Additionally, to avoid cutting of mangrove tree branches for fuelwood, subsidised LPG schemes should be provided and popularised to rural populations in the coastal areas .

11. **Investment on Nature Campaign**

Initiatives related to the Wetlands/Mangroves protection should be given top priority, since the benefits generated by this ecosystem far outweigh the short term gains from Agriculture or infrastructure development. Development permissions granted seeking to change user of wetland be immediately withdrawn in compliance with high court order

12. **The Carbon incentive Scheme**

Should be launched in the Wetlands/Mangroves Areas by ascertaining the carbon sequestration (capture) value of the site based on scientific approach. Parallel release funds under a scheme to boost local livelihood activities of local residents to ensure the natural area remains protected. Mangrove plantation should not be carried out on mud flats and seagrass beds, which are also separate categories of ecologically sensitive areas.

13. **Environment officer in every district**

Environment officer appointed in every district in Maharashtra reporting to the state environment department as a nodal officer for environmental crimes including mangrove and wetland destruction. The officer to be empowered to submit details to courts highlighting scale of destruction and requirements of resources for protecting natural areas.

14. **Making the Forest Department as an implementing agency under EPA**

The state government to empower forest department under the Environment Protection Act, 1986 apart from the revenue department or police for faster action in cases of environmental crime connected to Mangrove & Wetland protection that are not in forest areas.

15. **To Declare More Wetlands as Ramsar Sites**

Facilitating the upkeep of existing wetlands in the state to the level that they meet all criteria identified by the Ramsar Convention, and Maharashtra to take the lead by attempting to declare maximum Ramsar sites across India. To comply with the order of the high court and circular of urban department not to reclaim and/or carry out any development activities on wetlands.

About Us

Majhi Vasundhara Abhiyaan: Is an initiative by the Maharashtra Environment and Climate Change Department that seeks to make citizens aware of the impacts of climate change and environmental issues and to encourage them to make a conscious effort towards the improvement of the environment through climate mitigation and adaptation.

Climate Voices is a collective of three organisations: Purpose, Asar and Climate Trends. It aims to engage people in Maharashtra to have a conversation about climate, to amplify solutions to the state's climate issues, and to encourage key stakeholders to invest in them. We want to do this by collaborating with the state government and the issue experts in the state, but also through public mobilisation.

Asar Social Impact Pvt Ltd is a social impact startup, which believes in collectives and collaborative models for bringing about change. Asar addresses social and environmental issues by conducting action research, strategy development and backbone collective efforts to build a climate-resilient future.

Purpose is a social impact creative agency and campaigning organisation that works with businesses, foundations, nonprofits and international agencies to design campaigns that mobilise wide audiences on critical social issues and create impactful movements. It runs campaigns on the environment and sustainable development across the world. In India, they have focused on air pollution, renewable energy and sustainable mobility: their most recent project in Mumbai is aimed at building a youth collective who champion biodiversity protection and lead an inclusive climate movement.

Climate Trends is the Indian affiliate of an international network of communications professionals who are working to advance the conversation on climate mitigation and adaptation. We seek to bring new voices into the debate that drives support for progressive policy solutions on climate change, clean energy and resilience.

The Host

Waatavaran: A social venture that focuses on environmental justice. The group aims to protect the planet by bringing together multiple stakeholders (including public, government, corporates and organisations) for the development of sustainable solutions to global climate and environmental problems.

Our Partners

Climate Voices also collaborated with several partners as hosts for each of the 4 Town Halls.

Centre for Science and Environment (CSE): Is a public interest research and advocacy organisation based in New Delhi. CSE researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.

WRI India Ross Center is dedicated to supporting Indian cities in their journey to be low carbon, resilient and inclusive. WRI India Ross Center is a research organization that works with governments, businesses, multilateral institutions and civil society groups to develop practical solutions that improve people's lives.