



PROCEEDINGS

2nd Pokhara Sustainable Urban Transport Forum

Pokhara Clean Air Forum

27th December 2016

Hotel Da Yatra, Pokhara

Table of Contents

1. Background	1
2. Objective	1
3. Program Participants.....	2
4. Proceedings.....	2
4.1 Welcome Remarks	2
4.2 Key Note Remarks.....	2
4.3 Technical Session I	3
4.4 Technical Session II	4
4.5 Panel Discussion/ Group Discussion	5
5. Closing Remarks	7
Annex1: Program Agenda.....	8
Annex 2: List of Participants	9

1. Background

Air pollution has been reported to pose a significant threat to human health worldwide. Air pollution is a major environmental risk to public health. New findings of WHO reveals strong link between air pollution exposure and cardiovascular diseases such as strokes and ischemic heart disease, as well as cancer.

Pokhara sub-metropolitan City (PSMC) is the second largest city of Nepal with an area of 225.65 sq. km. with the annual population growth rate was found to be 6.3% in between 2001-2011, which is higher than national average and urban population growth in Kathmandu Valley. Pokhara valley is rapidly urbanizing, the urban built-up area coverage was increased from 6.35% of total area in 20.08% in 1990 to 51.42% in 2010.

Compared to Kathmandu Valley, the air pollution, traffic congestion and other urban transport problems are not severe so far. However the situation is continuously deteriorating with increasing motorization and unplanned urbanization. The air pollution level of Pokhara is still unknown but the visible effect has begun to surface. The increasing number of hazy days is one of the visible effects of air pollution, which have direct impact on the Tourism sector. The observed sources that contribute on air pollution of Pokhara are vehicle emission, road construction, solid waste burning, agricultural waste burning and industrial emission. If the emissions from these sources are not managed on time it won't take long to become like Kathmandu.

The program was jointly organized by Clean Energy Nepal, Clean Air Network Nepal, Pokhara Sub-Metropolitan City and FK Norway

2. Objective

The main objective of the forum is to initiate policy dialogues, partnership stakeholder collaboration for Better Air Quality with focus on air quality management. Specific objectives were:

- Discuss on the plans and programs related to air quality management
- Sensitize stakeholders on necessity of clean air.
- Bring together and share initiatives and best practices

3. Program Participants

Fifty five participants from governmental and non-governmental agencies, transport and urban planners, academia, private sectors and media participated in the program. (Please see the Annexes for detail program agenda and list of participants)

4. Proceedings

4.1 Welcome Remarks

Welcoming all the guests and forum participants, Mr. Om Raj Paudel, Senior Executive Officer, Pokhara Sub-Metropolitan City (PSMC) remarked that the environment of Pokhara is degrading along with the increasing urbanization and development works. He expressed that this sort of forum can be helpful in developing special agenda for the environment friendly development of Pokhara.



Figure 1: Guest of PSUTF

4.2 Key Note Remarks

Chief Technical advisor, UN-Habitat and advisor of Clean Energy Nepal (CEN) Mr. Bhushan Tuladhar presented on the 'Air pollution in Nepal- Challenges and Opportunities'. The presentation focused on air pollution and its health impacts. Additionally, he explained the importance of people centric development and non-motorized transport for improving the

air quality. He stated, “The air pollution of Kathmandu is 5 times higher than WHO standard”.

4.3 Technical Session I

Mr. Shankhar Prasad. Paudel, Senior Chemist, Department of Environment shared about the plans and polices related to Air Quality Management of Nepal. He highlighted on recent plans and programs of Department of Environment on air quality management. He mentioned about the Euro Standard Vehicle Regulation, Emission Standard for Industries, National Pollution Control and Strategy Plan. He mentioned about installation of air quality monitoring stations in Rathnapark of Kathmandu, Pulchowk of Lalitpur and Dhulikhel of Kavre, and opined that a monitoring station can be installed in Pokhara as well if demanded by Pokhara Sub Metropolitan City. He displayed the air quality data through pollution.gov.np and shared the information to the participants about the website. Lastly, he highlighted on the air pollution that could be induced by widening of roads and suggested to take action on curbing the pollution.

Er. Netra Prasad Timilsina, Landfill incharge, Pokhara Sub Metropolitan City (PSMC) presented on the plans and policies related to air quality management of PSMC. Mr. Timilsina remarked that there is need to discuss and analyze the issues like increased vehicle problem, air pollution, solid waste management for green and clean Pokhara. He highlighted on the activities conducted by the PSMC to make cleaner environment in Pokhara. Some programs conducted by PSMC were; Public Space Promotion, Sanitation Campaign, solid waste management in collaboration with private sectors and plastic bag ban,

Ms. Shriju Pradhan, Deputy Director, Kathmandu Metropolitan City presented on KMC efforts for Sustainable Urban Transport especially focusing on KTM Walks- a campaign to promote walking and cycling in the core urban area. She highlighted the importance of having vehicle free zone in our surroundings. She added, “Pokhara street festival should continue and be organized frequently to aware and act for the better air quality and mobility. “

4.4 Technical Session II



Figure 2: Participants at PSUTF II

Ms. Rashmi Maharjan, CANN shared her research study on 'Air quality of on Road Urban environment of Pokhara'. The objectives of her study was to understand the spatial and temporal pattern of the pollutants ($PM_{2.5}$, NO_2 , TVOC and VOC species) and to understand the association between them. Her study found that $PM_{2.5}$ concentrations of all routes were 56-80% higher than the 24hr WHO guideline value while the NO_2 concentration was below the 1hr WHO guideline value. Spatial and temporal pattern were observed with 25-60% less pollutants concentration in sub-urban routes and 35-46% less concentration level during non-peak hours than peak hours. BTEX compounds were dominated VOC species in all routes. She stated that, "The vehicular emission and dust re-suspension were major sources of pollutants that deteriorates on-road air quality. Quality check of vehicles and use of effective measures to reduce exposure were recommended."

4.5 Panel Discussion/ Group Discussion



Figure 3: Panelist of PSUTF II

The second half of the program was followed by panel discussion facilitated by Mr. Bhushan Tuladhar with eight panelists; Mr. Shankar Prasad Sharma, DoE, Mr. Netra Timilsina, PSMC, Mrs. Indra Kamal Manandhar, Civil Society, Mr. Tek Bahadur K.C, Division Road Office Pokhara, Mr. Udaya Bhattarai, Nepal Tourism Board, Mr. Prakash Bajracharya, Cycle City Pokhara, Mr. Shiva Prasad Pathak, Traffic police, Mr. Bhim Ghimire, Kantipur Publication. The entire panelist shared common view that though the environment of Pokhara has not been worst but the situation can be similar to Kathmandu Valley if prompt actions are not taken. They opine that this type of program can be a mile stone for the better policy and actions for Clean Pokhara. The individual opinions on air pollution issues from the Panelists are as follows;

Indra Kamal Manandhar, Civil Society Organization prioritized on the control of vehicle emission. She pressurized on the ban of outdated vehicle, regulating high emission vehicles and traffic management.

Mr. Tek Bahadur K.C, Division Road Office Pokhara said, " Better transportation and environment friendly road are required for better air quality management." Hence, the Road Division is willing to coordinate with PSMC for better transport management in Pokhara.

Mr. Udaya Bhattarai, Nepal Tourism Board mentioned that Tourism is important industry for the developing country. In addition he said, “For sustainability of tourism clean environment plays important role”.

Mr. Prakash Bajracharya, Cycle City Pokhara said, “Non-motorized transport plays important role in improving air quality. Walking and cycling should be promoted.” He requested PSMC for more constructing cycling tracks for secure cycling.

Mr. Shiva Prasad Pathak, Traffic police mentioned that the Traffic Police is the vulnerable groups which are directly affected by air pollution. They are looking forward to manage traffic flow and seek help from the citizen as well.

Mr. Bhim Ghimire, Kantipur Publication highlighted on the early pick up of solid waste by PSMC to reduce foul smell. He also added that alternate roads should be provided to reduce traffic jam on the major junction like Prithvi Chowk

Many queries and suggestions like need of mass awareness, implementation of no vehicle zone, banning of old vehicles, formulations of policy like green stickers, installation of air quality monitoring stations, traffic management, Improvement of footpath and cycle lane, solid waste management, open space and greenery management were discussed during the panel discussion. Addressing all such queries and issues raised by Panelists, Mr. Netra Timilsina informed that PSMC would work on such issues in co-ordination with other stakeholders for better air quality of Pokhara.

Pokhara Clean Air Forum concluded with 9 points that needs to be worked out for better air quality of Pokhara. The nine points commitment were;

- Maintenance, monitoring and management of old vehicles
- Establishment of Auto village
- Removal of obstruction on footpath
- Restriction of parking in public area
- Construction of footpath, greenbelt and cycle lane in river corridors
- Formulations of one ward one park policy
- Installation of air quality monitoring stations

- Formulation of Transport management plan
- Conducting the Social mobilization programs should be conducted.

5. Closing Remarks

In his closing remarks, Mr Kamal Raj Gosai, the Executive Director of Clean Energy Nepal stated that Pokhara being one of the best tourist hub of Nepal with serene beauty and warm people should be aware about the deteriorating quality of air now because it would pose negative impact on tourism business and induce degradation of health of people of Pokhara. He highlighted that the forum has been able to bring all stakeholders to discuss on how Pokhara can move on to ensure better air quality. He also thanked the gracious presence of all the stakeholders for their active participation in the discussion.



Figure 4: Participants of PSUTF

Annex1: Program Agenda

Time	Agendas
9:00	Registration
9:30	Welcome remarks- Chief and Executive Officer, Pokhara Sub-Metropolitan City
9:45	Key Note Speech- Mr. Bhusan Tuladhar
10:00-11:00	<p>Technical session-</p> <ol style="list-style-type: none"> 1. Plans and Programmes related to Air quality management of Nepal- Mr. Shankar Prasad Paudel (Department of Environment) 2. Pokhara Sub Metropolitan City: Plans and Programmes related to air quality management of Pokhara 3. Experience sharing on Walkability- Shirju Pradhan, KMC
11:00-11:15	Tea Break
11:15-11:45	<ol style="list-style-type: none"> 1. Ambient Air Quality in Micro Environment of Pokhara City- Rassu Manandhar, Clean Air Network Nepal 2. On road Air Quality along Urban and Sub Urban Routes in Pokhara and Kathmandu- Rashmi Maharjan, Clean Air Network Nepal <p>Q/A</p>
11:45-12:45	Lunch
12:45-15:00	<p>Panel discussion/ Group Discussion</p> <p>Moderator : Mr. Bhusan Tuladhar</p> <p>Proposed Panelists</p> <p>Pokhara Sub-metropolitan City</p> <p>Road Division</p> <p>Traffic Police</p> <p>Pokhara Tourism Council</p> <p>Cycle City Pokhara</p>

	Civil Society Group discussion on air quality management in Pokhara City
15:00	Conclusion and wrap up- Kamal Raj Gosai (Clean Energy Nepal)

Annex 2: List of Participants

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