

Workshop on Air Quality and Sustainable Urban Mobility Kathmandu, Dec 27, 2013



- ▶ People walking in the streets and riding bikes with masks to cover their noses and mouths are now common sights in Kathmandu, The 2.5 million residents here are worried about the deteriorating air quality across the valley, are trying to protect themselves with masks.
- ▶ **There are several laws, policies and programs in effect for curbing pollution in this 400 square kilometer (154 square mile) bowl shaped valley**
- ▶ **but the air quality continues to pose serious health threats.**
- ▶ **Ongoing road expansion adds to pollution**

Background

- ▶ General people dream to live in the city, the government as well plans to increase the percentage of population in the city.
- ▶ There is a sharp rise in the vehicle population in the city.
- ▶ Lack of Mass transit and due to economic prosperity the numbers of cars and motor bikes in the city are increasing thereby causing traffic jams.
- ▶ In turn, the pollution and air quality scenario in these cities are worsening

Background

- ▶ South Asian cities are growing in a faster pace during the last decades.
- ▶ The trend of urbanization, migration and growth of urban population and vehicle fleet has been phenomenal in these cities.
- ▶ The government and service providers are quite hard pressed to keep the city life moving.
- ▶ There is a huge demand for transportation for the mobility of this population. Economic activities are also increasing accordingly.

Causes of Air Pollution

- ▶ Most of the pollution is related with human activities as fuel burning, brick factories, unmaintained roads etc.
- ▶ Automobiles are the main source of air pollution inside the Kathmandu valley, which emits the carbon monoxide hydrocarbons, and nitrogen oxide.
- ▶ The automobile exhaust such as lead gas and black dust is very dangerous for human health
- ▶ recent inventory indicates that 67 percent of the PM10 is contributed by the vehicle emission in Kathmandu valley.

Causes of Air Pollution

- ▶ Air pollution from automobiles are the complex function of fuel characteristics, extent of combustion, reactions with other gases and atmospheric condition
- ▶ The rapidly increasing vehicular traffic in the valley is a major contributor to air pollution in Kathmandu valley.
- ▶ It is mainly because of the large number of vehicles on congested streets, poor quality fuel and weakness in the emission controlling system
- ▶ **The BOWL shape of the valley also responsible to some extent**

Causes of Air Pollution

- ▶ Most vehicles in Kathmandu have old engines, (more than 15 years old); are not well maintained
- ▶ There are 1500 kilometres of motor-able road in the Kathmandu valley, of which 1000 km are in poor condition.
- ▶ It is causing serious problem of traffic congestion and air pollution
- ▶ **Share of motorbikes in Kathmandu valley is 73% : causes congestion**

Initiation and Implementation in 2013

- ▶ Replacement of Old Vehicles
- ▶ Better maintenance of vehicles
- ▶ Strengthening Air Quality Monitoring System
 - Ambient Air Quality Standards Upgrading
 - Outsourcing of Air Quality Monitoring
 - Vehicle Emission Standards – Upgrading
- ▶ Upgrading of Public Transport
 - Low Emission
 - Zero Emission
- ▶ Using better quality Fuel
- ▶ Widening congested section of roads
- ▶ Clearing encroachment

Initiation and Implementation in 2013

- ▶ Strengthening Transport Management Activities: Traffic Management and Organizing Public Transport
- ▶ Pedestrianisation: Historical Areas planned
- ▶ Study for Re-introduction and Extension of Electric Trolley in Kathmandu Valley done
- ▶ Feasibility Study of East West and Kathmandu – Pokhara Electric Railway completed
- ▶ Study for Metro/ Elevated transport system in Kathmandu Started
DPR for 134 Km of electric Railway planned

Initiation and Implementation in 2011

- ▶ Dedicated Fund for Maintenance of Road :
Roads Board Nepal made functional
Legal improvement proposed based on
experience of past 8 years
- ▶ One door policy for maintenance fund
- ▶ Environmental Management Action Plan
EMAP prepared/followed strictly
- ▶ Regular testing of vehicular emissions done
- ▶ DPR completed for 100 km of electric railway
under Indian Assistance

Initiation and Implementation in 2011

- ▶ Kathmandu Sustainable Urban Transport: Support under Grant/Loan Financing of ADB is in implementation
 - ✓ Experimentation with 2 Pilot Routes – Public Transport will be done
 - ✓ GEF funding for Upgrading Public Transport Fleet will be available
 - ✓ Traffic Management Support
 - ✓ Rationalization of Public Transport Routes
 - ✓ Improvement of footpath in city core

Initiation/Implementation planned

- ▶ Developing Expressways for reasonable speed under PPP
- ▶ Reducing Congestion
 - Bypasses construction in Hetauda and Bhairahawa
 - Ring road improvement in Kathmandu and Biratnagar
 - Junction improvement/grade separation in Kathmandu
 - Planning Flyover and elevated roads in Kathmandu
 - Policy for Congestion pricing being formulated
- ▶ **JICA study for Kathmandu valley traffic management completed**
- ▶ **Cable cars construction to start in Pokhara , PPP**

Initiation/Implementation planned

- ▶ Capacity Development of Concerned Institutions to continue
- ▶ Improve Transport Inclusiveness
- ▶ Transport Planning in line with forth coming Federalism
- ▶ Strengthening Periodic Plans of Municipalities – Effective Land Use
- ▶ Effective maintenance of roads under municipal jurisdiction
- ▶ Peoples participation in Road Maintenance
- ▶ Cycle lane construction planned

The Way Forward

- ▶ Better maintenance of Roads: central, municipal and Local
- ▶ Improved Vehicle fleet
- ▶ Proper maintenance of vehicle
- ▶ Emphasis on Public transport
- ▶ Plan for Mass Transit
- ▶ Go for green vehicles
- ▶ Observe high standard against pollution
- ▶ **Improve driving discipline**
Act before it is too late

The Way Forward

- ▶ Observe high standard against pollution
- ▶ Dedicated Bus Lane/Priority lane
- ▶ Priority to non motorized transport
- ▶ Encouraging Mass Rapid Transit
- ▶ Subsidy to electric vehicle
- ▶ Availing Benefit from Carbon Credit
- ▶ More electric railways
- ▶ More expressways
- ▶ Improved Parking/ Congestion charging

THANK YOU !

