

## URBAN AIR QUALITY AND UNRELENTING PERIL OF VEHICULAR EMISSION (POLICY AND PRIORITIES OF CITY DISTRICT GOVERNMENT LAHORE)

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**ABSTRACT:** Lahore, the second largest city of Pakistan inundated with remorseless air pollution. Foremost source of air pollution is motor vehicular emission. Statistics of key sites reveals grim realities. Motor vehicular usage increased tremendously in wake of gigantic expansion of city and inappropriate landuse distribution or control. Motorization trend of city predict an irresistible rise of vehicles plying on roads of Lahore. Further peak hour's abnormal accumulation of traffic (which transmits heavy emission in environment) creates mess in central areas. City District Government is entrusted with task of achieving ambient air quality (under Devolution Plan 2001) failed to achieve it due to absence of transport policy, Institutional and organizational impediments, Government of Punjab change in landuse policy, poor monitoring and management of air quality. The paper is an attempt to chalk out policy and priorities for city District Government Lahore to mitigate environmental sufferings.

**Key words:** City District Government, Punjab Local Government ordinance (PLGO 2001)

### INTRODUCTION

Lahore is the second largest city of Pakistan. It is also acting as the provincial capital of biggest province of Pakistan, i.e. Punjab. The current population of City is more than 5 million. Integrated Master Plan (2005) for Lahore shows that the total area of District Lahore is 1772 sq. km. Lahore has undergone different administrative/organizational chain of commands which put profound effects on the environment of city. A Colossal change has been observed when devolution plan 2001 has been promulgated. Lahore, the heart of Pakistan is inflicted in swelling air pollution. The foremost source of this pollution is motor vehicular emission. Unrelenting emission of motor vehicles is disaster for

environment of city. The unchecked vehicular emission is disaster for human health. The data collected from the environment protection department shows that Lead level in blood of traffic policemen in Lahore is about 35  $\mu\text{g/dl}$  (microgram per delite) and in school children around mall, circular road, Yakki Gate and Shalimar heavily congested areas and it is 38.0  $\mu\text{g/dl}$  as against the maximum accepted level of 20g/dl.

Environmental statistics of key locations of Lahore show grim realities (figure-1). There is divergent gap between WHO standards and local figures. It is highlighted in Asian Development Bank (2003) report where severe situation exist in different parts of Lahore city. Air pollution causes lethal effects on human health, Human Suffering multiplied in central areas of city.

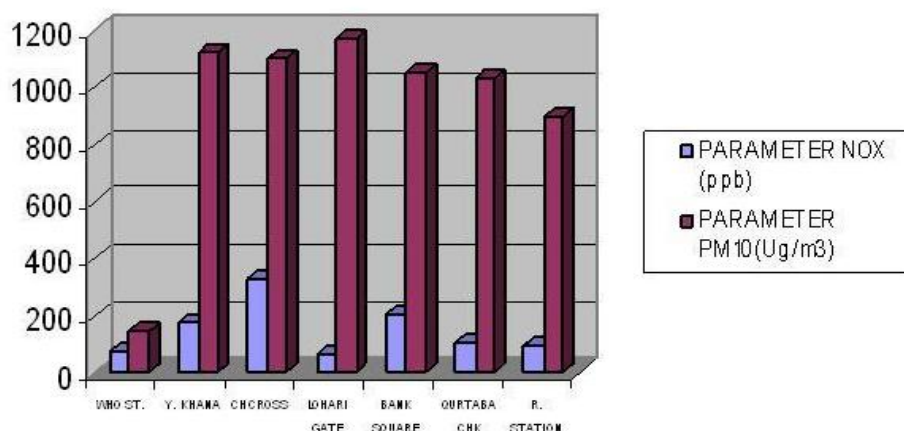
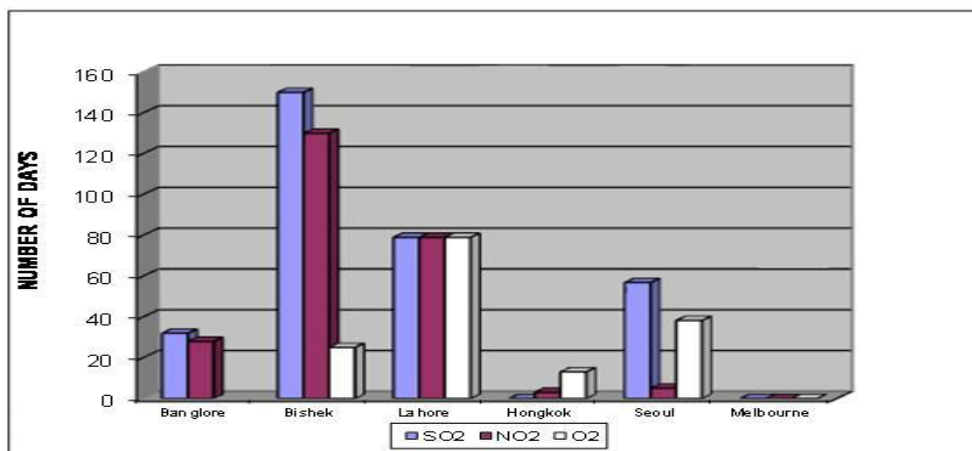


Figure-1: Air Pollution Level at Key Locations of Lahore

Urban indicators for managing cities published by Asian Development Bank (2001) indicate that pollution concentration standard exceeds 79 days per annum which is very high as compared with Seoul and Hong Kong (figure-2) with high population density. Motor vehicular usage increased tremendously due to gigantic expansion of city and inappropriate landuse control. At present there are about 0.85 million vehicles registered in Lahore Creation of City District Government Lahore caused metropolitan boundary to transform into District boundary. District boundary includes vast area of ex-Zila (district) council but landuse fabrication is thirty years old. It allows commercial and administrative activity to remain concentrated at central places of city. Master Plan for Greater Lahore was notified in 1972 and renewed during the year 2004 tills to date it neither subjected to review nor replaced by another master plan. Consequently landuses defined in it encircle old boundaries of city. City District Government Lahore (CDGL) rather to decentralize these activities

through means spatial planning (which is now mandatory function of CDGL as per PLGO 2001) contended to adopt change in landuse policy of Punjab Government, a blow to already choked transportation network. The situation further aggravated when CDGL declared eighty nine roads to be fit for commercialization irrespective of their status in Master Plan. The diversity of change in landuse not only disrupt calming environment of residential area but also contribute heavily toward congestion and vehicular emission. New paradigm of annual commercialization put fuels to fire. Bajwa (2004) also alarmed the continuous deteriorating conditions of air pollution in Lahore as the new aspect of annual /temporary commercialization made environment more vulnerable, as law doesn't differentiate between low/high pollutants. Ironically, high pollutants in some cases subject to imposition of less tax. Data collected from Excise and Taxation department (2003) shows a continuous increase in Motor cycles and cars over other modes of transport.



**Figure-2: Air Pollution Concentration Standard Exceed per Annum**

Motorization trend predicts an irresistible rise of vehicle plying on roads of Lahore (figure-3). Peak hour accumulations of unorthodox vehicles (like chinqchees etc.) create mess in central areas. Resultantly causes high vehicular emission / congestion in down town areas. Field survey shows an accumulation of more than 5000 Passenger Car Units (PCUs) during rush hour. The Median travel time of Lahore is quite high, despite moderate usage of private automobiles to work places (which do not include waiting time walking time etc.). Trend of high usage of private automobiles to work place also indicates toward menace of congestion and air pollution.

City District Government Lahore (CDGL) entrusted with task of achieving ambient air quality under section 40, 48 and 91. But it fails to protect environment due to absence of an integrated transport policy and local byelaws. Absence of transport policy is detracting even

mega projects in wrong direction. City District Government is constructing ring road around city to ease congestion of traffic within central areas, despite proposal of circular railway asserted in Master Plan. Mayo (2005) in his Paper 'Use of Urban Railroads as planning tool for Managing Urban Growth in Pakistan' proposes circular railway network for Pakistani cities including Lahore .Because circular railway not only keeps shape of city rigid but also have sustained accessibility even after urban sprawl . Government for one period patronizes one transit System without rationalizing the need of other. Aziz (2004) further aggravated the situation as during 1970's, for only two million people, a sufficient fleet of double decker buses (which are less polluted, low fuelled and high transit capabilities) were available as compared to 2002, wherein for seven million people we did not have a single double decker operating in city (figure-4). In later years rather than expanding role of mob carrying

transit government could not sustained with tiny fleet of Bus transit (each comprise on 75 seats) and thereby allowed an influx of privately owned wagons. These

wagons with low transit carrying capabilities cause a huge damage to environment of city.

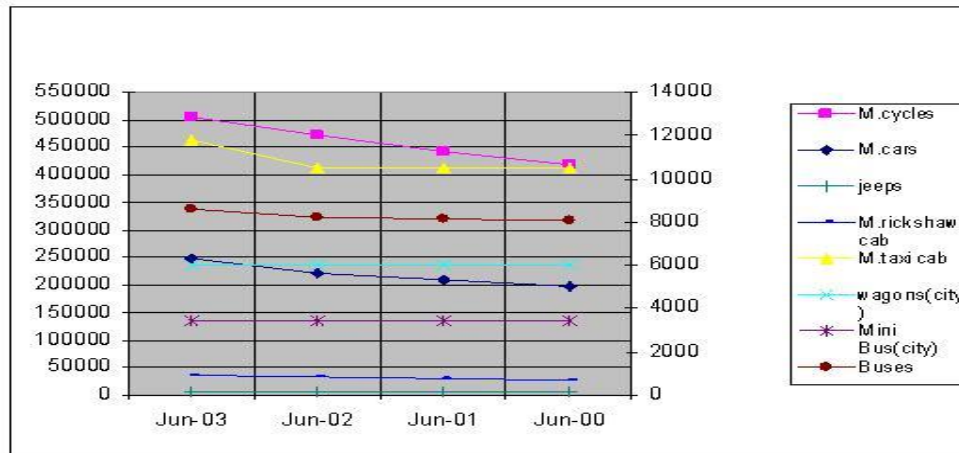


Figure-3: Motorization Trend

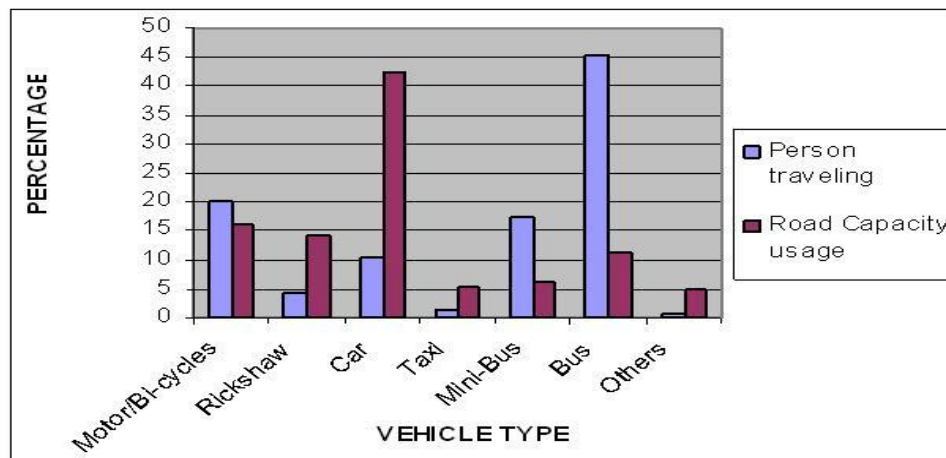


Figure-4: Person traveling and road capacity

Bus transit is an important tool of reducing vehicular emission, as it reduces congestion by using marginal capacity of road and carrying mob of passengers. Promotion of Bus transit in Lahore becomes souring task due to absence of policy. Government of Punjab came into an agreement with franchised bus operators to run buses at franchised routes of city. She declared buses as preferred public transport mode without considering its operational impediments. Buses at most of places have on street parking, resultantly squeezes the road width for flow of traffic. At present there are 708 buses operating in City with seating capacity of 49560. But total passenger carrying capacity by all modes (buses + wagons + mini buses), due to drive out of wagon transit remained same as that of 1998. Environmental review after induction of these buses shows no let up in

pollution table. Further these buses due to lack of route rationalization strategy creates high congestion in at some key routes of city. The conspicuous examples are routes of Rangmahal and Sanda (areas of central business district).

There are some organizational impediments associated with existing setup of City District Government Lahore. Devolution plan 2001, attempts to reduce missing linkages between key tiers of environment and transportation planning. But the spirit and letter of devolution plan has been ignored. Implementation of devolution plan put at whim of bureaucratic nightmare that molded it as per his convenience. Consequently, there remains no coherence among key tiers of transportation i.e. infrastructure, operation and regulation (figure-5).

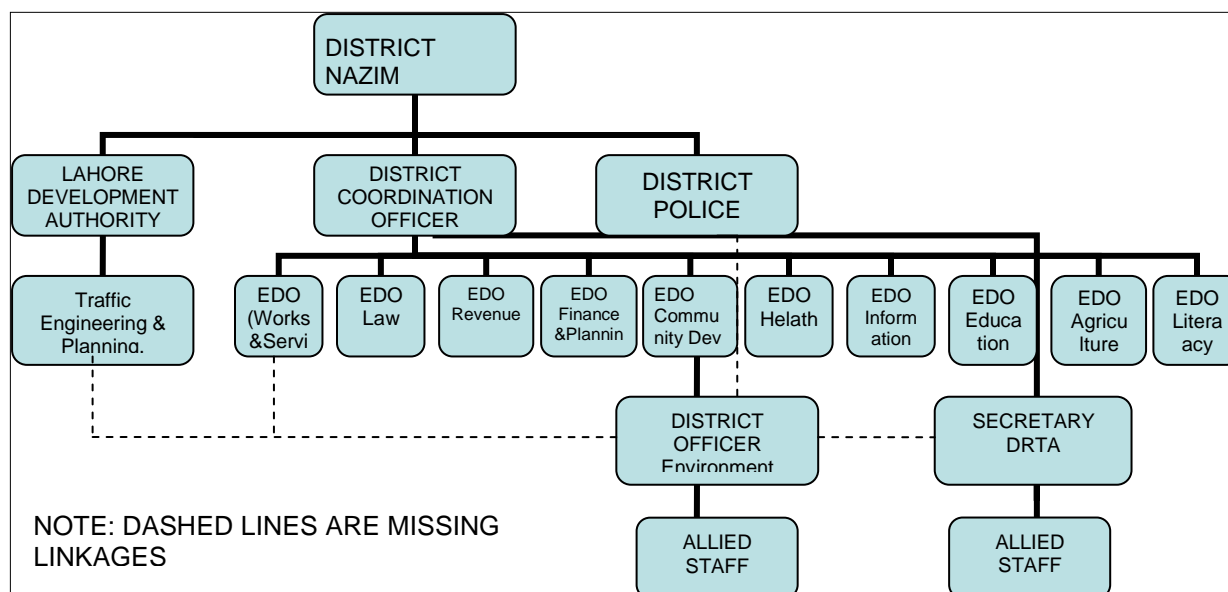


Figure-5: Existing Organizational Setup of Environment and Transportation Department in City District Government Lahore

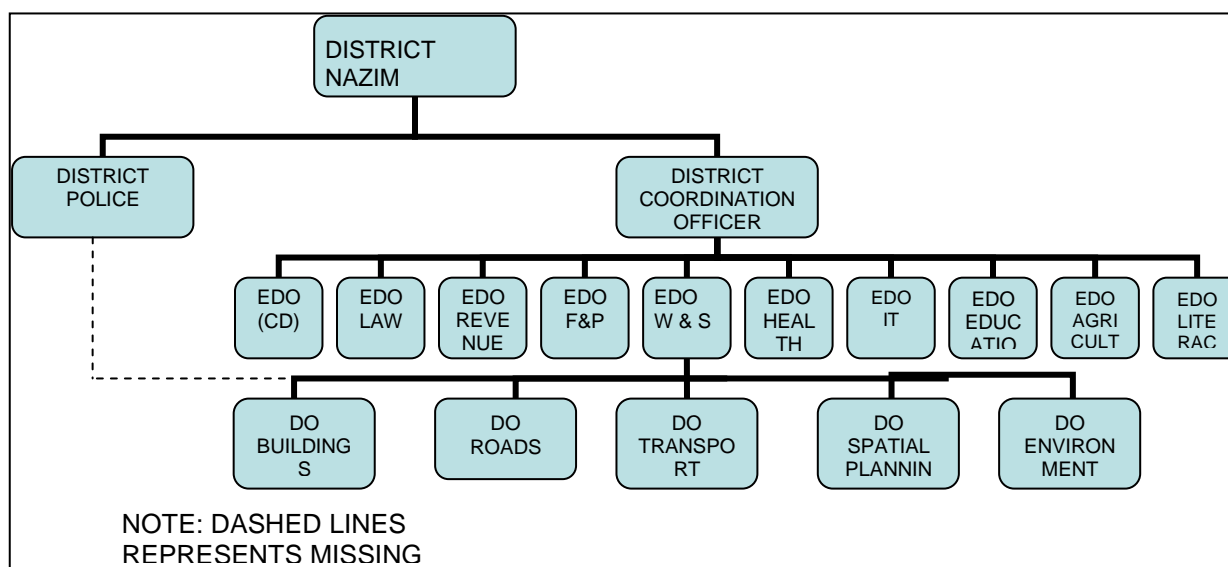


Figure-6: Organization Setup of Transport and Environment Department under PLGO 2001

The continuous defiance of devolution plan allowing duplication of functions to buff and feeble the coordination to be desired among Government departments. To perform functions envisaged under above mentioned sections Government has decentralized Environment Protection Agency. But Decentralized environment department is far behind rationale of its creation (figure-6). Monitoring of air quality is listless and role of environment department is far behind rationale of its creation, due to:

- Department is short of necessary equipment .Stringent monitoring of environment heavily reliant upon provincial EPA.

- Environment protection could not get recognized as kernel function of City District Government, Lahore ,therefore not put under sway of an independent EDO
- Challenging an effective tool of controlling vehicular emission heavily dependent upon traffic police. Delegation this power is not granted to DO (env), whereas the same is being enjoyed by rest of DOs of CDGL.

The data of urban air quality is very rare and no periodic updates are available. Environment Protection Department is yet not been able to set NEQS (National

Environmental quality Standards) for Key Pollutants like, NOXs, HC.

**Recommendations:** Following recommendations are made:

- An integrated Transport policy need to be announced and route rationalization strategy for introduction and operation of public transport is to be made necessary.
- Financial earning at cost of environment should stop immediately. Hence forth commercialization policy needs to be withdrawn. Requirement for change in landuse may be met through spatial planning which is now mandatory function of City District Government Lahore.
- Environment protection may be included among kernel functions of City District Government Lahore and therefore sway under separate EDO ( Executive District Officer)
- Organizational setup as proposed in Devolution Plan 2001 may be adopted to achieve optimum harmony among key tiers of transportation and environment protection
- To ease congestion within City Circular railway around city has to be setup.
- To reduce congestion, scope and management of bus transit lane is to be thrash out at major roads of city. It not only creates a feeling of superiority among passengers but also helps in reducing unrelenting trend of motorization
- Role of decentralized environment Department of City District Government Lahore is required

to be changed as local environment protection department rather than merely facilitators of federal and provincial environment protection agencies.

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