Quarterly Report on Vehicular Emission Testing

(April-June'2011- Dhaka, Chittagong, Rajshahi, Cox's bazar)

Case/vehicle emission test/03-07/11

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- **Chittagong Metropolitan Police**
- **Rajshahi Metropolitan Police**
- **Cox's Bazaar Police**

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Abbreviations

AR (P/O)	= Auto Rickshaw run on Petrol/Octane
AR (CNG)	= Auto Rickshaw run on CNG
Bus (CNG)	= Bus run on CNG
Bus (D)	= Bus run on Diesel
C/Mic (P/O)	= Car/Microbus run on Petrol/Octane
C/Mic (CNG)	= Car/Microbus run on CNG
CNG	= Compressed Natural Gas
CO	= Carbon Monoxide
CO_2	= Carbon Dioxide
HC	= Hydrocarbon
HSU	= Hartridge Smoke Unit
HPMTMCV(CNG)	= Human Hauler/Pick up/Mini truck/Mini covered van run on CNG
HPMTMCV(D)	= Human Hauler/Pick up/Mini truck/Mini covered van run on Diesel
MB	= Motor Bike
MinB (CNG)	= Minibus run on CNG
MinB (D)	= Minibus run on Diesel
ppm	= Parts per million
%(v)	= Percent by volume
PAH	= Poly Aromatic Hydrocarbon
P/O	= Petrol/Octane
Ta (CNG)	= Taxicab run on CNG
TrCV (D)	= Truck/Covered Van run on Diesel
VOC	= Volatile Organic Compound

1.0 Introduction: Mobile source has been proven worldwide to be the major source of air pollution because of the steady increase in number of vehicles in use. Various types of harmful hydrocarbons and organic oxygenates (acrolein, acetaldehyde…), carbon monoxide, nitrogen oxides and soot particles emit through the exhaust of motor vehicles that cause serious health hazard to human being. Of these hydrocarbons PAH like benzo-*a*-pyrene (BAP) and benzo-*e*-pyrene (BEP) are carcinogenic whereas VOCs are ozone precursors to varying degrees and a small number like benzene, toluene, xylene, 1,3 butadiene are toxic. Dhaka, the capital city of Bangladesh is bearing a huge burden of old fleet of diesel buses and trucks using high sulfur fuel and adulterated lubricating oil. In the last five years from 2005 the numbers of registered motor vehicles have been doubled whereas the road space remains almost the same. Improper traffic and parking management and irregular maintenance of the vehicles are responsible for high emission from the vehicles. Introduction of CNG as fuel and phase out of two stroke three wheelers from Dhaka city have decreased the pollution from mobile sources. However, the level of pollution from this source is still high; and the main polluters are motor bikes, diesel driven old buses and trucks. Bangladesh has revised standards for emission of motor vehicles in 2005. The standard is equivalent to Euro – 1 for new Diesel vehicles & Euro-2 for new Petrol/CNG vehicles. In-use vehicular emission standard is attached in Appendix-1. Gradual stringent standard is needed to ensure minimum pollution from the mobile sector.

In this regard, Clean Air & Sustainable Environment (CASE) Project with the support from the Air Quality Cell (AQC), Department of Environment (DoE) took massive initiatives of vehicle emission testing in four cities i.e. Dhaka, Chittagong Cox's Bazar and Rajshahi during the second quarter of 2011. Portable automotive gas analyzers were used to measure Carbon Monoxide (CO), Hydrocarbon (HC), Carbon Di-oxide (CO_2) and Air-Fuel Ratio (A/F) from the emission of CNG/Petrol/Octane driven vehicles while Full flow smoke meters were used to measure smoke opacity of the emission from diesel driven vehicles. A sum of about 490 vehicles has been tested within this period. Result of this study will certainly give valuable information to design plan on this sector.

2.0 Objectives: Primary objective of this study was to gain field knowledge on the emission profile of the vehicles in the major cities of the country. The emission profile will include Carbon Monoxide (CO) and Hydrocarbon (HC) emission from petrol/octane/CNG driven vehicles and opacity of emission from diesel driven vehicles. The study will give comprehensive picture of emissions of vehicles compared to the standard set and thus will inform the necessity and scope to revise the standard. The campaign will certainly raise public awareness against the mobile air pollution and make sense of regular maintenance of vehicles among the owners. Finally, the data from this study will give a primary signal to find emission factors for vehicles from other developing countries.

3.0 Methodology: Portable automotive gas analyzers were used to measure Carbon Monoxide (CO), Hydrocarbon (HC), Carbon Di-oxide (CO_2) and Air-Fuel Ratio (A/F) from the emission of CNG/Petrol/Octane driven vehicles while Full flow smoke meters were used to measure smoke opacity of the emission from diesel driven vehicles.

4.0 Look-ups of Cities and Vehicles: Dhaka and Chittagong have enough infrastructures for CNG fuelling whereas Cox's Bazar and Rajshahi is out of CNG network. Most of the light duty vehicles in Dhaka and Chittagong run on CNG while the local vehicles in Cox's Bazar and Rajshahi usually use petrol/octane or diesel. Trucks, in all places, were found to use diesel. Engine condition of heavy duty vehicles (minibus, bus, trucks, etc) seemed to be at the worst because of aging, lack of maintenance, driving styles, driving pattern, overload, etc. Good number of old minibuses using diesel are still seen plying on streets in Dhaka city. Trucks are rare in Dhaka city during daytime due to bar on their access. But this type of hindrance is not present in Chittagong, Cox's Bazar and Rajshahi. Most of the trucks tested under this program were found very old and high emitters of black smoke. Motorbikes usually use petrol/octane as fuel.

4.01 Dhaka: Dhaka, the capital city of Bangladesh is dangerously suffering from over population and high density of motor vehicles. Only 1530 Sq. km sized Metropolitan City is bearing about 12 million people and 0.6 million registered vehicles; It is said that huge number of unregistered vehicles are also plying in the city. Traffic management system is out of date; sidewalks are occupied by floating vendors while the main roads are occupied by the parked vehicles. All of these shortcomings led to unbearable traffic jam and slow movement of traffic on the street. After the introduction of CNG as fuel and phase out of two-stroke three wheelers in 2003 the situation improved. But the introduction (without permission) of older diesel-driven fleet of buses and minibuses turned the pollution level upward again. Motorbikes are very common in the streets. Most of the private cars, micro buses, human haulers and inter-city buses have been converted to CNG. Small number of trucks is seen frequently although they are officially not allowed in the city at day time. Diesel run trucks are the major polluters in the city at night time.

4.02 Chittagong: The port city of Chittagong is the second largest city of the country. It has hilly topography with sea in the south. The city also suffers from over vehicles and long traffic jam in the streets. However, the pollution level from the mobile source is not so acute as Dhaka for most of the public and private vehicles are running on CNG. Trucks and Lorries are very common all the time and are the main mobile polluters in the city.

4.03 Rajshahi: The metropolitan city with flat terrain counts very little number of vehicles except motor bikes within the city. Slow movement of traffic is due to excess amount of rickshaws in the streets. But this type of jam or slow movement does not give extra emission as the number of motor vehicles in the traffic is very little. However, condition of motorbikes is worst in this city and the trucks, district bound buses pass by the city with tremendous black smoke.

4.04 Cox's Bazar: Small town by the Bay of Bengal. People used to ride on motorbikes, rickshaws, electric-tuktuk within the city. Minibuses, buses and trucks are the main polluters in the city

Table#1: Fuel Facility of the Cities

City	CNG	P/O	Diesel
Dhaka	Y	Y	Y
Chittagong	Y	Y	Y
Cox's Bazar	N	Y	Y
Rajshahi	N	Y	Y

P/O= Petrol/Octane;

Y= Facility Present,

N= Facility Not Present

Table#2: Location Wise Testing in a brief

Location	No. of day	CNG vehicle tested	P/O vehicle tested	Diesel vehicle tested	Total tested
Manik Mia Avenue, Dhaka	02	25	12	16	53
Abdullahpur, Dhaka	01	14	03	13	30
Darussalam, Dhaka	01	25	04	14	43
Jowar Sahara, Dhaka	01	15	06	07	28
Sobhanbagh, Dhaka	02	22	18	20	60
Taltala, Dhaka	02	35	07	14	56
Talaimari, Rajshahi	01	03	15	21	39
City by-pass, Rajshahi	01	xx	xx	12	12
Amchattar, Rajshahi	01	02	18	25	45
Colonel Hat, Ctg	01	15	02	13	30
WASA, Ctg	01	10	02	14	26
Laboni Point, Cox's Bazar	01	09	35	18	62
Total	**15**	**175**	**122**	**187**	**=484**

5.0 Result Analyses (a): Primary observation reveals that about 88% of the CNG vehicles are satisfying standard value. CNG-run private cars and microbuses are frequently found faulty which is not at all acceptable. Private type vehicles with cleaner fuel should be more promising to environment. Motorbikes drag the success of petrol vehicles down to the minimum. Irrespective of their ages and types motor bikes are alarmingly polluting the air. The study found that the condition of motor bikes in the remote cities (Rajshahi, Cox's Bazar) is further disgraceful. Condition of all types of diesel vehicles all over the country is pathetic. The problem is mainly due to their age, lack of maintenance and overloading. These types of diesel vehicles are emitting enormous amount of soot particles which are responsible for dangerous lunge diseases. Detailed analyses of data have been shown in the following section.

Table#3: Percentage of Vehicles Passed by Fuel and City

City	Fuel	Number of Vehicles	Passed (%)
Dhaka	CNG	136	88.0
	Petrol	50	48.0
	Diesel	85	29.0
Chittagong	CNG	25	88.0
	Petrol	04	75.0
	Diesel	26	11.5
Cox's Bazar	CNG	09	55.5
	Petrol	35	60.0
	Diesel	18	39.0
Rajshahi	Petrol	42	28.6
	Diesel	58	17.0

Table-4: Percentage of Vehicles Passed by Category and City

Type	Fuel	Dhaka		Chittagong		Cox's Bazar		Rajshahi	
		No. tested	**Passed (%)**	No. tested	Passed (%)	No. tested	Passed (%)	No. tested	Passed (%)
M B	P/O	45	**44.4**	4	**75**	18	**33.33**	37	**21.6**
A R	P/O	03	**67**	xx	**xx**	08	**62.5**	xx	**xx**
	CNG	33	**100**	11	**100**	xx	**xx**	xx	**xx**
C/ Mic	P/O	03	**100**	xx	**xx**	10	**100**	04	**100**
	CNG	**30**	**86.7**	**09**	**77.8**	07	**57**	03	**100**
Taxi	P/O	xx	**xx**	xx	**xx**	xx	**xx**	xx	**xx**
	CNG	10	**100**	xx	**xx**	xx	**xx**	xx	**xx**
MinB	CNG	13	**100**	xx	**xx**	xx	**xx**	xx	**xx**
	D	**29**	**6.9**	03	**33.33**	08	**37.5**	04	**25.0**
Bus	**CNG**	**15**	**80.0**	02	**100**	02	**50**	xx	**xx**
	D	**09**	**44.4**	03	**00.0**	05	**60.0**	**27**	**18.5**
HPMTMCV	**CNG**	**34**	**73.5**	03	**67**	xx	**xx**	02	**100**
	D	**26**	**34.6**	xx	**xx**	03	**00.0**	**07**	**57.1**
TrCV	CNG	xx	**xx**	xx	**xx**	xx	**xx**	xx	**xx**
	D	**18**	**44.4**	**21**	**9.6**	02	**50**	**15**	**6.6**

6.0 Result Analyses (b) Interesting information about the model year and emission from motorbikes is seen from the table #5. Compared to 4-S Bikes regd. before 2004, same category bikes regd. after 2004 (newer ones) are passing more as it should be. But the scenario is opposite in case of Rajshahi where older 4-S bikes are passing more than newer ones and the condition of newer bikes is very pale (only 13% passing). This type of anomaly of the same category behaving opposite in two places needs proper investigation in the quality of fuel, driving behavior and maintenance practices in both cities. If we take only the extent of pollution, which is the ultimate target, into consideration other than model year, we see from table#5, 5.01 and 5.02 that 87% of the unsuccessful motor bikes have crossed the limit of HC whereas 67.7% of them crossed the limit of CO concentration. This type of information implies at partial burning of fuel in the engine.

Of the CNG vehicles more than 80% auto rickshaws and minibuses emit CO less than 1 (%v), but only 61% of them emit HC below 1000 ppm. In case of car, bus and human haulers the picture is opposite. For car/micro and human haulers 65% emit CO less than 1 (%v) while 90% of them emit HC less than 1000 ppm. For buses 65 to 68% emit CO less than 1 (%v) as well as HC below 1000 ppm. This type of analyses interpret that if we would set 1 (%v) for CO emission and 1000ppm for HC emission as standard for all CNG driven vehicles, more than 35% vehicles would have failed. Massive awareness among the vehicle owners and drivers should be built up urgently so they go for regular check-ups and maintenance of their vehicles.

Of the P/O vehicles 62% emit CO concentration less than 1% (v) while 79% of them emit HC less than 1000 ppm.

From the table #9 it is found that more than 72% of the diesel vehicles give emission opacity of more than 85% HSU. The result proves feeble situation of the diesel vehicles.

Table# 5 **Synopsis of unsuccessful Motor Bikes:**

City	Manfg Yr	Engine	Total no. tested	Failed No. and %	CO overvalue (%)	HC overvalue (%)	Both Parameter Overvalue
Dhaka	Before 2004	4-S	13	09, (69%)	05, (55.6%)	08, (89%)	04, (44.4%)
		2-S	09	06, (67%)	00	06, (100%)	00
	After 2004	4-S	22	10, (45.5%)	10, (100%)	10, (100%)	10, (100%)
Chittagong	Very nominal data						
Cox's Bazar	*****	4-S	17	11, (65%)	08, (73%)	07, (64%)	04, (36%)
Rajshahi	Before 2004	4-S	11	06, (54%)	03, (50%)	06, (100%)	03, (50%)
	After 2004	4-S	23	20, (87%)	16, (80%)	17, (85%)	14, (70%)

Table# 5.01 **CO Concentration Distributions among Motor Bikes: (Nos. 95)**

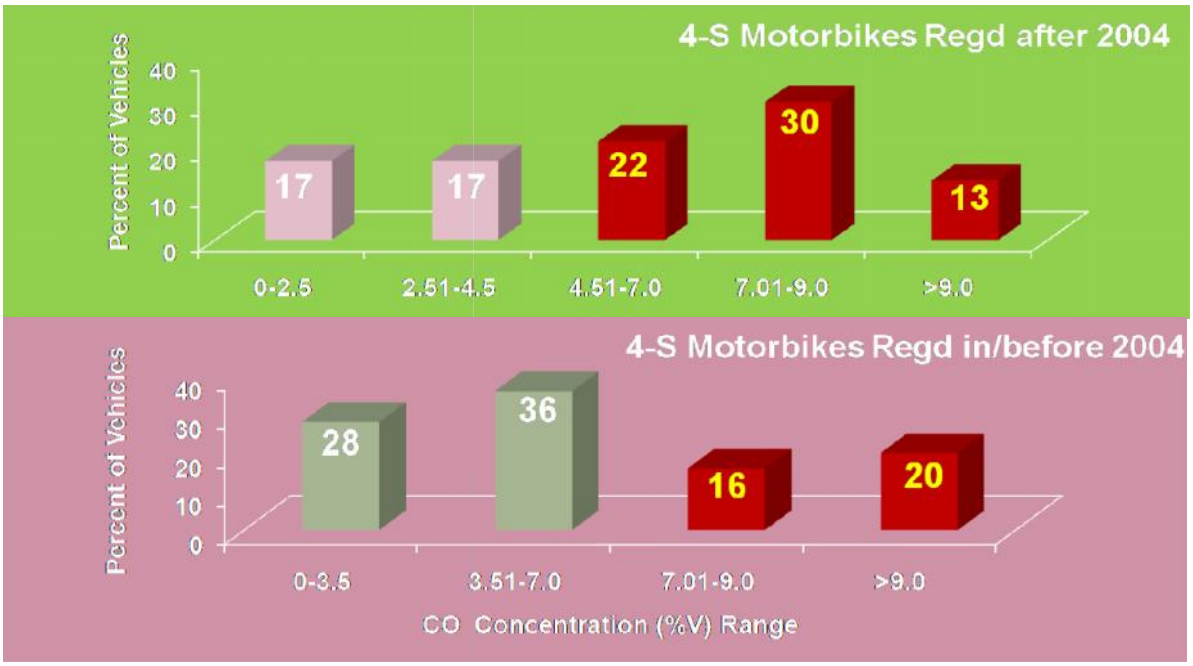
City	Manfg Yr	Engine	Standard	0<CO≤3	3<CO≤6	6<CO≤9	CO>9
Dhaka	Before 2004	4-S	**7.0 (%/v)**	03	03	03	04
		2-S	**7.0 (%/v)**	00	06	03	00
	After 2004	4-S	**4.5 (%/v)**	06	06	08	02
Rajshahi	Before 2004	4-S	**7.0 (%/v)**	03	01	06	1
	After 2004	4-S	**4.5 (%/v)**	03	08	08	04
Cox's Bazar	Not available	4-S	**7.0 (%/v)**	03	03	07	04
				18	**27**	**35**	**15**

Table# 5.02 **HC Concentration (ppm) Distributions among Motor Bikes:**

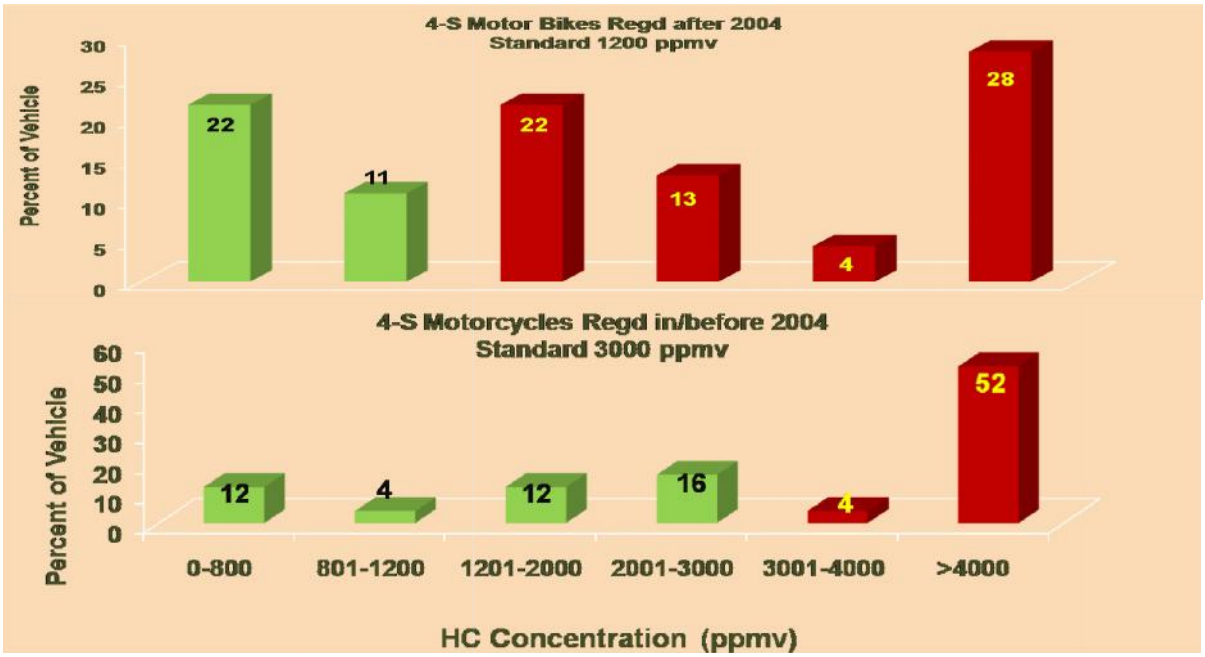
City	Manfg Yr	Engine	Standard	0<HC≤800	800<HC≤1200	1200<HC≤2000	2000<HC≤4000	HC>4000
Dhaka	Before 2004	4-S	**3000ppm**	02	00	02	01	08
	After 2004	4-S	**1200ppm**	07	02	05	05	03
Rajshahi	Before 2004	4-S	**3000ppm**	01	00	01	04	05
	After 2004	4-S	**1200ppm**	03	03	04	03	10
Cox's Bazar	Nt available	4-S	**3000ppm**	02	02	02	05	06
				15	**07**	**14**	**18**	**32**

City	Manufg Yr	Engine	Standard	0<HC≤4000	4000<HC≤8000	8000<HC≤12000	12000<HC≤16000	HC>16000
Dhaka	Before 2004	2-S	**12000ppm**	00	00	03	03	03

Graph#1: Frequency Distribution of CO Emission from 4-S Motorcycles



Graph#2: Frequency Distribution of HC Emission from 4-S Motorcycles



Table# 6: Frequency Distribution of CO Concentration (%v) from CNG Vehicles

Table# 6.01 Auto Rickshaw(AR) (Three Wheeler- CNG):

City	Standard	0<CO≤0.1	0.1<CO≤0.2	0.2<CO≤0.3	0.3<CO≤0.4	CO>0.4	Total
Dhaka	**3.0 (%v) for all model year AR**	07	16	09	01	00	33
Chittagong		00	04	03	01	03	11
Overall		**07**	**20**	**12**	02	06	**44**
		Comment: CO emissions from 88.6% of total AR are within 0.3 (%v)					

Table# 6.02 Car/Microbus (CNG):

City	Standard	0<CO≤1.0	1.0<CO≤3.0	3.0<CO≤4.5	CO>4.5	Total
Dhaka	**3.0 (%v) for vehicles before 2004; 1.0 (%v) for vehicles after 2004**	19	07	04	00	30
Chittagong		06	02	01	00	09
Rajshahi		03	00	00	00	03
Cox's Bazar		04	00	03	00	07
	Overall	**32**	**09**	08	00	**49**
	Comment: CO emissions from 65% of total vehicles are within 1.0 (%v)					

Table# 6.03 Minibus (CNG)

City	Standard	0<CO≤0.5	0.5<CO≤1.0	1.0<CO≤1.5	1.5<CO≤3.0	CO>3.0	Total
Dhaka	**3.0 (%v) for vehicles before 2004; 1.0 (%v) for vehicles after 2004**	11	02	00	00	00	**13**
Comment: CO emissions from 84.6% of total vehicles are within 0.5 (%v); 100% are within 1.0 (%v)							

Table# 6.04 Bus (CNG)

City	Standard	0<CO≤0.5	0.5<CO≤1.0	1.0<CO≤1.5	1.5<CO≤3.0	CO>3.0	Total
All	**3.0 (%v) for vehicles before 2004; 1.0 (%v) for vehicles after 2004**	11	02	02	00	04	**19**
Comment: CO emissions from 58% of total vehicles are within 0.5 (%v); 68.4% are within 1.0 (%v)							

Table# 6.05 Human Hauler/Pick up/Mini truck/Mini covered van- HPMtMc (CNG)

City	Standard	0<CO≤0.5	0.5<CO≤1.0	1.0<CO≤1.5	1.5<CO≤3.0	CO>3.0	Total
All	3.0 (%v) for HPMtMc bfore 2004; 1.0 (%v) HPMtMc after 2004	23	02	01	06	07	**39**
Comment: CO emissions from 59% of total vehicles are within 0.5 (%v); 64% are within 1.0 (%v)							

Table#7.0 Frequency Distribution of HC Concentration (ppm) from CNG Vehicles:

Table#7.01 *Auto Rickshaw-Three Wheeler- (CNG):*

City	Standard	0<HC≤500	500<HC≤1000	1000<HC≤1500	1500<HC≤2000	HC>2000	Total
Dhaka	**No**	14	07	03	04	05	33
Chittagong		06	00	01	00	04	11
Overall		**20**	**07**	**04**	04	09	**44**
		Comment; HC emission from 61% of total Auto Rickshaw (three wheeler) are within 1000ppm					

Table#7.02 Car/Microbus (CNG):

City	Standard	0<HC≤200	200<HC≤500	500<HC≤1000	HC>1000	Total
Dhaka	No standard for vehicles bfore 2004; **1200 ppm** for vehicles after 2004	10	16	03	01	30
Chittagong		09	00	00	00	09
Rajshahi		01	01	00	01	03
Cox's Bazar		06	01	00	00	07
	Overall	**26**	**18**	03	02	**49**
	Comment: HC emissions from 90% of total Car/Micro are within 500 ppm					

Table#7.03 Minibus (CNG)

City	Standard	0<HC≤500	500<HC≤1000	1000<CO≤1500	HC>1500	Total
All	Before 2004 **No;** After 2004 **1200 ppm**	04	04	02	03	**13**
	Comment: HC emissions from 61% of total minibus are within 1000 ppm					

Table#7.04 Bus (CNG)

City	Standard	0<HC≤500	500<HC≤1000	1000<CO≤1500	HC>1500	Total
All	Before 2004 **No;** After 2004 **1200 ppm**	09	03	04	03	**19**
	Comment: HC emissions from 63% of total bus are within 1000 ppm					

Table#7.05 Human Hauler/Pick up/Mini truck/Mini covered van- HPMtMc (CNG)

City	Standard	0<HC≤500	500<HC≤1000	1000<CO≤1500	HC>1500	Total
All	Before 2004 **No;** After 2004 **1200 ppm**	**28**	**08**	01	02	**39**
	Comment: HC emissions from 92% of total HPMtMc are within 1000 ppm					

Table#8.01 Frequency Distribution of CO Concentration (%v) from Petrol/Octane Vehicles

City	Standard	0<CO≤1.0	1.0<CO≤3.0	3.0<CO≤4.5	CO>4.5	Total
Dhaka	4.5 (%v) for vehicles before 2004; 1.0 (%v) for vehicles after 2004	04	00	01	01	06
Cox's Bazar		11	01	02	04	18
Rajshahi		03	00	00	02	05
Total		**18**	**01**	**03**	**07**	**29**
		Comments: CO emission from 62% vehicles are within 1.0 (%v)				

Table#8.02 Frequency Distribution of HC Concentration (ppmv) from Petrol/Octane Vehicles

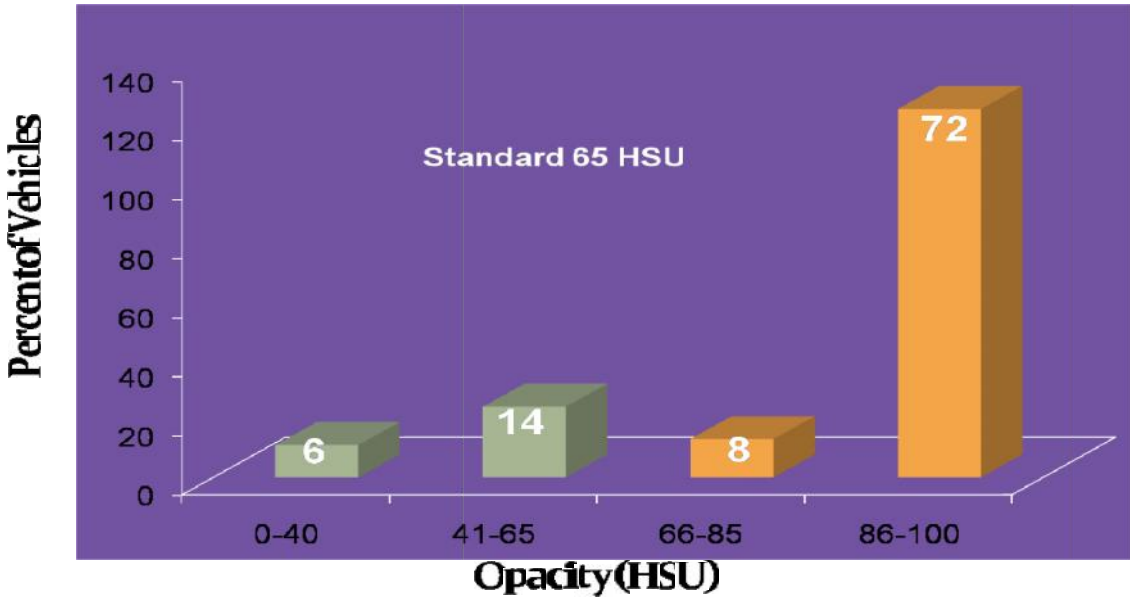
City	Standard	0<HC≤200	200<HC≤500	500<HC≤1000	HC>1000	Total
Dhaka	1200 ppm for all model year vehicles	02	00	02	02	06
Cox's Bazar		09	02	04	03	18
Rajshahi		03	00	01	01	05
Total		**14**	02	**07**	**06**	**29**
		Comments: HC emission from 79% vehicles are within 1000 ppm				

Table#9.0 Opacity (%HSU) Distribution from Diesel Vehicles:

City	Vehicle Type	Standard	0<HSU≤40	40<HSU≤65	65<HSU≤85	HSU>85	Total
Dhaka	Mini bus	65 % HSU	00	02	00	27	**29**
	Bus		00	01	01	03	**05**
	HPMtMc		00	09	03	13	**25**
	TrCv		01	05	01	09	**16**
Rajshahi	Mini bus		00	01	00	03	**04**
	Bus		02	03	03	19	**27**
	HPMtMc		03	00	00	04	**07**
	TrCv		01	00	01	13	**15**
Chittagong	Mini bus		00	01	00	02	**03**
	Bus		00	00	01	02	**03**
	HPMtMc		00	00	00	00	**00**
	TrCv		01	00	01	19	**21**
Cox's Bazar	Mini bus		01		02	05	**08**
	Bus		02	01	00	02	**05**
	HPMtMc		00	00	00	03	**03**
	TrCv		00	01	00	01	**02**
	Total		**11**	**24**	**13**	**125**	**173**

Comments: *only 20% vehicles meet the standards.*

Graph#3: Frequency Distribution of Opacity from Diesel Vehicles



Table#10.0 Age Distribution: We couldn't collect manufacturing year of a big portion of vehicles for the absence of valid documents with the drivers. However, a snap of age distribution of vehicles that could be managed is provided below.

Vehicle	Fuel	≤1990	1991-1995	1996-2000	2001-2005	2006-2011	Blank*
Motor bike	P/O	05	01	13	20	41	22
Auto rickshaw	CNG	00	00	00	33	01	20
Car/micro	CNG	05	07	07	24	06	
Bus/mini bus	CNG	01	00	05	11	15	
HPMtMc	CNG	01	03	06	09	08	12
Car/micro	P/O	01	00	02	09	05	
	Total	13	11	33	106	76	

*No valid document

7.0 <u>Recommendations</u>: Field level experiences offer the following recommendations regard to pollution control from the vehicle sector:

7.01 Massive awareness program on vehicular emission, standard and maintenance of vehicles to be undertaken very soon all over the country.

7.02 Old diesel minibuses, buses and trucks to be phased out.

7.03 Adequate infrastructure to be built in major cities for the emission testing or checking.

7.04 All vehicles should be tested both at port of entrance and at places of registration.

7.05 Adequate infrastructure for maintenance of vehicles to be developed.

Appendix 1

In-service Vehicular Emission Standards for Bangladesh

Registration Before 1st September 2004					
Vehicle Type	Fuel	Test	CO (% by Vol)	HC (ppm)	Smoke Opacity (HSU)
All 4-wheeled Vehicles	Petrol/ Octane	Idle Speed	4.5	1200	--
2-Stroke, 2 or 3 wheelers	Petrol/ Octane	Idle Speed	7.0	12000	--
4-Stroke, 2 or 3 wheelers	Petrol/ Octane	Idle Speed	7.0	3000	--
All CNG Vehicles	CNG	Idle Speed	3.0	--	--
All Diesel Vehicles	Diesel	Free Acceleration	--	--	65
Registration After 1st September 2004					
All 4-wheeled Vehicles	Petrol/ Octane	Idle Speed	1.0	1200	--
	CNG	Idle Speed	1.0	1200	--
4-Stroke, 2 or 3 wheelers	Petrol/ Octane	Idle Speed	4.5	1200	--
All CNG 3 wheelers	CNG	Idle Speed	3.0	--	--
All Diesel Vehicles	Diesel	Free Acceleration	--	--	65