

## NATIONAL QUESTIONNAIRE FOR FUELS AND VEHICLES: EECCA

**Objectives of the Assessment:** To assess the current state of vehicle fuel quality, vehicle emission standards and other related national-level information in order to develop comparative material, which will enable decision-makers and experts to discuss problems and necessities and define possible solutions at a meeting in 2007.

The questionnaire comprises of 4 main sections:

1. Personal Information
2. Air Quality
3. Fuel Quality
4. Vehicles & Emissions

### Please read the following instructions before filling in the questionnaire!

4. We propose that you use **2005 or 2006** as a reporting year, and where asked, please specify the reporting year.\* If data for 2006 is not yet publicized, and the available information is for a previous year, please insert this information and note the particular year in the heading of the table. If 2006 data and updates are available, please provide this data and note the year.
5. You may not find available all required data. Please, fill in the available data:
  - a) If there are data gaps, insert N/A in the respective table cell;
  - b) If such data is not measured, monitored or reported in your country, insert N/R in the respective table cell;
  - c) Please, use the text boxes to present any useful information, which is not covered by the tables or which needs additional description.

## 1. Personal Information

Reporting year*	2005, 2006
Country	Republic of Uzbekistan
Date report completed	7 January, 2008.
Institution responsible for report	State Committee for Nature Protection of the Republic of Uzbekistan
Address of institution	5, Mustakillik Sq., Tashkent, 100017.
Position/Person responsible for report	Chief of Main Department of Air Protection / Nadejda Dotsenko
Telephone No	Tel: (+998 71) 1394823
E-mail address or Fax No	E-mail: <a href="mailto:gkp@ars.uz">gkp@ars.uz</a> ; Fax: (+99871) 1207129

## 2. Air Quality

### 2.1 Institutional framework of air quality legislation

<b>Institution name</b>	<b>Departments</b>	<b>Personnel*</b>	<b>Legal acts</b>	<b>Responsibility</b>
State Committee for Nature Protection of the Republic of Uzbekistan	Main Department of Air Protection	Nadejda Dotsenko	The Law of the Republic of Uzbekistan “On Air Protection”, Regulation on the State Committee for Nature Protection	Implementation of the State Program of Control of pollutants’ chemical impact on Air. Coordination of activity of the Ministries of Internal Affairs and Health Protection in the field of air protection.
Ministry of Health Protection	The State Disease Control Department, Republican Center of the State Disease Control (RCSDC)	Mr. S. Shoumarov	The Law of the Republic of Uzbekistan “On State Disease Control Service”. The Law of the Republic of Uzbekistan “On Air Protection”	Implementation of the State Program of Control of Pollutants’ Physical Impact on Air. Monitoring of population health problems attributed to the environment.
Ministry of Internal Affairs	State Traffic Safety Service	Mr. B. Ermatov	The Law of the Republic of Uzbekistan “On Air Protection”, “Provision on the traffic safety” approved by the Resolution of the Cabinet of Ministers № 539 of 5 December 1997 “On adoption of the provision on traffic safety in the Republic of Uzbekistan”	Implementation of the State program of control of pollutants contained in exhaust gases of vehicles
Hydro Meteorological Service Department under the Cabinet of Ministers of the Republic of Uzbekistan	The Environment Monitoring Service	Ms. G. Grankina	The Law of the Republic of Uzbekistan “On Air Protection”. Provision on the Hydro Meteorological Center.	Monitoring of the environment condition, including air condition

### 3. Fuel Quality

#### 3.1 Contact Office(s)/Person(s)

Responsible Office(s) and Contact Person(s)	Institution	Responsibility	Contact Information	Email
Mr. R. Sheraliyev. Director	State Inspectorate for Use of Oil Products and Gas under the Cabinet of Ministers of the Republic of Uzbekistan	State Inspection of oil products and gas quality	32a, H. Abdullayev Str., Tashkent.	<a href="mailto:ngi@uzpak.uz">ngi@uzpak.uz</a>
General Director	«Uzbekneftgas» National Holding Company Fergana refinery	Oil products refining	240, U. Yusupov Str. Fergana town, Fergana region. Phone: +(99873) 2227669 Fax: + (99873) 2221649	<a href="mailto:refinery@simus.uz">refinery@simus.uz</a>
General Director	«Uzbekneftgas» National Holding Company Altiarik refinery	Oil products refining	Fergana region, Altiarik district	
General Director	«Uzbekneftgas» National Holding Company Bukhara refinery	Oil products refining	1, Mustakillil Str. Karaulbasar town, Kashkadarya region. Phone: +(8365) 3641052 Fax: + (8365) 3644550	<a href="mailto:buhrefin@intal.uz">buhrefin@intal.uz</a>

#### 3.2 Institutional framework for fuel quality management

Institution name	Institution type*	Responsibility	Frequency of fuel testing	Number of authorized testing labs
1	2	3	4	5
State Inspectorate for Use of Oil Products and Gas under the Cabinet of Ministers of the Republic of Uzbekistan	State Inspection of Oil Products and Gas Quality	State inspection of oil products and gas quality. Motor-fuel sampling and quality analyses.	In frames of the State Control	Goods laboratory
Fergana refinery	Central laboratory of the enterprise	Motor-fuel sampling and quality analyses	Constantly	Goods laboratory Fuel laboratory Oil laboratory
Bukhara refinery	Central laboratory of the enterprise	Motor-fuel sampling and quality analyses	Constantly	Goods laboratory Fuel laboratory

\*Government; Research/Academic; Private Company; NGO; accredited laboratories according the ISO 17025

### 3.3 Technical Assistance Received for Capacity Building in Fuel Quality Control

Source: N/A

### 3.4 National Fuel Quality Legislation (please list)

1. The Law of the Republic of Uzbekistan «On Air Protection», 1996. In accordance with the Article 14, all types of fuel and lubrication materials used on the territory of Uzbekistan should meet the requirements imposed by the State Committee for Nature Protection of the Republic of Uzbekistan.
2. The Law Code of the Republic of Uzbekistan “On Administrative Responsibility”, 1994. In accordance with the Article 173, sales of fuel and lubricating materials non-conforming the requirements of the standards or technical specifications and of those, which have an increased content of pollutants can result in penalization executive officers. Penalties may vary from five to seven minimum earnings.
3. The Law of the Republic of Uzbekistan “On Ecological Expertise”, 2000.
4. The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan № 491 «On Adoption of the Regulation on the State Ecological Expertise in the Republic of Uzbekistan », 2001.
5. GOST 2084-77 “Vehicle petrol”
6. TSh 39.3-203:2005 “Vehicle petrol RON -80 and RON-92”
7. Oz'DSt 989:2001 «Diesel fuel».

#### 3.5.1. Parameters for Market Fuels Used in Vehicles with Spark Ignition Engines (petrol), Fergana refinery, 2006

Parameter	Unit	Analytical and statistical results						Limiting value	
		No. of samples	Taken where	Min.	Max.	Mean	Standard deviation	National specification	
								Minimum	Maximum
Research octane No		326	Tank Farm	84,3	85,7	-	-	80	-
Motor octane No				76,4	77,7	-	-	76	-
Vapour pressure, DVPE	kPa			45,3	63,0	-	-	-	66,7
Distillation: -Evaporated at 100°C	%(v/v)			38	48	-	-	-	-
-Evaporated at 150°C	%(v/v)			89	90	-	-	-	-
End boiling point (EBP)	°C			185	195	-	-	-	215
Hydrocarbon analysis:				-	-	-	-	-	-
- Olefins	%(v/v)								
- Aromatics	%(v/v)								
- Benzene	%(v/v)								
Oxygen content				-	-	-	-	-	

Oxygenates:				-	-	-	-	-	-
- Methanol	%(v/v)								
- Ethanol	%(v/v)								
- Iso-propil alcohol	%(v/v)								
- Tert-butyl alcohol	%(v/v)								
- Iso-butyl alcohol	%(v/v)								
- Ethers with five or more carbon atoms per molecule	%(v/v)								
- Other oxygenates	%(v/v)								
Sulphur content	mg/kg			0,013	0,019	-	-	-	0,05
Lead content	g/l								
Leaded petrol				0,0023	0,0046	-	-	-	0,15
Unleaded petrol	g/l			-	-	-	-	-	0,013

### 3.5.2. Parameters for Market Fuels Used in Vehicles with Spark Ignition Engines (petrol), Bukhara refinery, 2006

Parameter	Unit	Analytical and statistical results						Limiting value	
		No. of samples	Taken where	Min.	Max.	Mean	Standard deviation	National specification	
Minimum	Maximum								
Research octane No		400	Tank Farm	80	82,5	81,25	-	80	-
Motor octane No				76	76,5	76,25	-	76	-
Vapour pressure, DVPE	kPa			52	63	57,5	-	-	66,7
Distillation:				90	95	92,5	-	-	-
-Evaporated at 100°C	%(v/v)			-	-	-	-	-	-
-Evaporated at 150°C	%(v/v)			185	195	190	-	-	215
End boiling point (EBP)	°C			-	-	-	-	-	-
Hydrocarbon analysis:				-	-	-	-	-	-
- Olefins	%(v/v)								
- Aromatics	%(v/v)								
- Benzene	%(v/v)								
Oxygen content				-	-	-	-	-	-

Oxygenates:				-	-	-	-	-	-
- Methanol	%(v/v)								
- Ethanol	%(v/v)								
- Iso-propil alcohol	%(v/v)								
- Tert-butyl alcohol	%(v/v)								
- Iso-butyl alcohol	%(v/v)								
- Ethers with five or more carbon atoms per molecule	%(v/v)								
- Other oxygenates	%(v/v)								
Sulphur content	mg/kg			0,02	0,03	0,025	-	-	0,05
Lead content	g/l			0,006	0,007	0,0065	-	-	0,013

### 3.6 Are there any other additives in the fuel? If so, what are they and what quantity?

#### 3.7.1. Parameters for Market Fuels Used in Vehicles with Compression Ignition Engines (diesel).

Data obtained from "Uzneftegasinspection" for 2006

Parameter	Unit	Analytical and statistical results					Limiting value	
		No. of samples	Minimum	Maximum	Mean	Standard deviation	National specification	
							Minimum	Maximum
Cetane No								
Density at 15°C - (20° C)	kg/m <sup>3</sup>	-	-	0,860	-	-	-	-
Distillation – 95% Point	15° C	-	-	360° C	-	-	-	-
Polycyclic aromatic hydrocarbons	%(m/m)	-	-	-	-	-	-	-
Sulphur content	mg/kg	-	-	-	-	-	-	-

#### 3.7.2. Parameters for market fuels used in vehicles with compression ignition engines (diesel).

Data obtained from «Uzbekneftegas» National Holding Company on Fergana refinery for 2006

Parameter	Unit	Analytical and statistical results					Limiting value
		Minimum	Maximum	Mean	Standard deviation	Minimum	National specification
							Maximum
Cetane No		45	49	-	-	45	-

Density at 15°C ( 20° C)	kg/m <sup>3</sup>	816	823	-	-	-	860
Distillation – 95% Point	°C	355	360	-	-	-	360
Polycyclic aromatic hydrocarbons	% (m/m)	-	-	-	-	-	-
Sulphur content	%	0,28	0,5	-	-	-	0,5

### 3.7.3. Parameters for Market Fuels Used in Vehicles with Compression Ignition Engines (diesel).

Data obtained from «Uzbekneftegas» National Holding Company on Bukhara refinery for 2006

Parameter	Unit	Analytical and statistical results					Limiting value
		Minimum	Maximum	Mean	Standard deviation	Minimum	National specification
							Maximum
Cetane No		54	56	55	-	45	-
Density at 15°C (при 20° C)	kg/m <sup>3</sup>	812	820	816	-	-	860
Distillation – 95% Point	°C	345	360	352,5	-	-	360
Polycyclic aromatic hydrocarbons	% (m/m)	-	-	-	-	-	-
Sulphur content	%	0,15	0,3	0,22	-	-	0,5

**Table 3.8 Number of samples in month (diesel), 2006**

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Data obtained from “Uzneftegasinspection”	2	7	11	8	12	10	10	9	2	12	12	12	<b>107</b>
Data obtained from Fergana refinery	46	28	37	63	45	31	34	53	36	52	21	23	<b>469</b>
Data obtained from Bukhara refinery	10	6	10	10	8	10	10	10	10	11	9	8	<b>112</b>

**3.9 Fuel quality standards** (Please, shortly describe your domestic standards and any planned standards and the anticipated deadlines for their adoption, etc.)

1. The local standards for unleaded petrol RON-91 (GOST 2084-77 “Types of Fuel for Vehicles”) provide for the lead mass fraction content

maximum 0,013 g/dm<sup>3</sup> and for the sulphur content – maximum 0,1%.

2. The content of the sulphur should be maximum 0,5% in accordance with O'z DSt 989:2001 “Diesel Fuel”, 2001.

3. Aimed to improve the fuel quality, new quality standards have been developed in Uzbekistan for:

- production of high-octane unleaded petrol RON-80 and petrol RON-92 - TSh 39.3 203:2005 “Fuel for Vehicles”, 2003-2004. Maximum content of lead mass fraction in the unleaded petrol is 0,013 g/dm<sup>3</sup> and in the lead fuel - 0,15 g/dm<sup>3</sup>. Maximum content of sulphur in petrol RON-80 is 0,1% and in petrol RON-92 – 0,5%.

At present, the standards for fuel quality are under revision and the standards are expected to become more severe.

### 3.10 Fuel production, import, export and consumption in 2005-2006.

Fuel grade	Production (1000 tons/year)		Import (1000 m <sup>3</sup> /year)	Export (1000 m <sup>3</sup> /year)	Consumption** (1000 tons/year)	
	2005	2006			2005	2006
Total leaded and unleaded petrol *	1389,6	1366,7	N/A	N/A	1373,9	1358,2
RON: 80			N/A	N/A		
RON: 91						
RON: 92						
RON: 93						
RON: 95						
RON: 98						
Total leaded fuel		***	N/A	N/A		N/A
Total diesel fuel	1437,1	1441,1	N/A	N/A	1431,0	1362,8
Total liquefied petroleum gas (LPG)	211,5	235,3	N/A	N/A	-	62,782
Total compressed natural gas (CNG), 1000 m <sup>3</sup>	50254,2	37700,4			-	73711,7
Other types of fuel (please specify)			-	-	-	-

\* If data for 2005 is not available, insert other data and indicate the year

\*\* Vehicle transport only (rail and marine transport excluded)

\* The share of leaded fuel (RON less than 98) production in 2007 equaled to appr. 10% of the gross production.

**3.10.1 Fuel production, import, export and consumption, 2005-2006.**

Fuel grade	Import, %		Export, %		Consumption, %	
	2005	2006	2005	2006	2005	2006
1	4	5	6	7	8	9
<b>Total leaded and unleaded petrol</b>	100	100	100	100	48,9	49,9
<b>Total leaded petrol</b> RON less than 98 (lead content more than 0, 013 g/dm <sup>3</sup> )	-	1,5	96,0	-	-	-
<b>Unleaded petrol</b> RON less than 95 (lead content maximum 0, 013 g/dm <sup>3</sup> )	35	-	3,9	100	-	-
<b>Unleaded petrol</b> RON 95 or more (lead content maximum 0, 013 g/dm <sup>3</sup> )	64,9	98,5	0,01	-	-	-
<b>Total diesel fuel</b>	-	-	-	-	51,1	50,1
<b>Total LPG</b>	-	-	-	-	100	54,2
<b>Total CNG</b>	-	-	-	-	-	45,8
<b>Other fuels (please specify)</b>	-	-	-	-	-	-

Note: the data provided in %, as the exact numeric data is considered confidential.

**3.11 Fuel production by producers (\* insert reporting year) N/A**

Refinery	Production of crude oil distillation (1000 m <sup>3</sup> /year)
<b>Fergana Refinery</b>	N/A
<b>Altirik Refinery</b>	N/A
<b>Bukhara Refinery</b>	N/A

**3.12 Fuel distribution указать, 2007**

Fuel distributors	Number of filling stations
Tank Farms	More 40
Retail petrol stations	More 1500
Retail CNG-filling stations	About 40
Retail LPG-filling stations	More than 100

**3.13 Promotion of environment friendly fuels (incentives, programs for unleaded petrol, low-sulphur petrol and diesel, biodiesel, bioethanol, LPG, etc.)**

Measure	Details
Ban on leaded petrol	<p>1. In 1998, under the auspices of the World Bank, the UN EEC and of the Dutch Agency for Environment Protection a national program of petrol unleading was worked out. A strategy providing for the soonest and complete phase-out and use of unleaded petrol, and for prevention of possible increase of benzol and other flavouring agents in petrol has been designed in order to:</p> <ul style="list-style-type: none"> <li>- assure maximum 20% market share of unleaded petrol from 1 January 2002;</li> <li>- cease production and consumption of unleaded petrol from 1 January 2008.</li> </ul> <p>2. To provide fulfillment of the national obligations, the Government of Uzbekistan adopted the Resolution # 469 of 20 October 1999 "Programme of Environmental Actions in Uzbekistan for 1999 - 2005". The Resolution makes provisions for completion of reconstruction of the Fergana refinery and complete elimination of lead additives in gasoline by the end of 2008.</p> <p>The share of unleaded petrol production in 2007 was approximately 10%, while the planed production of the unleaded petrol was 20%.</p>
Tax differentiation	A draft resolution of the Cabinet of Ministers making provisions for adoption of taxes for the unleaded petrol use has been prepared (see below).
Use of subsidies	No
Other (please add):	No
<b>Planned Measures</b>	<p>1. An additional draft Resolution of the Cabinet of Ministers "Programme of Environmental Actions in Uzbekistan for 2008- - 2011" has been prepared. The Resolution makes provisions for completion of the Fergana refinery and complete elimination of lead additives in 2008.</p> <p>2. Since 2005, the State Committee for Nature Protection jointly with other ministries and agencies concerned keep working out a draft Resolution of the Cabinet of Ministers "On insertion changes and additions to the Resolution of the Cabinet of Ministers of Uzbekistan # 199 of 1 May 2003 "On improvement of the system of payments for environment pollution and waste disposal on the territory of Uzbekistan". This Resolution shall be supplemented with provisions relating to compensatory payments for production of goods affecting the environment and human health. The amount of compensatory payments shall be 0.5% of the goods cost. With regard to the unleaded petrol, a procedure of calculating compensatory payments for its production shall be set.</p> <p>3. The State Committee for Nature Protection Collegium in 2004 passed a Decree instructing refineries to work out standards for fuel (including automotive petrol) quality and bring the fuel quality in balance with the world standards. In particular, the Fergana refinery shall start producing diesel fuel with 0,5% sulphur content maximum, taking into account construction of the second diesel fuel hydrodesulfurization unit.</p>

**4. Vehicle Emissions**

**4.1 Contact Office(s)/Person(s)**

<b>Responsible Office(s) and Contact Person(s)</b>	<b>Institution</b>	<b>Responsibility</b>	<b>Contact Information</b>	<b>Email</b>
State Committee for Nature Protection of the Republic of Uzbekistan	Main Department of Air Protection	State control of pollutants and exhaust gas emitted by vehicles at enterprises. Coordination of activity carried out in frames of the State control of exhaust gas emission by vehicles.	Tel: (+998 71) 1394823 Fax: (+99871) 1207129	E-mail: <a href="mailto:gkp@ars.uz">gkp@ars.uz</a>
State Committee for Nature Protection of the Republic of Karakalpakstan, 12 regional and Tashkent metropolitan Committee for Nature Protection	Republican and 12 regional inspectorates for air protection, Tashkent metropolitan inspection for nature protection, interregional and cities inspectorates for nature protection	State control of pollutants and exhaust gas emitted by vehicles at enterprises.		
Ministry of Internal Affairs of Republic Uzbekistan	Main Department of Traffic Safety	State control of pollutants and exhaust gas emission by vehicles on roads and during vehicles inspection.	Tel: (+998 71) 1442853 Fax: (+99871) 1442310	
14 Territorial Administrations of Traffic Safety	Specialized ecological units: Departments of Traffic Safety under the Ministry of Internal Affairs in Tashkent, Samarqand and Fergana regions. In other regions – Road Patrol Units under Departments of Traffic and Technical Supervision, Diagnostic stations of the Departments of traffic safety	1. Activity aimed to protect the environment from negative effect of vehicles; 2. Control of observance of regulatory documents on protection of the environment from exhaust gas of vehicles; 3. Issue of orders and bringing to administrative responsibility of the drivers and officials in the cases of non-fulfillment of environmental regulations.		

**4.2 National Fuel Quality Legislation (please list)**

1. The Law of the Republic of Uzbekistan “On Air Protection”, 1996. Articles 10, 15, 16 and 17 specify requirements for mobile pollution sources. Article 10 makes provision for specification of norms of pollutants content in exhaust gas of vehicles produced and operated in Uzbekistan. Article 15 regulates content of pollutants in exhaust gas of imported vehicles and vehicles entering the Republic and Article 16 regulates content of pollutants in exhaust gas during vehicles production and operation, while Article 17 – during vehicles operation and maintenance.
  2. The Code of the Republic of Uzbekistan “On Administrative Responsibility”, 1994 makes provisions for the administrative responsibility of legal entities and individuals. Articles 87 and 125 of the Code specify amounts of penalties for violation of vehicles production standards and their operation with excess content of pollutants in exhaust gas.
  3. GOST 17.2.2.03 -87 “Norms and Methods of Measuring Carbon Oxide and Hydrocarbons Content in the Exhaust Gas of Vehicles with Petrol Engines.
  4. GOST 21393-75 “Diesel vehicles. Exhaust gas smokiness ratio. Norms and methods of measuring”.
  5. As part of Article 10 “On Air Protection” execution of in 2006 new Engineering Specifications were worked out and approved by the State Ecological Expert Committee:
    - TSh 80-010:2004 “Light passenger cars “MATIZ”;
    - TSh 80-003:2004 “Passenger cars “NEXIA”;
    - TSh 80-001:2004 “Light-duty passenger vans “DAMAS”;
    - TSh 80-005:2004 “Light-duty commercial vans “DAMAS”
- New Specifications contain standards for pollutants content in exhaust gas of vehicles. In particular, the volume of repugnant substances in exhaust gas emitted by vehicles into the atmosphere should not exceed the values specified in the GOST P 41.83 “Unified Regulations on Official Certification of Vehicles in respect of Pollutants Exhaust” (Norms of the UN EEC # 83-92A or a corresponding Euro-0). Absence of toxic lead compounds in vehicles’ exhaust gas should be achieved.
6. A Decree of the President of Uzbekistan # IIII-531 of 14 December 2006 “On measures aimed to promote production of vehicles at Samarqand automobile factory and the Republican vehicle fleet renewal” prohibits from 1 March 2007 importation of vehicles which do not meet the requirements of the Euru-2 Standard, and from 1 January 2010 of vehicles which do not meet the requirements of the Euru-3 Standard.
  7. A joint resolution of the Standardization, Metrology and Certification and the State Committee for Nature Protection of the Republic of Uzbekistan “On adoption of the temporary instruction for ecological certification of diesel and petrol vehicles «M2», «M3» and «N2» for Euro-2 ecological standards” of April 2007. In accordance with the resolution, from 1 March 2007 Russian norms corresponding to Euro-2 standards (GOST P 41.24-2003, GOST P 41.49-2003, GOST P 41.83-2004, GOST P 51832-2001) concerning emissions from imported new vehicles «M2», «M3» and «N2» were put in practice. As of 1 January 2010 norms corresponding to Euro-3 standards based on UN EEC Rules №№ 24, 49 and 83 “On vehicles pollutants emission standards” will be used.
  8. “Sectoral program for environment protection of enterprises JSC “Uzavtosanoat” for 2007 – 2010” makes provisions for preparing standards for pollutants emission by petrol and diesel engines. May 2007.
  9. Resolution of the Cabinet of Ministers of Uzbekistan № 54 of 31.01.2003 “On adoption of the Regulation on the mandatory vehicles technical checkup”.
  10. Orders of the Ministry of Internal Affairs of Uzbekistan № 56 of 19.02.2003 “On instituting and execution of mandatory technical checkup of vehicles” and № 137 of 03.05.2003 “On adoption of the Instruction on maintenance supervision under the State traffic safety service under the Ministry of Internal Affairs of the Republic of Uzbekistan”

#### 4.3 Vehicle fleet structure in 2005

Year: (* please insert reporting year)	Total number of vehicles	Passenger Cars	LDV		HDV		Buses	
		Total	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel
Number (000s)**								
% of the total vehicle fleet***	100	5,5	80,2	0,4	7,4	3,7	2,0	0,8

\* If data for 2005 is not available, insert other data and indicate the year

\*\* Preliminary estimates show the total number of registered vehicles as of 1 January 2006. The total number is 1196,672 thousand, of which 1037, 487 thousand run on petrol, 98,003 thousand – on diesel fuel and 61,182 thousand – on gas.

\*\*\* the data provided in %, as it is considered confidential.

**Table 4.4 Share with catalytic converters**

Year: (* please insert reporting year)	Vehicles with Catalytic Converters	
	Passenger cars	All vehicles
Number (000s)	N/A	N/A
%	N/A	N/A

Note: At present, the production and use of approximately 10% of unleaded petrol goes on in the Republic, which prevents the usage of exhaust gas neutralizers in the Republic.

**Table 4.4a. The number of vehicles produced and equipped with exhaust gas neutralization system**

Vehicle type (model/brand)	2003	2004	2005	2006
<b>1. Total:</b>	<b>1569</b>	<b>15284</b>	<b>46453</b>	<b>78051</b>
1.1. «Matiz - 0,8 l»	589	5784	9614	27716
1.2. «Matiz - 1,0 l»	-	167	2522	2263
1.3. «Nexia - SONC»	1	5161	9158	12930
1.4. «Nexia - DONC»	979	4172	25159	35142

Note: Table 4.4a shows the number of vehicles produced in Uzbekistan and exported.

**Table 4.5 Newly registered passenger cars**

Year	Total	Passenger cars**			
	number	New		Second hand	
	000s	000s	%	000s	%
1995					
As of 01.08.2007*	62761	N/A	N/A	N/A	N/A

\* If data for 2003 is not available, insert older data and indicate the year

\*\* For the reasons of improving ecological and traffic safety a Resolution of the President № IIII-531 was adopted on of 14.12.2006. The resolution provides for gradual removing from service busses and minibuses, which service time exceeds 10 years.

**Table 4.6 Vehicle aging, %**

**Only cars registered in year 2005, in total, not in categories**

Year: 2005*	Total (%)	0-5 years	6-10 years	11-15 years	16-20 years	>20 years
Passenger cars (%)*	100	11	13	22	26	28
LDV (%)	100	18,2	27,8	20,6	33,4	N/A
HDV (%)	100	2,1	7,6	26,3	64,0	N/A
Buses (%)	100	11	13	22	26	28

\*If data for 2005 is not available, insert older data and indicate the year

**Table 4.7 Domestic vehicle production (if any)**

Type	2003*		2004		2005	
	Total	%	Total	%	Total	%
Passenger cars (%)**	267	0,6	187	0,3	199	0,2
LDV (%)***	40505	99,3	70070	99,6	101010	99,7
HDV (%)***	28	0,07	79	0,1	57	0,05
Buses (%)****	267	0,6	187	0,3	199	0,2
<b>TOTAL (%)</b>	<b>40800</b>	<b>100</b>	<b>70336</b>	<b>100</b>	<b>101266</b>	<b>100</b>

\* 2003 is included in order to see the trend. If data is available, any previous year can be included too.

\*\* All busses produced in the Republic are mostly designed for transportation of passengers;

\*\*\* Various modifications of light and heavy trucks (1.5 – 8 tons) – trucks with awning, closed trucks, petrol trucks, garbage trucks and honey buckets, refrigerator trucks;

\*\*\*\* Minibuses with 14 seats maximum.

**Table 4.8 Quantity of imported vehicles\*\***

Type	2003	2004	2005
Passenger cars (%)	N/A	N/A	N/A
LDV (%)	N/A	N/A	N/A
HDV (%)	N/A	N/A	N/A
Buses (%)	N/A	N/A	N/A
Total (%)	N/A	N/A	N/A

\* 2003 is included in order to see the trend. If data is available, any previous year can be included too.

\*\* If there is data by country of import, please include it.

#### **4.9 Restrictions placed on imported vehicles (age limits, requirements for catalytic converters, installation of emission technology for the HDV, etc.)**

1. For the purpose of working out national standards corresponding the European ones, for further improving ecological safety of the population and creation of a protective barrier against importation of ecologically unfriendly vehicles a Resolution of the President № IIII-531 of 14.12.2006 was adopted. In accordance with this Resolution, from 1 March 2007 importation of vehicles, not meeting the Euro-2 ecological standard requirements is banned. From 1 January 2010 importation of vehicles, not meeting the Euro-3 ecological standard requirements shall be banned.

The requirements of the Resolution can be applied to the vehicles:

«M 2» (more than 8-seat passenger vans, which maximum weight is less than 5 tons);

«M 3» (more than 8-seat passenger vans, which maximum weight exceeds 5 tons);

«N 2» (petrol and diesel trucks, which maximum weight exceeds 3,5 tons, but not more than 12 tons)

2. In order to improve the ecological safety of population and the environment by protecting them from harmful effect of pollutants emitted by vehicles imported to Uzbekistan, a draft Resolution of the Cabinet of Ministers of Uzbekistan “On improvement of measures aimed at protection of the environment” was adopted. The Resolution introduced bans for customs clearing of the vehicles not meeting the requirements of Euro-2 standards.

#### **4.10 Information on retrofitting imported fleets (e.g. bus fleets) with emissions control technologies or cleaner engines**

Following the joint Resolution of the Standardization, Metrology and Certification Agency and the State Committee for Nature Protection of the Republic of Uzbekistan “On adoption of the temporary instruction for ecological certification of diesel and petrol vehicles «M2», «M3» and «N2» categories for Euro-2 ecological standards” of April 2007.

In accordance with the resolution, from 1 March 2007 the Russian standards (GOST P 41.24-2003, GOST P 41.49-2003, GOST P 41.83-2004 and GOST P 51832-2001) corresponding to Euro-2 standards for emission from imported new vehicles of «M2», «M3» and «N2» categories were put in practice. As of 1 January 2010 standards corresponding to Euro-3 standards will be used and ecological certificates of other countries will be recognized.

**4.11 Institutional framework for vehicle emission testing**

Institution name	Institution type	Personnel	Responsibility	Number of vehicles tested (vehicles/year)		Number of testing sites	
				2005	2006	2005	2006
1	3	3	4	5	6	7	8
State Committee for Nature Protection of the Republic of Uzbekistan	National	185	State control	217711	205557	118	118
Ministry of Internal Affairs of the Republic of Uzbekistan	National	456	State control	835000*	856000*	118	118
JSC "Uzavtosanoat" "Uzavtoprom"	Joint-stock Companies		Manufacturing supervision	101010	140000	2**	2**
JSC "Uzavtosanoat" "Uzavtoprom"	JSC "Uzavtotehhizmat" and 18 regional branches		Manufacturing supervision				

\* inclusive of testing operational vehicles emission and exhaust gas smokiness in the time of vehicles technical checkup.

\*\* Automobile factories

**4.12 Legal and institutional framework of vehicle inspection and maintenance**

1. In accordance with Articles 28-32 of the Law "On Nature Protection" State inspection, internal monitoring, manufacturing supervision or public inspection is put in place, including vehicles.
2. In accordance with Article 28 "On Air Protection", the nature protection, traffic safety and epidemiological surveillance authorities control toxic level and smoke content in exhaust gas of vehicles.
3. The regional enterprises JSC "Uzavtotehhizmat" and "Uzavtosanoat" act in accordance with Article 17 "On Air Protection", which specify particular requirements for enterprises analyzing toxic level and pollutants content in the vehicle exhaust gas. Eighteen regional branches of JSC "Uzavtotehhizmat" and "Uzavtosanoat" operating all over the Republic have 26 service stations and 2 car repair shops with total capacity of 443 diagnostic stations equipped with gas-analyzers and instruments for controlling toxic level and smokiness of the exhaust gas. On demand of drivers, in time of vehicle repair and maintenance, the components and units related to exhaust of pollutants are checked every three month.
4. In accordance with the Resolution of the Cabinet of Ministers of Uzbekistan № 54 of 31.01.2003 "On adoption of the Regulation on the mandatory vehicles technical checkup" and the Orders of the Ministry of Internal Affairs of Uzbekistan № 56 of 19.02.2003 "On instituting and execution of mandatory technical checkup of vehicles" and № 137 of 03.05.2003 "On adoption of the Instruction on maintenance supervision under the State traffic safety service under the Ministry of Internal Affairs of the Republic of Uzbekistan", the Traffic safety service under the Ministry of

Internal Affairs of the Republic of Uzbekistan control activity aimed to protect the air quality and ecological state of vehicles. Vehicle technical checkup is obligatory in the Republic. During vehicle technical checkup the exhaust gas is checked for toxic level and smokiness. In accordance with the established requirements, all passenger vehicles (busses, minibuses and taxis) are checked up twice a year, while vehicles of all other types – once per year.

#### 4.13 Technical Assistance Received for Capacity Building in Vehicle Inspection and Maintenance

1. The State Committee for Nature Protection in 2005 received 16 gas analyzers “Avtotrest-01.01” and 16 smoke analyzers “Meta-01 MP” for the total amount of USD 17216. The equipment was granted by UNDP in frames of the Project “Assistance in Implementing Actions Aimed at Protecting the Environment and Energy Sources under the Country Programme Action Plan”

Source: UNDP ..... (institution) State Committee for Nature Protection.... (department) Main Department of Air Protection, 14 territorial specialized inspections for air protection, State specialized analytical monitoring inspection.

#### 4.14 National Vehicle exhaust emission requirements (ONLY light-duty vehicles/passenger cars)

g/km	Petrol	Diesel
CO	See below	See below
CH	See below	See below
NO <sub>x</sub>	See below	See below
HC+NO <sub>x</sub>	See below	See below
PM	See below	See below
Opacity	Not established	See below

#### 4.14. Emission Standards for vehicles imported to Uzbekistan

4.14.1. CO, CH, NO<sub>x</sub> and CH + NO<sub>x</sub> values for vehicles equipped with spark-plug ignition engines should not exceed values presented in the table below

Vehicle Ecological Class	Vehicle Category	Document Establishing Measuring Methods	Check Weight (RW), kg.	Emission Standards			
				CO	CH	NO <sub>x</sub>	CH + NO <sub>x</sub>
	Gross vehicle weight less than 2500 kg.		-	2,2 g/km	-	-	0,5 g/km

2	M1 Gross vehicle weight from 2500 to 3500 kg. and N1	UN EEC rules: -№ 83-03 B, C, D; -№ 83-04 B, C, D.  GOST P 41.83-2003 (Russia)	up to 1250	2,2 g/km	-	-	0,5 g/km
			from 1250 to 1700	4,0 g/km	-	-	0,6 g/km
			more than 1700	5,0 g/km	-	-	0,7 g/km
	M1 Gross vehicle weight exceeding 3500 kg., M2, M3, N2 ,N3	ГОСТ P 51832-2003 (Russia)	-	11,2 g/kWh	2,4 g/kWh	10 g/kWh	-

**4.14.2. Values of CO, CH, NO<sub>x</sub>, CH + NO<sub>x</sub>, PT and η smokiness ratio for vehicles with compression ignition and gas engines should not exceed the values presented in the table below**

Vehicle ecological class	Vehicle category	Document on measuring procedure	Check weight (kg.) or the cycle type	Emission Standards					
				CO	CH	NO <sub>x</sub>	CH + NO <sub>x</sub>	Particulate (PT)	Smokiness ratio M <sup>-1</sup>
2	M1 Gross weight up to 2500 kg.	UN EEC Regulations № 83-03 B, C, D. GOST P 41.83-99 <sup>1)</sup> (Russia)	-	1,0 g/km	-	-	0,7 g/km	0,08 g/km	-
	M1 Gross weight more than 2500 kg and N1	UN EEC Regulations № 83-04 B, C, D.  GOST P 41.83-2003 <sup>1)</sup> (Russia)	up-to 1250	1,0 g/km	-	-	0,7 g/km	0,08 g/km	
			from 1250 to 1700	1,25 g/km	-	-	1,0 g/km	0,12 g/km	
			more than 1700	1,5 g/km	-	-	1,2 g/km	0,17 g/km	
M1 Gross weight more than 3500 kg, M2, M3, N1, N2, N3	UN EEC Regulations № 49- 02B GOST P 41.49-99 (Russia)	-	4,0 g/kWh	1,1 g/kWh	7,0 g/kWh	-	0,15 g/kWh		

**4.14.3. Content of CO and CH in the exhaust gas of cars in service should not exceed the values presented in the table below**

RPM	CO maximum allowed concentration, volume ratio, %	CH maximum allowed concentration, volume ratio, mm <sup>-1</sup>	
		for engines with cylinders	
		up to 4	more than 4
n <sub>МИН.</sub>	1,5	1200	3000
n <sub>ПОВ.</sub>	2,0	600	1000

**4.14.4. Exhaust gas smokiness ratio of cars in service should not exceed the values presented in the table below**

Smokiness ratio measurement	Smokiness ratio, % maximum
Free acceleration for diesel vehicles: with n/a engine	40
with supercharged engine	50
Maximum rotations per minute	15

**4.15 Recent Developments/Planned Vehicle exhaust emission requirements, inspection and maintenance****Planned actions**

1. From 2003, the cars «Matiz - 0,8 l», «Matiz - 1,0 l», «Nexia - SONC» and «Nexia - DONC» produced in Uzbekistan for local and foreign market meet the requirements of Euro-2 Standards (models E 93 equipped with catalytic converter operating on unleaded petrol). All cars are tested and certified for their conformity to the UN EEC Code № 83-04B. The cars are tested by a Russian scientific-research car and bike test and finishing center located in Moscow region. There are no appropriate facilities in Uzbekistan to carry out all tests following the UN EEC Codes №№ 83 and 49. Export-oriented cars are equipped with exhaust gas two-component catalytic converters, so the cars meet the requirements of Euro-2.

1.2. One of the measures aimed to reduce the level of air pollution by mobile sources is the State control of toxic level and smokiness ratio of vehicle exhaust gas.

In accordance with a joint Resolution of the State Committee for Nature Protection, the Ministry of Health and the Ministry of Internal Affairs of the Republic of Uzbekistan № 12/79/137 of 31 March 1996, in frames of the above said State control, a campaign “Clean Air” is implemented in the Republic of Uzbekistan. Actions in frames of the campaign are annually carried out in two stages over the Republic. In the course of campaign ecological state of motor transport enterprises, petrol stations, service centers and auto-repair factories are checked. Special attention is paid at checking spark-ignition engines (which exhaust gas contains 70% of carbon oxide (CO) and 13% of hydrocarbons (CH), as well as at smokiness ratio of diesel vehicles. In frames of the “Clean Air” campaign 40% – 48% of the total number of vehicles are checked (the vehicle operation factor equaled to 0,75 is applied).

1.3. On 17 April 2005, the President of Uzbekistan adopted a Resolution № III-325 “On measures aimed to accelerate the development of service industries in the Republic of Uzbekistan in 2006-2010”. The Resolution, in particular, provides for development of services in installation and maintenance of gas-bottle systems for 1200 million Uzbek Soums. The JSC “Uzavtotehhismat” and “Uzavtosanoat” Ltd. provide services on installation and maintenance of gas-cylinder equipment. Six stations have been launched in Samarqand, Andijan, Navoi, Fergana and Surhandaria

regions. Chief engineers and specialists in vehicle conversion to LPG were trained and certified on the “Uzavtosozlash-KTB” Ltd. basis. Technical specifications for vehicles “Nexia”, “Damas”, “Tico” and “Matiz” conversion to CNG were designed by the “Uzavtosozlash-KTB” Ltd. by order of the JSC “Uzavtotehhismat”.

### Planned actions

2.1. In accordance with the Resolution of the State Committee for Nature Protection Collegium № 8 / 1 of 26 August 2006 “On observation of the Law “On Air Protection”, the JSC “Uzavtosanoat” was charged to:

- decide a matter of establishing a laboratory for exhaust gas toxic level (smokiness) bench-testing following the procedure established by the UN EEC Rules №№ 83 and 49;
- starting from 2009, after complete ban of lead-based additives in petrol, start commercial production of vehicles meeting the requirements of Euro-2 Norms for both the local and external markets;
- settle the matter of production vehicles equipped with the exhaust gas neutralization systems or equipped with gas-bottle systems. The vehicles are supposed to meet the requirements of Euro-2 ecological standards. At present, there are plans to start production of minibuses “Damas” equipped with gas-bottle systems, thus meeting the requirements of Euro-2 ecological standards.

2.2. . In accordance with the Resolution of the State Committee for Nature Protection Collegium № 11/3 of 29 November 2007 “On improvement of cooperation of the State Committee for Nature Protection and the Ministry of Internal Affairs in arranging and implementing the “Clean Air” campaign”, the both ministries have to:

- work out a joint programme of the State control of the activity carried out in the field of air protection;
- before 15 February 2008, define and approve location of road patrol stations which will participate in the “Clean Air” campaign;
- before 15 March 2008, prepare and approve training materials on the State control of ecological condition of vehicles, including guideline for arranging and implementing the “Clean Air” campaign by the both ministries;
- improve methods of controlling the “Clean Air” campaign arrangements and implementation by regional branches of the State Committee for Nature Protection and the Ministry of Internal Affairs, provide them with training materials, etc.

Source: Resolutions of the Board (institution) State Committee for Nature Protection (department) Main Department for Air Protection

#### 4.16 Incentives for alternative fuels and vehicles (e.g. Flexi-fuel/CNG/LPG powered vehicles)

Incentive	Description
Reduction of pollution by vehicles; Saving fuel and power resources; Reduction of compensatory payments for air pollution.	<ol style="list-style-type: none"> <li>1. In accordance with the Resolution of the Government № 30 of 10 February 2007 “On development of the gas-filling and petrol stations network, stage-by-stage vehicles retrofitting to LPG and CNG”, 188 thousand vehicles shall be retrofitted for LPG and CNG, of which 100 thousand vehicles shall be retrofitted for LPG and more than 60 thousand vehicles for CNG during 2007-2012..</li> <li>2. The draft “Action plan for environment protection in 2007 – 2011” gives recommendations for retrofitting 15 thousand vehicles for use gas-fuel.</li> <li>3. The JSC “Uzavtosanoat” is working at the possibility of production of</li> </ol>

	minibuses “Damas” equipped with the gas-cylinder equipment and meeting the ecological requirements of the Euro-2 standards. In this issue the JSC “Uzavtosanoat” is cooperating with the companies “ZOLVER”, “LANDI RENZO”, JSC “INTERMIBILGAZ”, SRC “Fan va Tatakkiyot” and JSC “KTB Avtosozlash”.
Reduction of greenhouse gas and pollutants emission, reduction of compensatory payments for air pollution	The Scientific-research center “Eco-energy” under the State Committee for Nature Protection, which main task is introduction and replication of new alternative energy sources technologies is working at the project of bio-ethanol motor-fuel.

#### 4.17 Promotion of environment friendly vehicles (such as import of only new vehicles, catalytic converters, fuel cells, etc.)

Measures	Details
1. Ban on the sale of new vehicles not equipped with catalytic converters	Bans on the sale of new vehicle not equipped with catalytic converters have not been established. However, the Resolution of the State Committee for Nature Protection obliges automakers to start producing vehicles meeting the requirements of Euro-2 and newer, i.e. equipped with exhaust gas neutralization system as soon as from 2009 after the complete ban on lead-based additives in petrol.
2. Tax differentiation	Resolution of the Cabinet of Ministers № 199 of 1 May 2003 “On improvement of the system of payments for environment pollution and waste disposal on the territory of Uzbekistan” compensatory payments were established for air pollution by mobile pollution sources, including vehicles depending on the used fuel .
3. Use of subsidies	No
4. Inspection and maintenance program	The Resolution of the State Committee for Nature Protection Collegium № 11/3 of 29 November 2007 “On improvement of cooperation of the State Committee for Nature Protection and the Ministry of Internal Affairs in arranging and implementing the “Clean Air” campaign”, calls the both ministries to work out a joint programme for implementation of the State control of the activity carried out in the field of air protection.

Retrofit program	<p>1. The draft “Action plan for protection of the environment in the Republic of Uzbekistan in 2007-2011” contains recommendations for retrofitting 15 thousand vehicles for gas-fuel and increase production of diesel vehicles by 20 thousand.</p> <p>2. Based on the President’s Resolution № IIII-325 of 17 April 2006 “On measures aimed to accelerate the development of service industries in the Republic of Uzbekistan in 2006-2010”. The JSC “Uzavtotehhisimat” and “Uzavtosanoat” Ltd. started providing services on installation and maintenance of gas-cylinder equipment. Six retrofitting stations were launched in Samarqand, Andijan, Navoi, Fergana and Surhandaria regions. Chief engineers and specialists in vehicle conversion to LPG were trained and certified on the basis of “Uzavtsozlash-KTB” Ltd.. Technical specifications for vehicles “Nexia”, “Damas”, “Tico” and “Matiz” conversion to CNG were prepared by the “Uzavtsozlash-KTB” Ltd. by order of the JSC “Uzavtotehhisimat”. As of 1 January 2007, 102 thousand vehicles shall be reequipped for use of gas-fuel.</p> <p>3. In accordance with the Resolution of the Government № 30 of 10 February 2007 “On development of the gas-filling and petrol stations network and stage-by-stage vehicles retrofitting to LPG and CNG”, 188 thousand vehicles shall be retrofitted for LPG and CNG, of which 100 thousand vehicles shall be retrofitted for LPG and more than 60 thousand vehicles for CNG during 2007-2012.</p> <p>4. The JSC “Uzavtosanoat” is working at the possibility of production of minibuses “Damas” equipped with the gas-cylinder equipment and meeting the ecological requirements of the Euro-2 standards. In this regard the JSC “Uzavtosanoat” is cooperating with the companies “ZOLVER”, “LANDI RENZO”, JSC “INTERMIBILGAZ”, SRC “Fan va Tatakkiyot” and JSC “KTB Avtsozlash”.</p>
6. Accelerated retirement program	In accordance with the President’s Resolution № IIII-531 of 14.12.2006, a plan for stage-by-stage removing from service of the buses and passenger minibuses, which lifetime exceeds 10 years was worked out.
7. Scrappage programs	No
8. Vehicle age caps	In accordance with the President’s Resolution № IIII-531 of 14.12.2006, a plan for stage-by-stage removing from service of the buses and passenger minibuses, which lifetime exceeds 10 years was worked out.
9. Other (please add):	