



# **Environmentally Sustainable Transport in Ulaanbaatar City Mongolia**

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## **Contents of Presentation**

1. Basic statistics of Ulaanbaatar
2. Overview of Transports in Ulaanbaatar
3. Environmental challenges facing Ulaanbaatar
4. The measures being taken in EST in Ulaanbaatar
5. The challenges facing for promoting EST in Ulaanbaatar
6. The strategies for promoting EST in Ulaanbaatar

## 1. Basic statistics of Ulaanbaatar

### 1.1. LOCATION OF CITIES

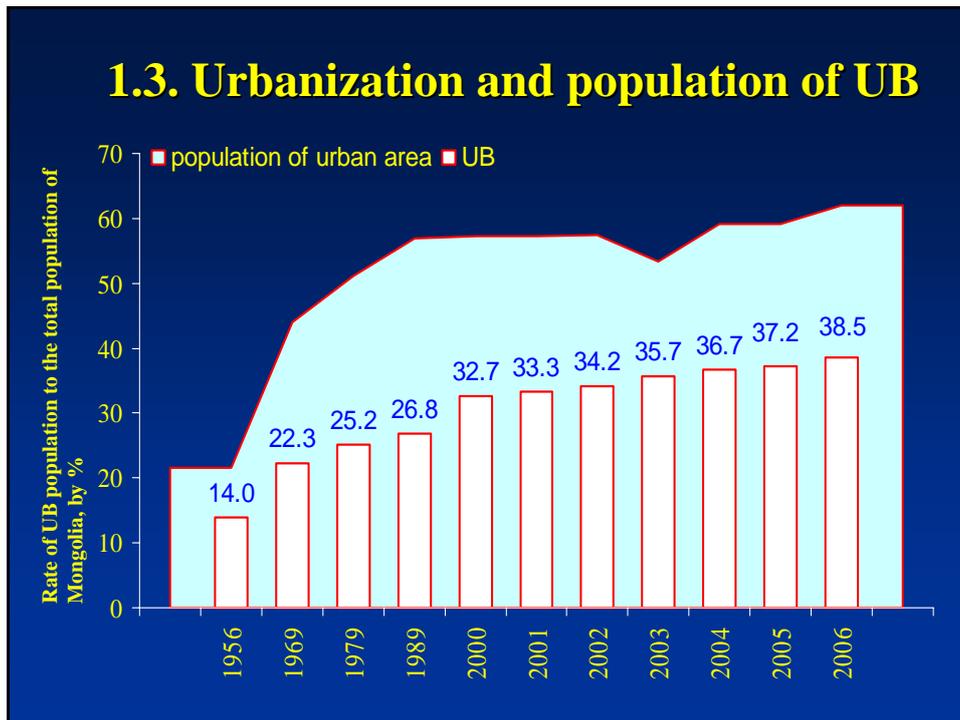


### 1.2. Ulaanbaatar – The Capital City of Mongolia

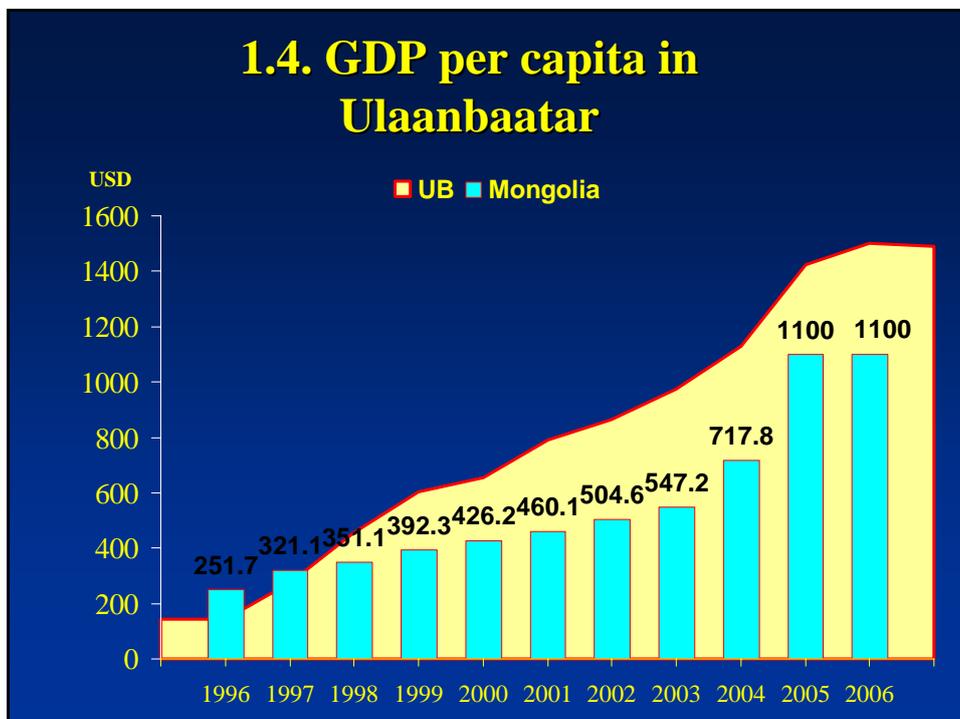
- **Territory**
  - 470,444 ha, ca 0.3% of total territory of Mongolia (156 426 424,6 ha)
- **Administrative Districts:**
  - 9
- **Population: 987,200**
  - 38.2% of the total population of Mongolia
- **Over 57% of the GDP is produced in the Capital City**
- **Ulaanbaatar City makes up one third of the Mongolian Government's budget**



### 1.3. Urbanization and population of UB

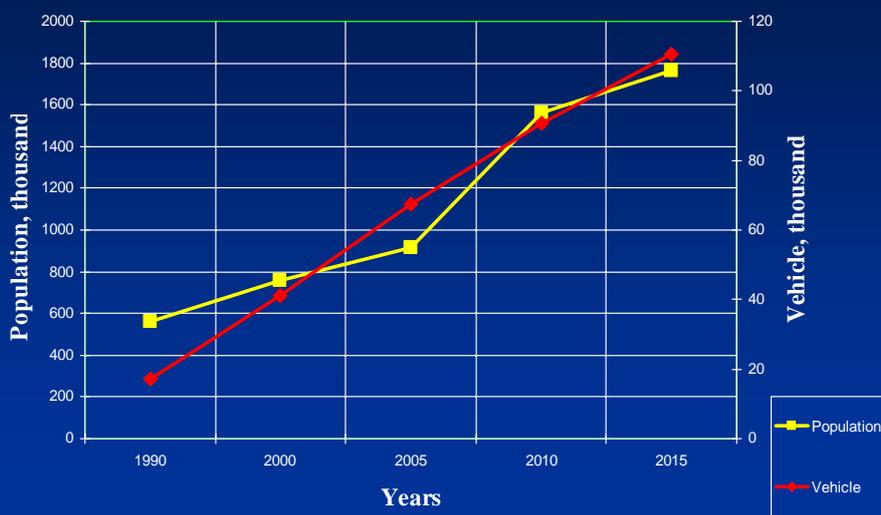


### 1.4. GDP per capita in Ulaanbaatar



## 2. OVERVIEW OF PUBLIC TRANSPORT IN ULAANBAATAR

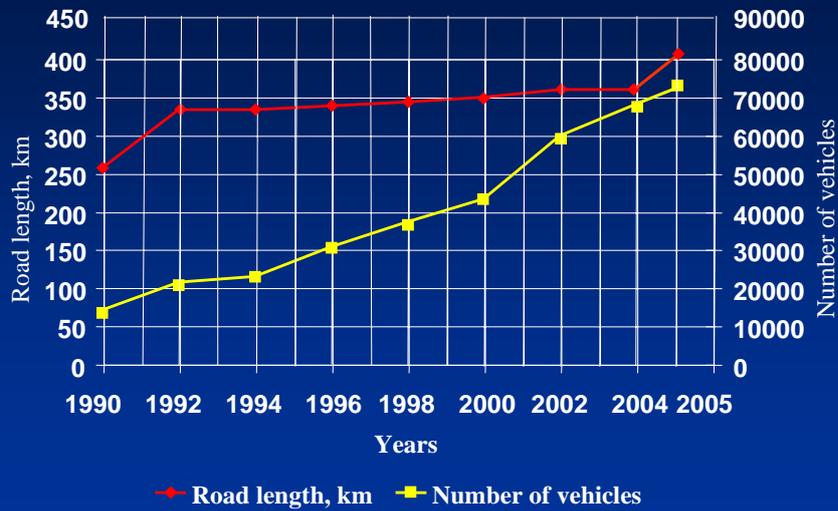
### 2.1. POPULATION AND VEHICLES IN UB



### 2.2. CITY PUBLIC TRANSPORT MODES



### 2.3. Increasing of vehicles and road extensions



### 2.4. Usage duration of big, medium and small sized buses

Usage duration / years /	Number and percentage of big and medium sized buses	Number and percentage of small sized buses	Number and percentage of taxis
Up to 3	37 (5.3%)	9 (0.4%)	8 (0.6%)
3.1 - 7	47 (6.7%)	21 (0.8%)	425 (29.4%)
7.1 – 10	231 (33%)	230 (9.5%)	703 (48.7%)
10.1 - 15	262 (37.5%)	1970 (81.0%)	307 (21.3%)
More than 15	122 (17.5%)	201 (8.3%)	-
Result	699 (100%)	2431 (100%)	1443 (100%)

### 3. Environmental challenges in Ulaanbaatar

3.1. Air pollution

3.2. Soil pollution

3.2. Water pollution

#### 3.1. Air pollution in Ulaanbaatar

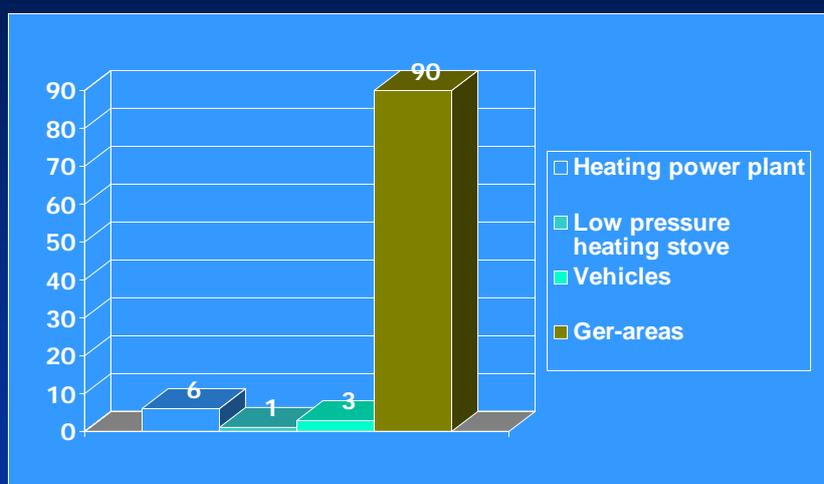
“Geography and Geology research center”  
NGO’s survey indicates the percentage of  
Ulaanbaatar City’s air pollution:

- Smoke from the ger-areas /Mongolian traditional dwellings/ **90%**
- Heating power plants **6%**
- Vehicles **3%**
- Low pressure heating stoves **1%**

### 3.1.1. Ulaanbaatar City's air pollution



### 3.1.5. The most recent survey indicates the percentage of Ulaanbaatar City's air pollution

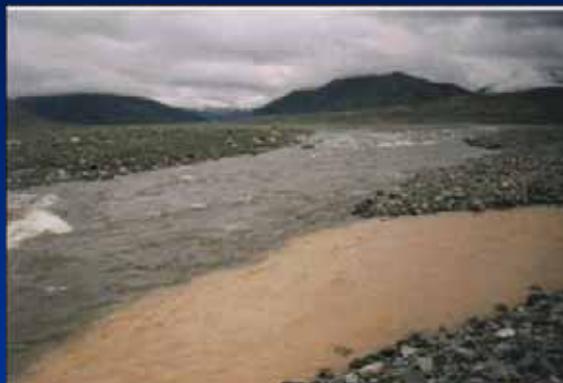


### 3.2 Ulaanbaatar City's soil pollution



Each household residing in the ger-areas has their own toilets in their yards is the main reason that the soil is being polluted.

### 3.3 Ulaanbaatar City's water pollution



Polluted water flowing into a river

## 4. The policies in transport sector to develop EST in Ulaanbaatar City

1. Exploitation of liquid propane for vehicles

2. Encouraging the exploitation and manufacturing of trolley buses and electro buses for the public transport

3. Introducing high-techs to decrease the toxic ingredients coming out of vehicles

4. Putting "Eco" sign on vehicles

### 4.1. Exploiting liquid propane

- The program "Liquid propane" was approved by the Mongolian Government's decision number 140, in 2006.
- Measures are being taken to exploit liquid propane for public transport taxis, in order to carry out this program.  
969 taxis of 30 companies of public taxi service are using liquid propane.  
Aiming to have the complete usage of liquid propane for the 1440 taxis, by the 2008.
- Aiming to have complete usage of liquid propane for the small sized buses in the public transportation of Ulaanbaatar City, starting from 2008.

### 4.1.1 VEHICLE STATUS



### 4.2. Manufacturing and using of trolley buses and electro buses in public transport

- Manufacturing 120 trolley buses in the year 2007-2009, in cooperation with the “MosGorTrans” state manufacturing authority of Russia.
- Mongolian “Electro vehicle” company manufactured 1 “JEA-800” trolley bus. The advantage is that the estimated manufacturing cost was less than the manufacturing cost in Europe and in Russia.
- Planning to manufacture 1 electro bus in 3 months period.

### 4.3. Using high-tech devices

- The Mongolian-Japanese joint venture “Uni-Gas” is doing test on the devices of benzin and liquid propane combination, manufactured in Italy, suitable for the Mongolian sharp continental and severe cold climate. This device is eliminating the problems for vehicles using liquid propane in the winter.
- This device is being placed free of charge, to the public transport vehicles. The cost of this device is 430\$.
- This device is not being placed on some old vehicles due to security measures /securing from accidents of propane loss/
- Test is being made on “City Taxi” company’s taxis, by placing devices from China, that decreases the toxic ingredients coming out of vehicles and accelerates the burning, by increasing air access to the vehicles’ engine.
- Experts from “Community of research on electric techniques of vehicles” are doing research on usage and cost of this device.

### 4.4. Promoting EST in Ulaanbaatar City

- More than 75% of the total vehicles trafficking in Ulaanbaatar City are more than 7 years old. Officials are planning to create favorable legal condition on promoting EST, by doing a city wide state inspection on vehicles and putting “Eco” sign on the technically approved vehicles, starting 2007.
- The vehicles without the “Eco” sign will be banned and limited for trafficking in Ulaanbaatar City.

## 5. The challenges facing Ulaanbaatar City on promoting EST

- 5.1. Limited legal condition
- 5.2. Lack of road network and road usage in Ulaanbaatar City
- 5.3. Traffic jams
- 5.4. Low livelihood of residents and price coordination of public transports
- 5.5. Lack of financial resource on new vehicle access in public transport

## 6. Strategies for promoting EST in public transport

- **Developing a general plan on upgrading the public transport in the city**
- **Developing the conditions of legal and jurisdictional acts in public transport**
- **Providing equipments and technologies for the organizations serving in public transport**

## 6. Strategies for promoting EST in public transport

- **Intensifying the work on placing devices decreasing toxic ingredients coming out of vehicles**
- **Developing a technical project on decreasing toxic ingredients from vehicles with diesel engines**
- **Vehicle taxation based on practical calculation on the vehicle's road usage**

## 6. Strategies for promoting EST in public transport

- **Take measures to access the most effective methods and analyze the new relations on road transport**
- **Road network extensions and improving of roads**
- **Developing vehicle transportations based on land usage and regional development prospective**
- **Using the measures of "Transport needs management"**

Thank you for your attention