



Улаанбаатар
АЗ ЖАРГАЛТАЙ ХОТ

LOW CARBON DEVELOPMENT OF ULAANBAATAR CITY:

Improving Air Quality and Reducing Greenhouse Gas
Emission while Stimulating Growth

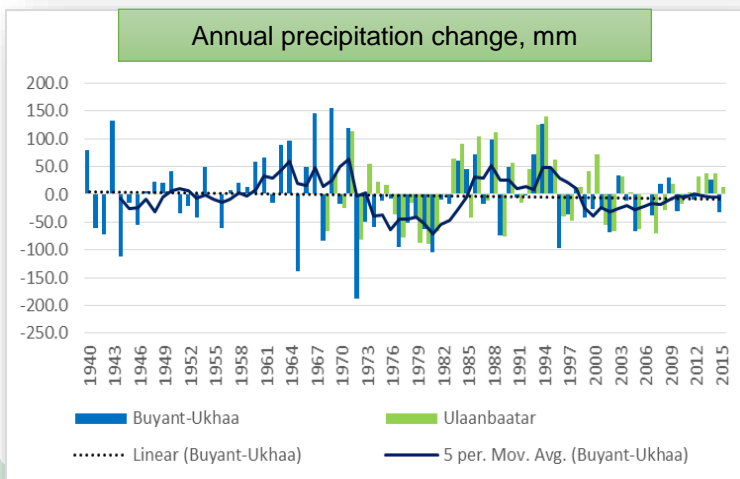
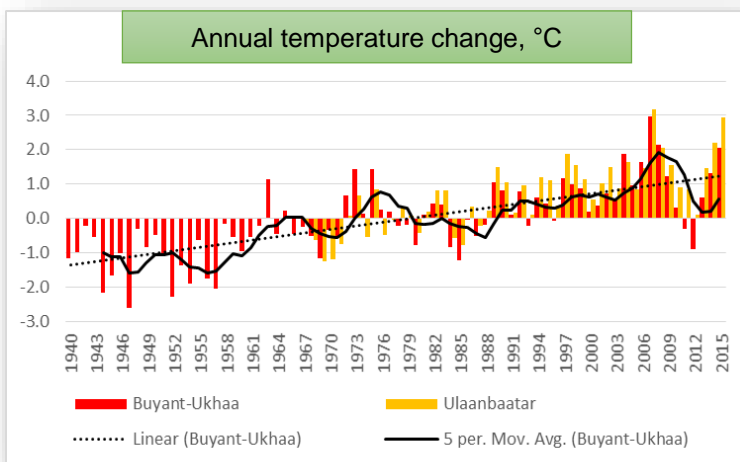
BATBAYASGALAN JANTSAN

Deputy Governor, Ulaanbaatar city

2018.06.18

- Ulaanbaatar is the coldest capital city in the world
- 1.4 million residents
- Located in Tuul river valley
- The main energy source is **raw coal**
- Territory – 470,000 hectares
- Average altitude – 1,350 m





Climate

- Annual average humidity is 70-75%
- Annual average precipitation is 240mm
- There are 40-70 days of rain, 25-30 days of snow

Climate change

- Average temperature has risen by 2.6°C, which is 0.4 °C higher than national average
- Annual precipitation decreased by 5%

Changes in seasonal temperature

- Winter – by 3.7 °C
- Spring – by 2.5 °C
- Summer and autumn – by 2.2 °C



ULAANBAATAR

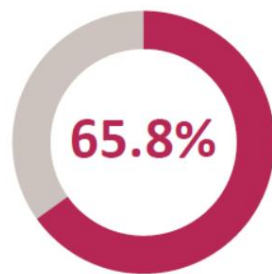
1 462 thousand people (46.2% of total population)



Entity (percentage of national entities)



GDP (percentage of national GDP)



Vehicles (percentage of total vehicles)

68.2%

216021 Households in ger districts (56% of total households in the city)



216 021



164,807 households in apartment districts (44% of total households in the city)

164807

SOURCE OF AIR POLLUTION



80%

10%

6%

4%



LAWS, POLICIES, PROGRAMS ON IMPROVING AIR QUALITY AND GREENHOUSE GAS EMISSION REDUCTION



Law on Air Quality (2012)



Ulaanbaatar City Master Plan 2020 and Development Approaches for 2030



Resolution No.02 of the State Great Khural on January 2018



Government of Mongolia Action Plan for 2016-2020,
Ulaanbaatar City Governor`s Action Plan for 2016-2020



National Program on Reduction of Air and Environmental Pollution

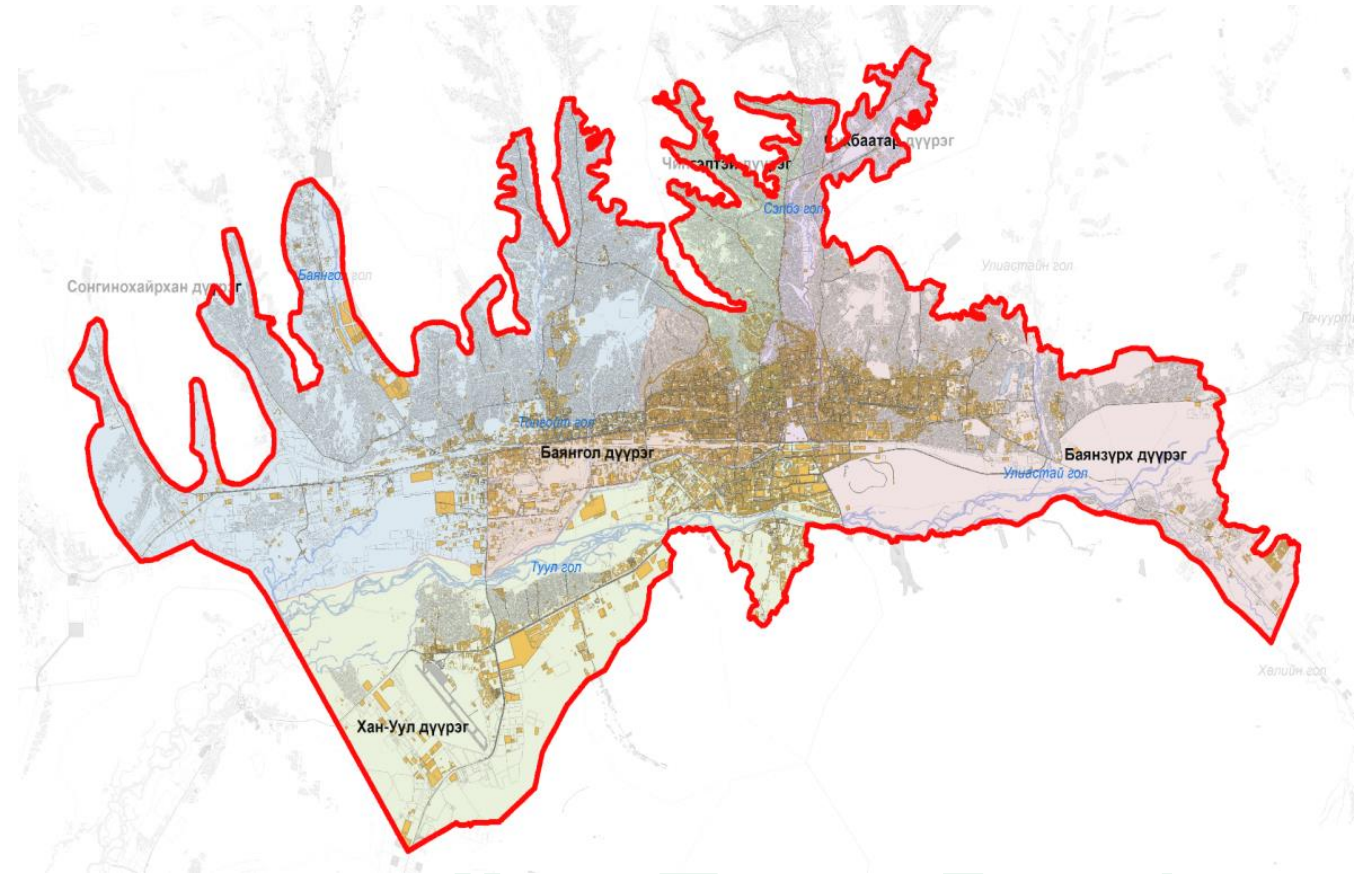


National Action Program on Climate Change

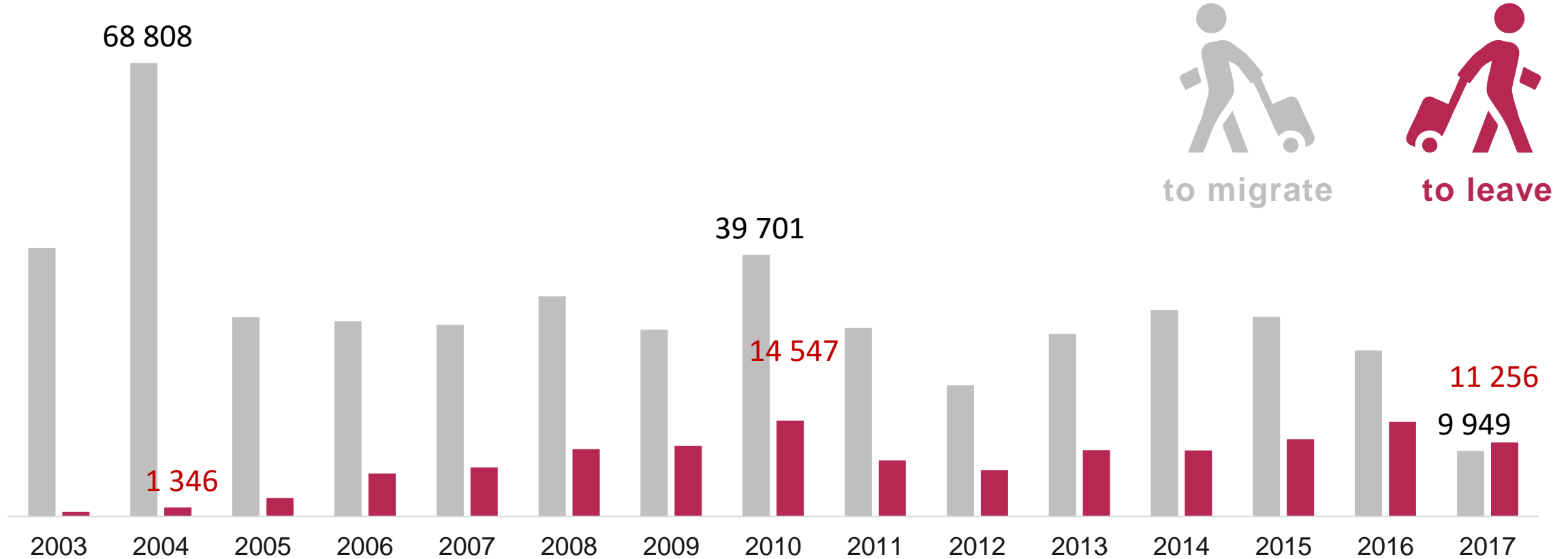


SETTLEMENT AREA BOUNDARY

Settlement area for infrastructure and ger district settlement areas has been determined to **35,206 hectares** of land.



TEMPORARY RESTRICTION OF RURAL TO URBAN MIGRATION



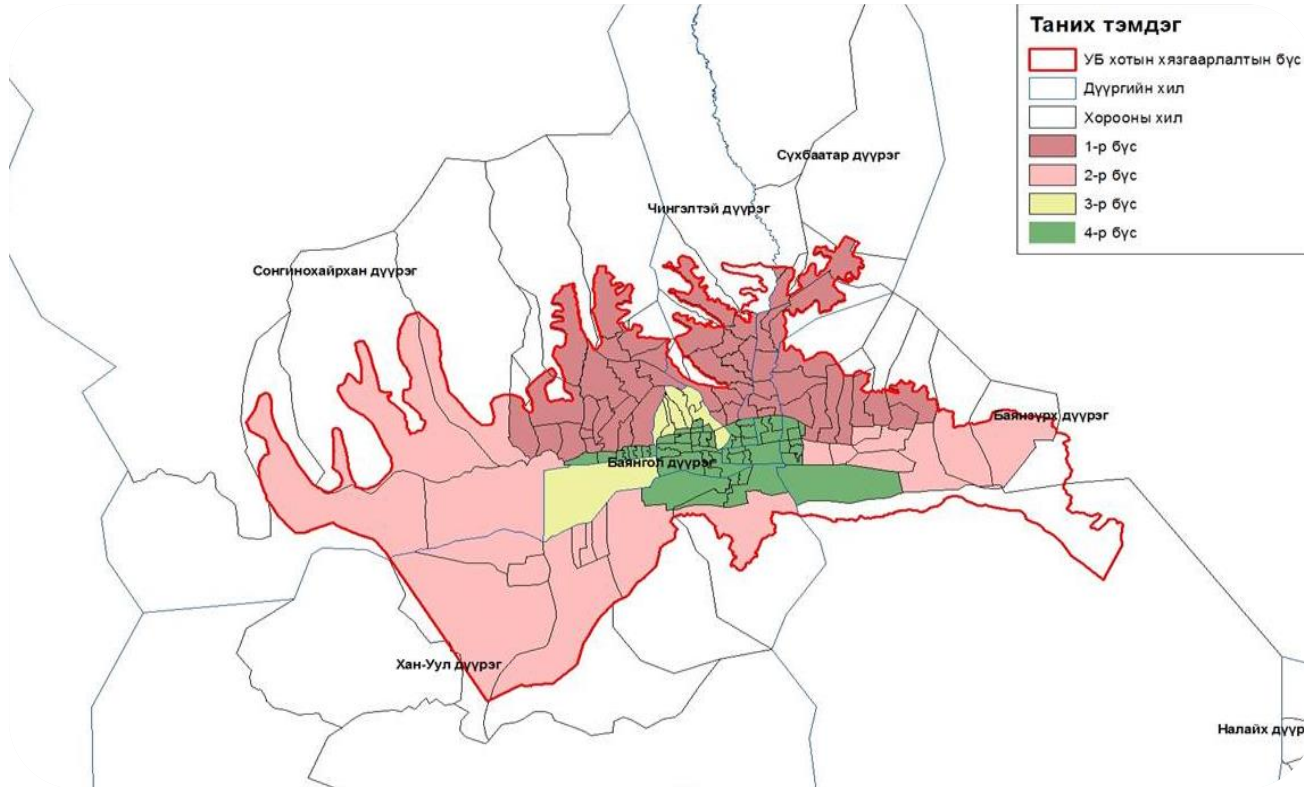
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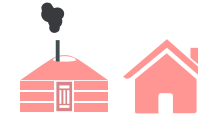
AIR QUALITY IMPROVEMENT ZONES



Zone



Highly polluted zone



Polluted zone



Air pollution from zone 1



Air pollution from zones 1,2,3

All domestic stoves other than **MNS5216:2016 standard** are banned from sales in Ulaanbaatar from 1 April, 2017





VAT and Customs tax exemption on 15 equipments including **heat pumps, electric heaters and air purifiers.**



BANNING RAW COAL CONSUMPTION

Banning the use of raw coal beginning from 15 May, 2019



Processed fuel

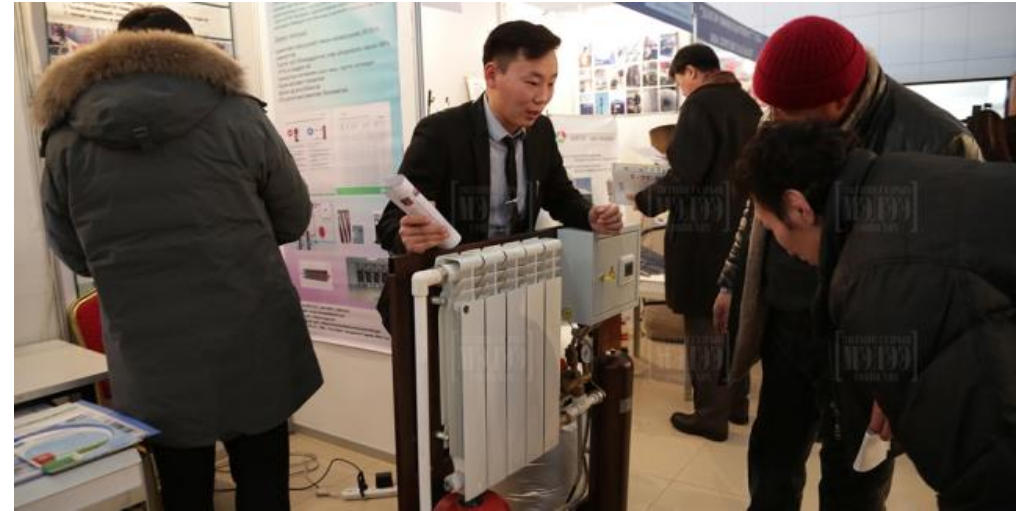


Support processed fuel production



ELECTRICITY NIGHT-TIME TARIFF DISCOUNT

- 114,512 costumers – 9.4 billion tugriks
- PM 2.5 and PM 10 Reduction - 8%





TO SPEND TAXES ON AIR POLLUTION

Statements about “Air pollution reduction fund” are included and adopted in the Law on air quality to establish sustainable policy to spend the fund effectively on matters relative to air pollution.

2017

- 45 HOB dismantled,
- 56 customers connected to central heating system



2018

- 78 HOB will be dismantled



Annual raw coal consumption
59000 tons



TSP
448 tons



Sulfur dioxide
505 tons



Greenhouse Gas
74340 tons

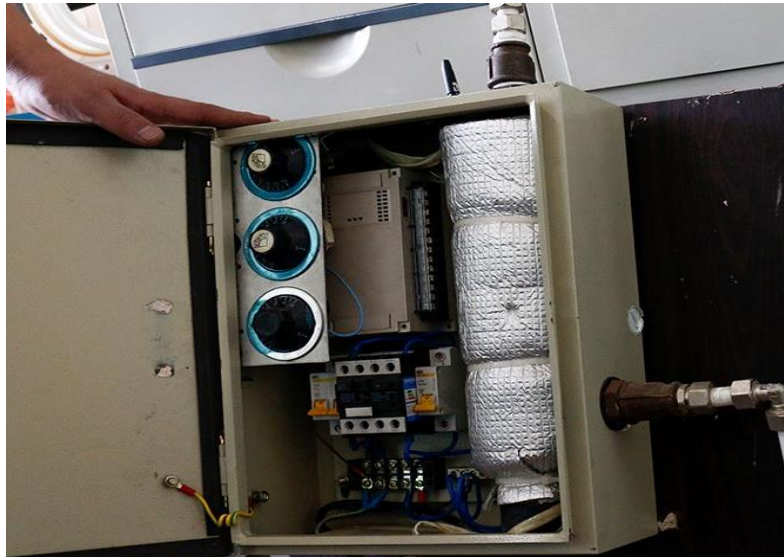


HEATING SOLUTION WITH ELECTRIC HEATERS



10 CLINICS

3 KINDERGARTENS



Annual raw coal consumption

360 tons



TSP

2.7 tons



Sulfur dioxide

3 tons



Greenhouse Gas

842 tons





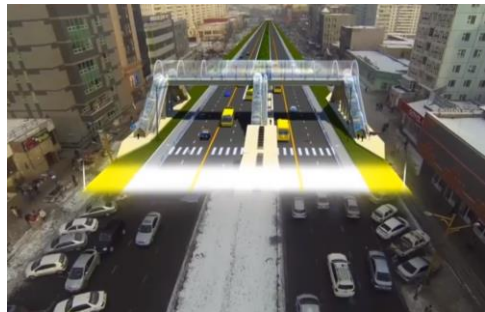
INSULATION CAMPAIGN





CNG BUSES

CNG buses from
February 07, 2018



BUS RAPID TRANSIT (BRT)

Introduced to public
transport



ELECTRIC VEHICLE

Electric cars are
exempted from road
restrictions and taxes



UBIKE

2000 electric bikes
between 2018-2020,
60.4km bike path



Central ger area

This area can be connected to the city utility infrastructure.

Middle ger area

Residential neighborhoods within this area will have self-sustaining utilities or partially connected to the city utility infrastructure.

Suburb ger area

Will be developed as a low density private housing district with independent utility infrastructure.

HOUSING PROJECT



90 hectares of land



5,093 households



Annual raw coal consumption
20372 tons



TSP
154 tons



Sulfur dioxide
174 tons



Greenhouse Gas
47600 tons



“INFRASTRUCTURE CENTER” PROJECT



2020 – 50 infrastructure center

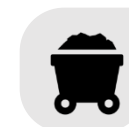


HEATING

WATER SUPPLY

POWER SUPPLY

WASTEWATER SYSTEM



Annual raw coal consumption

48400 tons



TSP

473 tons



Sulfur dioxide

160 tons



Greenhouse Gas

113000 tons

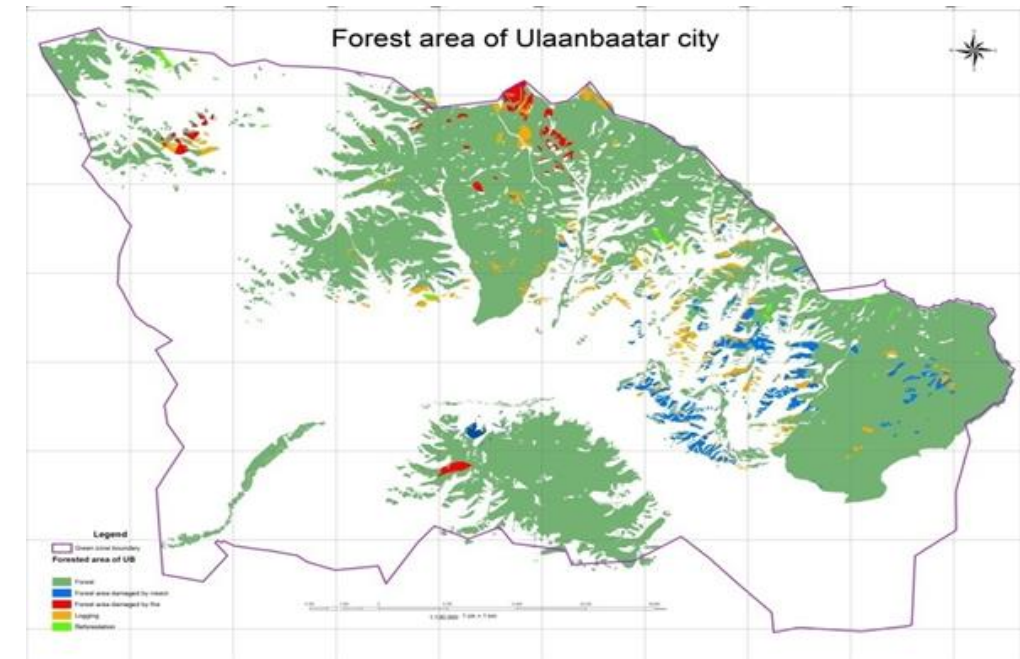
The outskirts ger district covers 4402.5 hectares or 47.3 percent of land. In this region, independent engineering facility or substations will be built, or connected to renewable energy sources in stages.



ULAANBAATAR 2020 MASTER PLAN AND DEVELOPMENT APPROACHES FOR 2030

30m² per capita

- Forest area – 95,233 hectares (22% of Ulaanbaatar territory)
- Annual reforested area – 200 hectares
- As of 2018, green area per capita – 2,5 m²





Улаанбаатар
АЗ ЖАРГАЛТАЙ ХОТ

THANK YOU FOR YOUR ATTENTION!

2018.06.18