

The Study on City Master Plan and Urban Development Program of Ulaanbaatar City (UBMPS)

FINAL REPORT / Volume 4
Technical Appendices



March 2009

ALMEC Corporation
Oriental Consultants Co., Ltd.
Aero Asahi Corporation

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UBMPS

JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF ROADS, TRANSPORTATION,
CONSTRUCTION AND URBAN DEVELOPMENT
ULAANBAATAR CITY GOVERNMENT

THE STUDY ON
CITY MASTER PLAN AND URBAN
DEVELOPMENT PROGRAM
OF
**ULAANBAATAR CITY
(UBMPS)**

Final Report

Volume 4: Technical Appendices

March 2009

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PREFACE

In response to a request from the Government of Mongolia, the Government of Japan decided to conduct a study on The Study on City Master Plan and Urban Development Program of Ulaanbaatar City in Mongolia and entrusted to the study to the Japan International Cooperation Agency(JICA).

JICA selected and dispatched a study team headed by Dr. Shizuo IWATA of ALMEC Corporation and consist of ALMEC Corporation, Oriental Consultants Co., Ltd. and Aero Asahi Corporation between February, 2007 and March, 2009.

The team held discussions with the officials concerned of the Government of Mongolia, and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Mongolia for their close cooperation extended to the study.

March 2009

Eiji HASHIMOTO,
Deputy Vice President
Japan International Cooperation Agency

March 2009

Eiji HASHIMOTO

Deputy Vice President

Japan International Cooperation Agency

Tokyo

Subject: Letter of Transmittal

Dear Sir,

We are pleased to formally submit herewith the final report of the Study on City Master Plan and Urban Development Program of Ulaanbaatar City.

This report compiles the results of the study which was undertaken both in Mongolia and Japan from February 2007 to March 2009 by the Team comprising ALMEC Corporation, Oriental Consultants Co., Ltd., and Aero Asahi Corporation.

We owe a lot to many people for the accomplishment of this report. First, we would like to express our sincere appreciation and deep gratitude to all those who extended their extensive assistance and cooperation to the Team, in particular Ministry of Roads, Transportation, Construction and Urban Development in Mongolia and Ulaanbaatar City Government.

We also acknowledge the officials of your agency, and the Embassy of Japan in Mongolia for their support and valuable advice in the course of the Study.

We hope the report would contribute to the sustainable development of Ulaanbaatar City.

Very truly yours,

IWATA Shizuo

Team Leader

Study on City Master Plan and Urban Development Program of Ulaanbaatar City (UBMPS)

**The Study on City Master Plan and Urban Development Program of
Ulaanbaatar City (UBMPS)**

**Final Report
Volume 4: Technical Appendices**

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**(1) Databook on Socio-Economic and
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1 INTRODUCTION

This Databook consolidate the results of the Comprehensive Socio-economic and Environmental Survey conducted in the early part of 2007 by interviewing a total of 4,500 households and their members residing in Ulaanbaatar City. This Databook may represent the way how the citizens live their lives and perceive current living conditions, which provide updated information for urban planning of the UBMPs and useful references for other similar undertakings of the city. This is the draft and will be finalized based on the further review and comments of the readers.

Comprehensive Socio-economic and Environmental Survey: The Survey intended to obtain information on Socio-economic profile, daily activities, availability and accessibility of urban services, living conditions of the people as well as their satisfaction and future needs. Sample households were selected randomly at sampling rate of 2% from all Khoroo in the city using questionnaire form (see Appendix). The interviews were made between March and October 2007 by a pair of interviewers (mostly students), without any difficulties and problems.

Table 1.1.1 No. of Household by District and Household Size (Including Those Living Outside)

Household Size	District									Total	
	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	No	%
1	441	894	974	737	671	189	0	0	161	4,067	2
2	2,939	3,189	5,467	5,271	4,182	2,214	470	104	509	24,345	10
3	8,191	6,950	14,053	11,068	11,324	5,032	1,564	326	1,697	60,205	25
4	10,221	8,049	15,014	15,225	11,248	7,876	2,495	222	1,773	72,123	30
5	5,503	5,779	8,147	10,176	8,153	3,895	1,226	93	963	43,935	18
6	2,961	2,712	5,101	4,848	3,269	1,385	627	162	487	21,552	9
7	1,225	1,185	2,123	1,596	1,132	985	54	0	368	8,668	4
8	852	624	1,042	984	638	415	146	0	304	5,005	2
9	112	347	159	235	304	142	55	46	162	1,562	1
10	241	163	181	293	315	152	43	0	53	1,441	1
11	0	100	55	63	109	0	0	0	0	327	0
12	52	47	0	0	41	46	0	0	0	186	0
Total	32,738	30,039	52,316	50,496	41,386	22,331	6,680	953	6,477	243,416	100
Population	136,490	125,189	212,507	210,133	168,983	92,567	27,975	3,925	28,095	1,005,864	
Average Members	4.17	4.17	4.06	4.16	4.08	4.15	4.19	4.12	4.34	4.13	

2 SOCIO-ECONOMIC PROFILE OF UB RESIDENTS

This chapter contains demographic pattern, occupation and employment household profile, household characteristics by household income group, ownership of property, poverty aspect and migration.

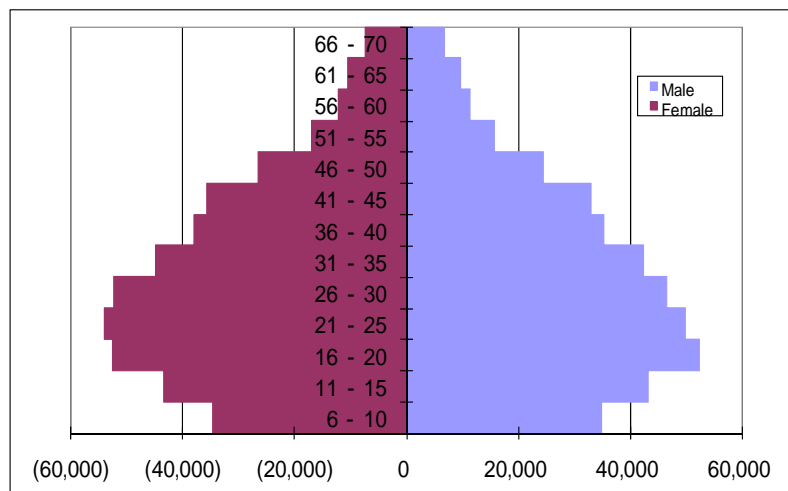
2.1 Demographic Pattern

On the total population of 859,971 older than six years, women and men share 51.5% and 48.5%, respectively. With decreasing share of young generation, the city's population is expected to be aging gradually.

Table 2.1.1 Population by Gender and Age Group

Age Group	Number			% (Gender)			% (Age Group)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
6 - 10	34,938	34,471	69,409	50	50	100	8	8	8
11 - 15	43,316	43,213	86,529	50	50	100	10	10	10
16 - 20	52,370	52,352	104,722	50	50	100	13	12	12
21 - 25	49,885	53,838	103,723	48	52	100	12	12	12
26 - 30	46,554	52,270	98,824	47	53	100	11	12	12
31 - 35	42,307	44,688	86,995	49	51	100	10	10	10
36 - 40	35,269	37,924	73,193	48	52	100	9	9	9
41 - 45	33,116	35,586	68,702	48	52	100	8	8	8
46 - 50	24,438	26,339	50,777	48	52	100	6	6	6
51 - 55	15,803	16,938	32,741	48	52	100	4	4	4
56 - 60	11,306	12,177	23,483	48	52	100	3	3	3
61 - 65	9,670	10,335	20,005	48	52	100	2	2	2
66 - 70	6,826	7,386	14,212	48	52	100	2	2	2
71	11,184	15,472	26,656	42	58	100	3	4	3
Total	416,982	442,989	859,971	49	52	100	100	100	100

Figure 2.1.1 Population by Gender and Age Group



2.2 Occupation and Employment

Table 2.2.1 Population by Type and Occupation and Gender (No. and %)

Occupation	Number			Composition (%)		
	Male	Female	Total	Male	Female	Total
Leader of branches, administration levels and units	7,253	7,005	14,258	2	2	2
Professional	45,308	62,003	107,311	11	14	12
Technical professional	24,852	5,771	30,623	6	1	4
Clerical worker	11,760	7,400	19,160	3	2	2
Service workers and shop and market sales worker	15,013	24,759	39,772	4	6	5
Skilled agriculture, forestry, livestock breeder and fishery worker	2,095	1,100	3,195	1	0	0
Craft and related trades	3,452	2,998	6,450	1	1	1
Plant and machine operator and assembler	3,468	2,028	5,496	1	0	1
Elementary occupation	6,537	4,985	11,522	2	1	1
Small vendors	11,907	11,530	23,437	3	3	3
Military people, police	6,783	1,213	7,996	2	0	1
Pupils (grade 1-11)	95,915	95,984	191,899	23	22	22
Student (Univ. & collage)	36,441	44,103	80,544	9	10	9
Housewife	0	40,495	40,495	0	9	5
Disabled	11,399	9,517	20,916	3	2	2
Jobless	70,380	54,742	125,122	17	12	15
Retired	32,937	47,685	80,622	8	11	9
Others	31,413	19,671	51,084	8	4	6
Total	416,913	442,989	859,902	100	100	100

Table 2.2.2 Population by Employment Sector and Gender (No. and %)

Employment Sector 1)	Number			Composition (%)		
	Male	Female	Total	Male	Female	Total
Agriculture, hunting and forestry	1,340	714	2,054	0	0	0
Fishing, fishery	2,512	1,651	4,163	1	1	1
Mining and quarrying	5,881	1,397	7,278	2	0	1
Manufacturing	5,339	5,684	11,023	2	2	2
Electricity, gas and water supply	10,233	3,214	13,447	4	1	2
Construction	20,443	4,043	24,486	7	1	4
Trade	14,460	16,438	30,898	5	5	5
Other industrial sector	18,439	11,264	29,703	7	4	5
Whole sale and retail trade	8,534	11,120	19,654	3	4	3
Knitting and fabric	2,230	5,286	7,516	1	2	1
Food industry	3,939	6,414	10,353	1	2	2
Transport, storage and communication	21,470	6,983	28,453	8	2	5
Financial service	2,214	3,891	6,105	1	1	1
Science and technology	2,965	2,660	5,625	1	1	1
Real estate	2,469	2,280	4,749	1	1	1
Public administration, defence etc.	14,388	10,903	25,291	5	4	4
Hotel and restaurant	2,091	5,575	7,666	1	2	1
Educational	7,438	20,999	28,437	3	7	5
Health care, social works etc.	3,202	12,978	16,180	1	4	3
Cultural and sport activities	2,386	1,766	4,152	1	1	1
Party and membership organization	211	354	565	0	0	0
Union and volunteer activities	130	830	960	0	0	0
Jobless	119,441	155,222	274,663	42	51	47
Other services	11,735	10,216	21,951	4	3	4
Total	283,490	301,882	585,372	100	100	100

1) Excluding pupil and student

Table 2.2.3 Population by Occupation and Age Group (No.)

Occupation	Age Group														Total
	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	+71	
Leader of branches, administration levels and units	0	0	0	1,011	1,924	2,210	2,545	3,269	1,621	894	419	365	0	0	14,258
Professional	0	0	1,413	12,456	22,736	18,732	15,933	14,782	12,688	5,964	2,052	349	97	109	107,311
Technical professional	0	0	479	3,886	5,367	5,073	4,571	4,466	3,984	1,915	789	93	0	0	30,623
Clerical worker	0	0	1,923	3,212	3,348	3,566	2,428	2,272	1,570	587	252	0	0	0	19,160
Service workers and shop and market sales worker	0	0	1,128	5,833	7,623	7,071	6,294	6,791	3,206	1,417	381	28	0	0	39,772
Skilled agriculture, forestry, livestock breeder and fishery worker	0	0	0	269	474	685	502	536	422	168	42	61	36	0	3,195
Craft and related trades	0	0	231	780	1,336	1,282	950	989	498	317	67	0	0	0	6,450
Plant and machine operator and assembler	0	0	393	743	1,261	934	670	782	553	117	0	43	0	0	5,496
Elementary occupation	0	0	502	2,436	1,801	1,218	2,221	1,840	834	547	86	37	0	0	11,522
Small vendors	0	0	427	2,154	3,688	4,664	4,860	4,234	2,056	936	321	39	0	58	23,437
Military people, police	0	0	470	1,464	1,596	1,723	1,289	776	508	90	80	0	0	0	7,996
Pupils (grade 1-11)	61,107	84,899	45,513	380	0	0	0	0	0	0	0	0	0	0	191,899
Student (Univ. & collage)	0	0	38,884	35,705	3,643	958	495	280	342	37	0	49	0	151	80,544
Housewife	0	117	549	4,877	10,249	8,917	6,141	5,224	2,893	1,130	209	72	76	41	40,495
Disabled	84	178	784	1,461	2,056	2,894	2,548	3,085	3,411	2,345	1,269	484	72	245	20,916
Jobless	3,482	710	10,298	22,175	24,079	16,834	14,229	12,240	9,696	6,331	2,424	1,498	296	830	125,122
Retired	0	0	0	0	0	0	0	63	2,506	8,011	14,409	16,846	13,609	25,178	80,622
Others	4,736	625	1,728	4,881	7,643	10,232	7,448	7,073	3,989	1,935	683	41	26	44	51,084
Total	69,409	86,529	104,722	103,723	98,824	86,995	73,124	68,702	50,777	32,741	23,483	20,005	14,212	26,656	859,902

Table 2.2.4 Population by Occupation and Age Group (% by Age Group)

Occupation	Age Group														Total
	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	+71	
Leader of branches, administration levels and units	0	0	0	7	13	16	18	23	11	6	3	3	0	0	100
Professional	0	0	1	12	21	17	15	14	12	6	2	0	0	0	100
Technical professional	0	0	2	13	18	17	15	15	13	6	3	0	0	0	100
Clerical worker	0	0	10	17	17	19	13	12	8	3	1	0	0	0	100
Service workers and shop and market sales worker	0	0	3	15	19	18	16	17	8	4	1	0	0	0	100
Skilled agriculture, forestry, livestock breeder and fishery worker	0	0	0	8	15	21	16	17	13	5	1	2	1	0	100
Craft and related trades	0	0	4	12	21	20	15	15	8	5	1	0	0	0	100
Plant and machine operator and assembler	0	0	7	14	23	17	12	14	10	2	0	1	0	0	100
Elementary occupation	0	0	4	21	16	11	19	16	7	5	1	0	0	0	100
Small vendors	0	0	2	9	16	20	21	18	9	4	1	0	0	0	100
Military people, police	0	0	6	18	20	22	16	10	6	1	1	0	0	0	100
Pupils (grade 1-11)	32	44	24	0	0	0	0	0	0	0	0	0	0	0	100
Student (Univ. & collage)	0	0	48	44	5	1	1	0	0	0	0	0	0	0	100
Housewife	0	0	1	12	25	22	15	13	7	3	1	0	0	0	100
Disabled	0	1	4	7	10	14	12	15	16	11	6	2	0	1	100
Jobless	3	1	8	18	19	13	11	10	8	5	2	1	0	1	100
Retired	0	0	0	0	0	0	0	0	3	10	18	21	17	31	100
Others	9	1	3	10	15	20	15	14	8	4	1	0	0	0	100
Total	8	10	12	12	11	10	9	8	6	4	3	2	2	3	100

Table 2.2.5 Population by Occupation and Age Group (% by Occupation)

Occupation	Age Group														Total
	6 - 10	11 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	+71	
Leader of branches, administration levels and units	0	0	0	1	2	3	3	5	3	3	2	2	0	0	2
Professional	0	0	1	12	23	22	22	22	25	18	9	2	1	0	12
Technical professional	0	0	0	4	5	6	6	7	8	6	3	0	0	0	4
Clerical worker	0	0	2	3	3	4	3	3	3	2	1	0	0	0	2
Service workers and shop and market sales worker	0	0	1	6	8	8	9	10	6	4	2	0	0	0	5
Skilled agriculture, forestry, livestock breeder and fishery worker	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
Craft and related trades	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1
Plant and machine operator and assembler	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1
Elementary occupation	0	0	0	2	2	1	3	3	2	2	0	0	0	0	1
Small vendors	0	0	0	2	4	5	7	6	4	3	1	0	0	0	3
Military people, police	0	0	0	1	2	2	2	1	1	0	0	0	0	0	1
Pupils (grade 1-11)	88	98	43	0	0	0	0	0	0	0	0	0	0	0	22
Student (Univ. & collage)	0	0	37	34	4	1	1	0	1	0	0	0	0	1	9
Housewife	0	0	1	5	10	10	8	8	6	3	1	0	1	0	5
Disabled	0	0	1	1	2	3	3	4	7	7	5	2	1	1	2
Jobless	5	1	10	21	24	19	19	18	19	19	10	7	2	3	15
Retired	0	0	0	0	0	0	0	0	5	24	61	84	96	94	9
Others	7	1	2	5	8	12	10	10	8	6	3	0	0	0	6
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 2.2.6 Socio-economic Profile by Education Background (1)

		Higher Education	Upper Grade (G8-11)	Lower Grade (G7 or below)	Total	Higher Education	Upper Grade (G8-11)	Lower Grade (G7 or below)	Total
Gender	Male	32	13	55	100	45	46	49	47
	Female	35	14	51	100	55	54	51	53
	Total	33	14	53	100	100	100	100	100
Occupation	Leader of branches,	81	9	9	100	6	2	0	2
	Professional	63	14	23	100	34	18	8	18
	Technical professional	38	22	40	100	5	8	4	5
	Clerical worker	18	16	65	100	1	3	3	3
	Service workers and shop and	29	19	53	100	5	8	6	6
	Skilled agriculture, forestry,	41	4	55	100	1	0	0	0
	Craft and related trades	13	26	61	100	0	2	1	1
	Plant and machine operator	22	17	61	100	1	1	1	1
	Elementary occupation	16	18	66	100	1	2	2	2
	Small vendors	32	18	50	100	4	5	4	4
	Military people, police	44	16	40	100	2	2	1	1
	Pupils (grade 1-11)	4	4	92	100	0	1	4	2
	Student (Univ. & collage)	6	1	92	100	3	1	23	13
	Housewife	33	13	54	100	6	6	6	6
	Disabled	23	17	60	100	2	3	3	2
	Jobless	24	13	64	100	12	15	20	17
	Retired	37	23	39	100	12	18	8	10
	Others	33	13	54	100	7	7	7	7
	Total	33	14	53	100	100	100	100	100
	Employment Sector	Agriculture, hunting and	50	15	35	100	0	0	0
Fishing, fishery		48	6	47	100	1	0	1	1
Mining and quarrying		41	23	35	100	1	2	1	1
Manufacturing		15	22	63	100	1	3	2	2
Electricity, gas and water		42	19	39	100	3	3	2	2
Construction		28	23	49	100	3	6	3	4
Trade		37	17	46	100	5	6	4	5
Other industrial sector		48	12	40	100	7	4	3	5
Whole sale and retail trade		24	21	55	100	2	5	3	3
Knitting and fabric		25	19	56	100	1	2	1	1
Food industry		33	16	51	100	2	2	2	2
Transport, storage and		30	19	51	100	4	6	4	4
Financial service		85	4	11	100	3	0	0	1
Science and technology		84	7	9	100	2	0	0	1
Real estate		77	5	18	100	2	0	0	1
Public administration, defence		61	13	26	100	8	4	2	4
Hotel and restaurant		34	12	54	100	1	1	1	1
Educational		68	7	25	100	11	3	3	5
Health care, social works etc.		63	20	17	100	5	4	1	3
Cultural and sport activities		67	4	28	100	2	0	0	1
Party and membership		63	9	28	100	0	0	0	0
Union and volunteer activities		44	13	43	100	0	0	0	0
Jobless		22	12	66	100	34	43	62	50
Other services		24	19	57	100	2	5	4	3
Total		33	14	53	100	100	100	100	100

Table 2.2.7 Socio-economic Profile by Education Background (2)

	Higher Education	Upper Grade	Lower Grade	Total
% of HH Head	39	44	29	35
% of Gainful Workers	66	57	37	49
Average Income (tg000/mo)	162	122	98	128

2.3 Household Profile

Table 2.3.1 Household Characteristics by Household Size (%)

		Household Size										Total
		1	2	3	4	5	6	7	8	9	10 <=	
Household	no (000)	4	24	60	72	44	22	9	5	2	2	243
	%	2	10	25	30	18	9	4	2	1	1	100
Average no. of Gainful Workers		0	1	1	1	1	2	2	2	2	2	1
Gendar (%)	Male	58	44	48	50	49	48	49	47	46	45	48
	Female	42	56	52	50	51	52	51	53	54	55	52
Age Group (%)	10 >=	0	2	7	10	8	8	9	6	7	9	8
	11 - 15	0	5	7	11	11	12	14	8	13	9	10
	16 - 20	4	8	9	12	15	14	15	14	13	8	12
	21 - 25	12	14	12	9	12	14	15	18	20	16	12
	25 - 30	14	15	15	10	9	10	10	12	11	22	11
	31 - 40	20	15	19	24	16	16	13	13	10	18	19
	41 - 50	6	10	13	14	17	14	13	14	10	7	14
	51 - 60	20	14	8	5	6	6	6	7	10	6	7
	61 - 70	14	10	5	3	4	3	3	3	2	4	4
+71	9	7	4	2	3	2	3	3	3	1	3	
Total		100	100	100	100	100	100	100	100	100	100	100

Table 2.3.2 Gainful Workers by Household Size (No.)

		Household Size								Total
		1	2	3	4	5	6 - 7	8 - 9	10 <=	
No. of Gainful Workers	Leader of branches, administration levels and units	183	1,033	3,402	4,954	2,576	1,680	305	125	14,258
	Professional	649	7,146	24,605	33,826	20,849	15,815	3,637	784	107,311
	Technical professional	127	1,889	5,831	8,861	7,119	5,421	1,115	260	30,623
	Clerical worker	29	902	3,320	6,169	3,359	3,851	1,215	315	19,160
	Service workers and shop and market sales worker	0	1,745	8,867	11,767	8,107	6,098	2,106	1,082	39,772
	Skilled agriculture, forestry, livestock breeder and fishery	0	283	413	879	1,095	428	97	0	3,195
	Craft and related trades	0	34	1,280	1,614	1,333	1,281	652	256	6,450
	Plant and machine operator and assembler	0	212	1,133	1,836	1,039	782	375	119	5,496
	Elementary occupation	188	434	2,226	2,936	2,506	2,237	514	481	11,522
	Small vendors	64	969	5,154	7,457	5,885	3,326	410	172	23,437
	Military people, police	94	355	1,244	2,675	1,537	1,571	204	316	7,996
	Others	310	3,128	9,841	17,348	9,636	8,884	1,260	677	51,084
	Total	1,644	18,130	67,316	100,322	65,041	51,374	11,890	4,587	320,304

Table 2.3.3 Household Characteristics by Household Size

		Household Size									Total	
		1	2	3	4	5	6	7	8	9 plus		
Household	no (000)	4	24	60	72	44	22	9	5	4	243	
	(%)	2	10	25	30	18	9	4	2	1	100	
Household Head	% of Male	58	55	74	81	84	83	76	79	81	77	
	Average Age (yrs)	45	45	43	42	46	47	50	52	53	44	
	% with Job	45	51	57	63	57	55	53	33	29	57	
Household Members	Gendar (%)	Male	58	44	48	50	49	48	49	47	45	48
		Female	42	56	52	50	51	52	51	53	55	52
	Children (%)		0	11	11	12	19	23	25	39	37	17
	Gainful Workers (no)	Male	1,272	8,164	35,992	54,299	34,796	18,898	7,964	5,054	3,402	169,841
Female		372	9,966	31,324	46,023	30,245	17,619	6,893	4,309	3,712	150,463	
Total		1,644	18,130	67,316	100,322	65,041	36,517	14,857	9,363	7,114	320,304	
Household Security	Ownership (%)	Land	23	28	34	36	39	42	49	42	47	36
		House	94	87	89	92	94	92	96	94	90	91
		Other Property	2	6	6	9	8	6	7	1	5	7
		Car	11	14	18	22	22	21	14	17	16	19
		Other Vehicles	3	3	5	9	11	11	12	2	6	8
		Livestock (%)	7	3	3	4	6	4	9	1	3	4
Household Economy	Income (tg000/month)	Livestock (no)	57	53	78	42	54	35	33	220	1	52
		Summer	184	165	216	222	231	239	228	223	211	217
		Winter	184	166	214	225	235	244	227	223	211	219
	Expenditure (tg000/month)	Summer	195	144	184	197	200	215	201	206	221	191
		Winter	193	156	200	205	211	229	216	208	232	203
	Loan	% Yes	0	0	0	0	1	0	0	0	3	0
		of which Govt.	-	2	2	3	5	2	2	-	2	3

Table 2.3.4 Business Practiced in the Khashaa or Apartment

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Composition (%)
No	95	97	96	96	97	97	98	100	94	96
Owner, family members	5	3	3	3	2	3	1	0	6	3
1-5 employees	0	0	0	0	0	0	1	0	0	0
6-10 employees	0	0	0	0	0	0	0	0	0	0
>10 employees	0	0	0	0	0	0	0	0	0	0
For renting	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100

Table 2.3.5 Share House (No.)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Khashaa	No	14,244	8,112	20,977	17,825	8,092	9,208	2,892	861	2,743	84,954
	1 HH	6,053	4,929	10,796	7,932	2,371	2,494	1,288	0	764	36,627
	2 HHs	3,375	1,613	4,282	4,027	1,441	1,428	329	0	106	16,601
	3 HHs	885	572	1,719	1,728	906	141	113	0	54	6,118
	Total	24,557	15,226	37,774	31,512	12,810	13,271	4,622	861	3,667	144,300
Apartment	No	7,547	14,058	12,946	17,489	25,711	8,565	2,011	92	2,489	90,908
	1 HH	237	535	989	848	2,141	249	0	0	267	5,266
	2 HHs	120	65	63	263	182	141	47	0	0	881
	3 HHs	168	105	219	221	268	105	0	0	0	1,086
	Total	8,072	14,763	14,217	18,821	28,302	9,060	2,058	92	2,756	98,141
Total	32,629	29,989	51,991	50,333	41,112	22,331	6,680	953	6,423	242,441	

Table 2.3.6 Share House (%)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Khashaa	No	58	53	56	57	63	69	63	100	75	59
	1 HH	25	32	29	25	19	19	28	0	21	25
	2 HHs	14	11	11	13	11	11	7	0	3	12
	3 HHs	4	4	5	5	7	1	2	0	1	4
	Total	100	100	100	100	100	100	100	100	100	100
Apartment	No	93	95	91	93	91	95	98	100	90	93
	1 HH	3	4	7	5	8	3	0	0	10	5
	2 HHs	1	0	0	1	1	2	2	0	0	1
	3 HHs	2	1	2	1	1	1	0	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100

Table 2.3.7 Relationship of Sharing Partner (No.)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
1st HH	Relative	8,405	5,803	13,824	10,716	4,921	3,404	1,460	58	1,137	49,728
	Friend	167	326	982	879	487	216	174	0	0	3,231
	No relationship	1,884	1,519	2,875	2,720	1,631	615	44	0	53	11,341
	Total	10,456	7,648	17,681	14,315	7,039	4,235	1,678	58	1,190	64,300
2nd HH	Relative	3,335	1,698	4,947	4,440	1,968	1,410	371	0	107	18,276
	Friend	0	156	233	385	131	170	0	0	0	1,075
	No relationship	1,129	630	1,318	1,553	489	192	0	0	53	5,364
	Total	4,464	2,484	6,498	6,378	2,588	1,772	371	0	160	24,715
3rd HH	Relative	703	320	1,379	1,400	991	187	113	0	54	5,147
	Friend	0	57	52	147	104	0	0	0	0	360
	No relationship	462	480	526	817	400	59	0	0	0	2,744
	Total	1,165	857	1,957	2,364	1,495	246	113	0	54	8,251

Table 2.3.8 Relationship of Sharing Partner (%)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
1st HH	Relative	80	76	78	75	70	80	87	100	96	77
	Friend	2	4	6	6	7	5	10	0	0	5
	No relationship	18	20	16	19	23	15	3	0	4	18
	Total	100	100	100	100	100	100	100	100	100	100
2nd HH	Relative	75	68	76	70	76	80	100	0	67	74
	Friend	0	6	4	6	5	10	0	0	0	4
	No relationship	25	25	20	24	19	11	0	0	33	22
	Total	100	100	100	100	100	100	100	0	100	100
3rd HH	Relative	60	37	70	59	66	76	100	0	100	62
	Friend	0	7	3	6	7	0	0	0	0	4
	No relationship	40	56	27	35	27	24	0	0	0	33
	Total	100	100	100	100	100	100	100	0	100	100

2.4 Household Characteristics by Household Income Group

Table 2.4.1 Households by Income Level and Household Size (No.)

Income Level (tg000/month)	Household Size (no)								Total
	1	2	3	4	5	6 - 7	8 - 9	10 <=	
less than 50	447	1,465	3,135	3,188	1,592	650	176	108	10,761
51 - 75	1,072	2,911	5,034	4,221	2,686	1,420	783	101	18,228
76 - 100	506	4,832	7,507	9,761	4,515	3,074	916	137	31,248
101 - 200	1,195	10,169	23,257	26,056	18,004	11,301	2,397	708	93,087
201 - 300	414	2,347	11,157	14,754	7,505	7,001	1,028	423	44,629
301 - 400	63	935	3,798	6,168	4,131	3,049	416	263	18,823
401 - 500	57	404	2,498	2,952	2,509	1,290	486	77	10,273
more than 500	196	682	2,144	3,321	2,175	1,785	302	137	10,742
Unknown	117	600	1,675	1,702	818	650	63	0	5,625
Total	4,067	24,345	60,205	72,123	43,935	30,220	6,567	1,954	243,416
Average (tg000/mo)	184	164	216	222	231	235	212	238	217

Table 2.4.2 Households by Income Level and Household Size (% by Household Size)

Income Level (tg000/month)	Household Size (no)								Total
	1	2	3	4	5	6 - 7	8 - 9	10 <=	
less than 50	4	14	29	30	15	6	2	1	100
51 - 75	6	16	28	23	15	8	4	1	100
76 - 100	2	15	24	31	14	10	3	0	100
101 - 200	1	11	25	28	19	12	3	1	100
201 - 300	1	5	25	33	17	16	2	1	100
301 - 400	0	5	20	33	22	16	2	1	100
401 - 500	1	4	24	29	24	13	5	1	100
more than 500	2	6	20	31	20	17	3	1	100
Unknown	2	11	30	30	15	12	1	0	100
Total	2	10	25	30	18	12	3	1	100

Table 2.4.3 Households by Income Level and Household Size (% by Income Level)

Income Level (tg000/month)	Household Size (no)								Total
	1	2	3	4	5	6 - 7	8 - 9	10 <=	
less than 50	11	6	5	4	4	2	3	6	4
51 - 75	26	12	8	6	6	5	12	5	7
76 - 100	12	20	12	14	10	10	14	7	13
101 - 200	29	42	39	36	41	37	37	36	38
201 - 300	10	10	19	20	17	23	16	22	18
301 - 400	2	4	6	9	9	10	6	13	8
401 - 500	1	2	4	4	6	4	7	4	4
more than 500	5	3	4	5	5	6	5	7	4
Unknown	3	2	3	2	2	2	1	0	2
Total	100	100	100	100	100	100	100	100	100

Table 2.4.4 Households by Household Size and Income Class (No.)

Household Size	Quintile (Income Group)					Total
	1	2	3	4	5	
1	1,922	622	536	480	390	3,950
2	7,622	5,652	4,767	3,520	2,125	23,686
3	12,609	12,223	11,827	11,489	10,382	58,530
4	12,773	13,837	13,695	15,066	14,995	70,366
5	6,980	8,417	9,083	8,060	10,577	43,117
6	2,799	3,330	4,534	5,197	5,236	21,096
7	981	1,914	1,645	2,021	1,866	8,427
8	1,149	935	807	955	1,159	5,005
9 plus	690	640	658	789	676	3,453
Total	47,525	47,570	47,552	47,577	47,406	237,630

Table 2.4.5 Households by Household Size and Income Class (% by Income Class)

Household Size	Quintile (Income Group)					Total
	1	2	3	4	5	
1	49	16	14	12	10	100
2	32	24	20	15	9	100
3	22	21	20	20	18	100
4	18	20	19	21	21	100
5	16	20	21	19	25	100
6	13	16	21	25	25	100
7	12	23	20	24	22	100
8	23	19	16	19	23	100
9 plus	20	19	19	23	20	100
Total	20	20	20	20	20	100

Table 2.4.6 Households by Household Size and Income Class (% by Household Size)

Household Size	Quintile (Income Group)					Total
	1	2	3	4	5	
1	4	1	1	1	1	2
2	16	12	10	7	4	10
3	27	26	25	24	22	25
4	27	29	29	32	32	30
5	15	18	19	17	22	18
6	6	7	10	11	11	9
7	2	4	3	4	4	4
8	2	2	2	2	2	2
9 plus	1	1	1	2	1	1
Total	100	100	100	100	100	100

Table 2.4.7 Workers by Employment Sector and Income Level (No.)

	Income Level (tg000/month)									Total	Average
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown		
Primary	716	525	1,896	1,675	487	146	37	173	1,000	6,655	150
Secondary	5,774	10,144	23,076	29,671	4,559	1,132	699	1,002	1,446	77,503	136
Tertiary	19,747	24,190	64,346	74,361	16,214	3,424	2,788	2,400	10,216	217,686	138
Government	1,096	3,030	7,087	11,724	1,666	292	80	120	251	25,346	134
Total	27,333	37,889	96,045	117,431	22,926	4,994	3,604	3,695	12,913	327,190	137

Table 2.4.8 Workers by Employment Sector and Income Level (% by Employment Sector)

	Income Level (tg000/month)									Total
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown	
Primary	3	1	2	1	2	3	1	5	8	2
Secondary	21	27	24	25	20	23	19	27	11	24
Tertiary	72	64	67	63	71	69	77	65	79	67
Government	4	8	7	10	7	6	2	3	2	8
Total	100	100	100	100	100	100	100	100	100	100

Table 2.4.9 Workers by Employment Sector and Income Level (% by Income Level)

	Income Level (tg000/month)									Total
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown	
Primary	11	8	28	25	7	2	1	3	15	100
Secondary	7	13	30	38	6	1	1	1	2	100
Tertiary	9	11	30	34	7	2	1	1	5	100
Government	4	12	28	46	7	1	0	0	1	100
Total	8	12	29	36	7	2	1	1	4	100

Table 2.4.10 Household Income by Employment Sector (%)

	Household Income Level (tg000/month)									Total	Average
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown		
Primary	1	5	11	31	26	13	7	7	1	100	240
Secondary	1	4	10	38	23	10	7	6	1	100	228
Tertiary	1	3	10	35	24	12	6	8	2	100	241
Government	2	2	6	40	24	11	7	7	1	100	242
Total	1	3	10	36	23	11	6	7	2	100	238

Table 2.4.11 Income per Household Member by Household Size and Income Level

Income Level (tg000/month)	tg000/month/capita by Household Size (no)									Total
	1	2	3	4	5	6 - 7	8 - 9	10 <=		
less than 50	34	17	11	9	7	6	3	3	10	
51 - 75	59	31	21	16	12	10	7	6	16	
76 - 100	87	46	31	23	19	15	11	10	24	
101 - 200	160	79	53	40	32	25	19	16	39	
201 - 300	260	131	88	66	53	42	31	25	61	
301 - 400	400	175	124	91	72	58	43	33	82	
401 - 500	500	230	159	119	95	74	56	49	107	
more than 500	1,283	360	352	194	159	106	96	63	187	
Total	184	82	72	55	46	37	26	23	52	

Table 2.4.12 Household Income by Household Size and Income Level

Income Level (tg000/month)	tg000/month/household by Household Size (no)								Total
	1	2	3	4	5	6 - 7	8 - 9	10 <=	
less than 50	34	33	34	37	37	41	28	31	36
51 - 75	59	61	63	63	61	61	60	60	62
76 - 100	87	92	93	92	94	94	91	97	93
101 - 200	160	158	160	162	161	159	158	160	160
201 - 300	260	262	264	263	265	264	259	259	263
301 - 400	400	351	372	365	358	365	351	345	364
401 - 500	500	460	477	476	475	473	448	488	474
more than 500	1,283	721	1,057	777	795	665	779	668	822
Total	184	164	216	222	231	235	212	238	217

Table 2.4.13 Source of Income by Income Class of Households (%)

Season	Income and Source	Quintile					Total	
		1	2	3	4	5		
Winter	Average (tg000/month)	44	64	75	93	148	90	
	Source (%)	Salary	27	36	37	46	48	40
		Pension/social allowance	62	52	48	40	33	45
		Cash remittance	1	1	1	1	2	1
		Rentals	0	0	0	0	0	0
		Business and agricultural production	6	7	10	11	14	10
		Others	3	4	3	3	3	3
		Total	100	100	100	100	100	100
Summer	Average (tg000/month)	44	67	79	93	154	93	
	Source (%)	Salary	27	37	37	46	48	40
		Pension/social allowance	62	52	47	40	33	45
		Cash remittance	1	1	1	1	2	1
		Rentals	0	0	0	0	0	0
		Business and agricultural production	6	7	10	11	14	10
		Others	4	4	4	3	3	3
		Total	100	100	100	100	100	100

Table 2.4.14 Household Characteristics by Income Class

		Quintile (Income Class)					Total		
		1	2	3	4	5			
Household Size	Size (%)	1	49	16	14	12	10	100	
		2	32	24	20	15	9	100	
		3,4,5	19	20	20	20	21	100	
		6 plus	15	18	20	24	24	100	
	Average Size (no)	4	4	4	4	4	4		
Household Head	% of Male	62	77	80	82	84	77		
	Average Age (yrs)	44	45	46	45	43	44		
	% with Job	37	50	57	67	76	57		
Household Members	Gender (%)	Male	46	49	50	49	49	49	
		Female	54	51	50	51	51	51	
	Children (%)	17	16	13	14	13	15		
		Gainful Workers (no)	Male	16,144	27,387	34,131	40,763	48,523	166,948
Household Security	Ownership (%)	Land	43	43	37	34	27	37	
		House	89	91	93	92	93	92	
		Other	2	3	5	9	17	7	
	Household Economy	Income (tg000/month)	Summer	66	122	174	243	482	217
			Winter	67	122	176	255	476	219
		Expenditure (tg000/month)	Summer	86	132	165	215	360	192
			Winter	95	137	177	227	381	203
Loan	% Yes	0	0	1	0	0	0		
	of which Govt.	2	-	4	2	2	3		

2.5 Ownership of Property

Table 2.5.1 Ownership of Property and Assets by Income Class

		Quintile					Total	
		1	2	3	4	5		
Land	% Yes	53	56	53	55	51	54	
House	% Yes	90	92	94	92	93	92	
	Type	Ger	38	29	21	16	9	23
		Detached	39	41	40	35	26	36
		Apartment	23	30	39	50	65	41
		Others	1	0	0	0	0	0
	Ave. Size (m ²)	32	34	34	36	40	35	
	Rent (tg 000/month)	Ger	9	60	74	42	-	48
Detached		13	20	5	39	9	19	
Apartment		56	-	-	-	31	44	
Summer House	(% Yes)	2	3	5	9	18	7	
Other Land	(% Yes)	1	1	1	2	3	2	
Vehicle	% Yes	Bicycle	2	2	3	4	5	3
		Motorcycle	1	1	1	2	3	1
		Car (<7pax)	6	13	17	24	38	19
		Others	3	3	4	4	5	4
	Average No. of Units	Bicycle	1	1	1	1	1	1
		Motorcycle	1	1	1	1	1	1
		Car (<7pax)	1	1	1	1	1	1
Livestock : Cow, Sheep, Goat, Horse and Camel	% Yes	3	4	3	2	4	3	
	Ave. No. of Heads	46	56	49	31	98	59	

Table 2.5.2 Ownership of Land

		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	Composition (%)
Summer House	Yes	6	10	4	5	17	4	1	0	3	7	7
	No	94	90	96	95	83	96	99	100	97	93	93
	Total	100	100	100	100	100	100	100	100	100	100	100
Beside	Yes	1	3	1	2	3	1	1	0	1	2	2
	No	99	97	99	98	97	99	99	100	99	98	98
	Total	100	100	100	100	100	100	100	100	100	100	100

Table 2.5.3 Ownership of Vehicles by District

		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Ratio of Ownership (%)	Bicycle	3	4	3	2	4	2	5	6	3	3
	Motorcycle	1	2	1	3	1	0	1	5	2	2
	Car (<7 pax)	16	21	18	20	25	18	10	11	20	19
	Microbus (>8 pax)	1	1	2	1	1	1	3	0	2	1
	Bus	0	0	0	0	0	0	1	0	0	0
	Truck (<=4t)	1	0	2	1	2	1	1	0	0	1
	Truck(>4t)	1	0	1	1	0	1	5	0	1	1
	Others	0	1	0	0	0	0	1	0	0	0
No. of units of owned HH	Bicycle	1	2	1	1	1	1	1	1	3	1
	Motorcycle	1	1	1	1	1	-	1	1	1	1
	Car (<7 pax)	1	1	1	1	1	1	1	1	1	1
	Microbus (>8 pax)	1	1	1	1	1	1	1	-	1	1
	Bus	1	-	1	-	1	-	1	-	-	1
	Truck (<=4t)	1	1	1	1	1	1	1	-	-	1
	Truck(>4t)	1	1	1	1	1	1	1	-	1	1
	Others	-	1	1	-	1	-	1	-	-	-

Table 2.5.4 Ownership of Livestock by District

		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Ratio of Ownership (%)	Cow	1	2	3	3	1	2	11	16	2	2
	Sheep	1	2	2	3	2	1	4	0	3	2
	Goat	1	1	2	2	1	1	4	0	3	2
	Horse	0	1	1	2	1	1	4	5	2	1
	Camel	0	0	0	0	0	0	0	0	0	0
	Pig	0	0	0	0	0	0	0	0	0	0
	Chicken	0	0	1	1	0	0	0	0	1	1
	Others	0	0	0	0	0	0	1	0	1	0
No. of units of owned HH	Cow	19	9	8	12	22	11	11	7	16	12
	Sheep	43	26	23	59	68	37	63	-	45	45
	Goat	30	29	20	46	67	29	26	-	65	39
	Horse	5	8	8	16	14	22	5	20	21	13
	Camel	2	200	10	11	-	-	-	-	-	52
	Pig	-	8	30	2	1	7	-	-	-	7
	Chicken	-	-	1	1	1	-	-	-	1	1
	Others	-	1	10	3	9	22	10	-	14	10

2.6 Poverty

Table 2.6.1 Households by Income Level and Household Size (No. and %)

	tg000/mo/capita	Household Size									Total
		1	2	3	4	5	6	7	8	9 plus	
No. of Households	less than 10	0	298	1370	1841	1639	1120	488	795	779	8330
	10 - 20	0	825	4056	8198	7325	3606	2227	1791	1153	29181
	20 - 30	242	1948	5928	11136	9108	4663	2254	797	952	37028
	30 - 40	123	2446	8298	11173	8980	3629	970	669	215	36503
	40 - 50	82	3791	8165	11305	3266	3703	1288	270	175	32045
	50 - 60	786	1909	4816	3026	4409	1205	278	286	91	16806
	Sub Total	1233	11217	32633	46679	34727	17926	7505	4608	3365	159893
	60 - 70	341	1040	6987	5939	1926	1302	307	137	0	17979
	70 - 80	170	3374	1952	6270	1830	287	323	116	88	14410
	80 - 90	63	739	3813	2334	825	489	189	0	0	8452
	90 - 100	218	3118	4757	3148	1684	343	0	0	0	13268
	100 - 150	610	2327	4721	4145	1232	551	103	144	0	13833
	150 - 300	999	1364	2889	1694	746	198	0	0	0	7890
	300 - 500	120	507	596	44	147	0	0	0	0	1414
	more 500	196	0	182	113	0	0	0	0	0	491
	Total	3950	23686	58530	70366	43117	21096	8427	5005	3453	237630
%	less than 10	0	4	16	22	20	13	6	10	9	100
	10 - 20	0	3	14	28	25	12	8	6	4	100
	20 - 30	1	5	16	30	25	13	6	2	3	100
	30 - 40	0	7	23	31	25	10	3	2	1	100
	40 - 50	0	12	25	35	10	12	4	1	1	100
	50 - 60	5	11	29	18	26	7	2	2	1	100
	Sub Total	1	7	20	29	22	11	5	3	2	100
	60 - 70	2	6	39	33	11	7	2	1	0	100
	70 - 80	1	23	14	44	13	2	2	1	1	100
	80 - 90	1	9	45	28	10	6	2	0	0	100
	90 - 100	2	24	36	24	13	3	0	0	0	100
	100 - 150	4	17	34	30	9	4	1	1	0	100
	150 - 300	13	17	37	21	9	3	0	0	0	100
	300 - 500	8	36	42	3	10	0	0	0	0	100
	more 500	40	0	37	23	0	0	0	0	0	100
	Total	2	10	25	30	18	9	4	2	1	100
%	less than 10	0	1	2	3	4	5	6	16	23	4
	10 - 20	0	3	7	12	17	17	26	36	33	12
	20 - 30	6	8	10	16	21	22	27	16	28	16
	30 - 40	3	10	14	16	21	17	12	13	6	15
	40 - 50	2	16	14	16	8	18	15	5	5	13
	50 - 60	20	8	8	4	10	6	3	6	3	7
	Sub Total	31	47	56	66	81	85	89	92	97	67
	60 - 70	9	4	12	8	4	6	4	3	0	8
	70 - 80	4	14	3	9	4	1	4	2	3	6
	80 - 90	2	3	7	3	2	2	2	0	0	4
	90 - 100	6	13	8	4	4	2	0	0	0	6
	100 - 150	15	10	8	6	3	3	1	3	0	6
	150 - 300	25	6	5	2	2	1	0	0	0	3
	300 - 500	3	2	1	0	0	0	0	0	0	1
	more 500	5	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100

Table 2.6.2 Household Characteristics by Poverty Level of Poor Households

		Poverty Level by Per Capita Income (tg000/month/capita)						Total	
		<= 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60		
Household Size	no (000)	7	23	36	35	23	29	153	
	%	4	15	23	23	15	19	100	
	Average Size (no)	5	5	5	4	4	4	4	
Household Head	% of Male	65	71	73	76	77	80	75	
	Average Age (yrs)	41	46	45	45	47	46	45	
	% with Job	17	38	47	50	59	58	49	
Household Members	Gendar (%)	Male	47	47	48	48	49	49	48
		Female	53	53	52	52	51	51	52
	Children (%)	22	21	17	14	14	13	16	
	Gainful Workers (no)	Male	1,815	11,120	21,744	22,081	16,319	21,519	94,598
Female		1,183	9,803	17,487	20,407	15,235	18,734	82,849	
Total		2,998	20,923	39,231	42,488	31,554	40,253	177,447	
Household Security	Ownership (%)	Land	52	42	49	38	44	34	42
		House	89	93	90	93	92	91	92
		Other Property	2	3	2	4	6	8	4
Household Economy	Income (tg000/mo)	Summer	34	75	112	146	179	201	138
		Winter	36	75	114	151	192	205	142
	Expenditure (tg000/mo)	Summer	75	89	130	147	170	188	143
		Winter	83	98	138	158	179	197	152
	Loan	% Yes	0	1	0	0	1	0	0
	of which Govt.	-	2	2	2	8	-	3	

Table 2.6.3 Population by Per Capita Income Level and District (No.)

	Population by Per Capita Income Level (tg000/month)									
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown	Total
Chingeltei	31,842	11,331	18,995	16,460	2,956	881	751	116	34,380	117,712
Sukhbaatar	27,828	9,676	14,743	17,016	3,312	393	241	327	31,974	105,510
Songinokhairkhan	48,572	19,734	28,033	24,842	3,509	824	431	740	58,918	185,603
Bayansurkh	40,710	15,693	26,267	27,904	5,499	1,067	654	955	63,108	181,857
Bayangol	32,490	11,525	18,106	27,509	6,952	1,642	1,436	1,848	39,534	141,042
Klan-uul	20,945	8,618	12,178	12,147	1,369	328	109	170	23,701	79,565
Nalaikh	8,419	2,427	3,166	2,097	419	66	0	64	6,944	23,602
Bagakhangai	1,161	156	400	229	0	0	0	0	1,067	3,013
Baganuur	8,013	2,084	1,420	2,734	365	53	122	0	7,276	22,067
Total	219,980	81,244	123,308	130,938	24,381	5,254	3,744	4,220	266,902	859,971

Table 2.6.4 Population by Per Capita Income Level and District (% by Income Level)

	Population by Per Capita Income Level (tg000/month)									
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown	Total
Chingeltei	27	10	16	14	3	1	1	0	29	100
Sukhbaatar	26	9	14	16	3	0	0	0	30	100
Songinokhairkhan	26	11	15	13	2	0	0	0	32	100
Bayansurkh	22	9	14	15	3	1	0	1	35	100
Bayangol	23	8	13	20	5	1	1	1	28	100
Klan-uul	26	11	15	15	2	0	0	0	30	100
Nalaikh	36	10	13	9	2	0	0	0	29	100
Bagakhangai	39	5	13	8	0	0	0	0	35	100
Baganuur	36	9	6	12	2	0	1	0	33	100
Total	26	9	14	15	3	1	0	0	31	100

Table 2.6.5 Population by Per Capita Income Level and District (% by District)

	Population by Per Capita Income Level (tg000/month)									
	<50	<75	<100	<200	<300	<400	<500	>500	Unkown	Total
Chingeltei	14	14	15	13	12	17	20	3	13	14
Sukhbaatar	13	12	12	13	14	7	6	8	12	12
Songinokhairkhan	22	24	23	19	14	16	12	18	22	22
Bayansurkh	19	19	21	21	23	20	17	23	24	21
Bayangol	15	14	15	21	29	31	38	44	15	16
Klan-uul	10	11	10	9	6	6	3	4	9	9
Nalaikh	4	3	3	2	2	1	0	2	3	3
Bagakhangai	1	0	0	0	0	0	0	0	0	0
Baganuur	4	3	1	2	1	1	3	0	3	3
Total	100	100	100	100	100	100	100	100	100	100

Table 2.6.6 Population by Per Capita Income Level Excluding Unknown (% by Income Level)

	Population by Per Capita Income Level (tg000/month)								
	<50	<75	<100	<200	<300	<400	<500	>500	Total
Chingeltei	14	14	15	13	12	17	20	3	14
Sukhbaatar	13	12	12	13	14	7	6	8	12
Songinokhairkhan	22	24	23	19	14	16	12	18	21
Bayansurkh	19	19	21	21	23	20	17	23	20
Bayangol	15	14	15	21	29	31	38	44	17
Klan-uul	10	11	10	9	6	6	3	4	9
Nalaikh	4	3	3	2	2	1	0	2	3
Bagakhangai	1	0	0	0	0	0	0	0	0
Baganuur	4	3	1	2	1	1	3	0	2
Total	100	100	100	100	100	100	100	100	100

Table 2.6.7 Type of Loan Committed by Household (No.)

		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	Composition (%)
Bank/NBFO	Housing	343	136	505	452	764	93	91	0	53	2,437	12
	Business	843	836	1,838	1,480	1,684	599	112	0	161	7,553	39
	Others	1,135	985	1,675	2,737	1,281	575	569	92	566	9,615	49
	Total	2,321	1,957	4,018	4,669	3,729	1,267	772	92	780	19,605	100
Government	Housing	0	0	62	0	0	0	0	0	0	62	6
	Business	0	50	47	0	112	67	0	0	0	276	25
	Others	0	65	345	202	143	0	0	0	0	755	69
	Total	0	115	454	202	255	67	0	0	0	1,093	100
Project/NGO	Housing	0	0	0	0	0	47	0	0	0	47	7
	Business	52	50	88	0	0	0	0	0	0	190	30
	Others	50	90	131	90	41	0	0	0	0	402	63
	Total	102	140	219	90	41	47	0	0	0	639	100
Total	2,423	2,212	4,691	4,961	4,025	1,381	772	92	780	21,337		

Table 2.6.8 Difficulty of Repayment of Loan (No.)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	Composition (%)
Very easy	0	0	0	0	48	0	0	0	0	48	0
Easy	204	51	354	741	349	269	54	92	98	2,212	9
Fair	1,699	1,432	2,611	2,996	2,701	631	478	0	565	13,113	51
Difficult	890	1,043	2,163	1,475	1,910	732	193	0	337	8,743	34
Very difficult	54	145	492	298	401	152	91	0	0	1,633	6
Total	2,847	2,671	5,620	5,510	5,409	1,784	816	92	1,000	25,749	100

Table 2.6.9 Type of Loan Committed by Household (% by Type)

		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	Composition (%)
Bank/NBFO	Housing	15	7	13	10	20	7	12	0	7	12	12
	Business	36	43	46	32	45	47	15	0	21	39	39
	Others	49	50	42	59	34	45	74	100	73	49	49
	Total	100	100	100	100	100	100	100	100	100	100	100
Government	Housing	0	0	14	0	0	0	0	0	0	6	6
	Business	0	43	10	0	44	100	0	0	0	25	25
	Others	0	57	76	100	56	0	0	0	0	69	69
	Total	0	100	100	100	100	100	0	0	0	100	100
Project/NGO	Housing	0	0	0	0	0	100	0	0	0	7	7
	Business	51	36	40	0	0	0	0	0	0	30	30
	Others	49	64	60	100	100	0	0	0	0	63	63
	Total	100	100	100	100	100	100	0	0	0	100	100

Table 2.6.10 Difficulty of Repayment of Loan (% by Level)

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	Composition (%)
Very easy	0	0	0	0	1	0	0	0	0	0	0
Easy	7	2	6	13	6	15	7	100	10	9	9
Fair	60	54	46	54	50	35	59	0	57	51	51
Difficult	31	39	38	27	35	41	24	0	34	34	34
Very difficult	2	5	9	5	7	9	11	0	0	6	6
Total	100	100	100	100	100	100	100	100	100	100	100

Table 2.6.11 Source of Loan Committed by Household by District

	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Ratio of HHs by loan type (%)	No loan	93	93	91	90	87	94	89	90	93
	From friends	1	1	1	1	1	1	0	0	1
	From relatives	1	1	1	0	1	0	0	0	1
	From bank/NBFO	6	6	7	9	9	5	12	10	8
	From government	0	0	1	1	1	0	0	0	0
	From project/NGO	0	0	0	0	0	0	0	0	0
	Others	0	0	0	0	1	0	1	0	1
Interest rate (%/month)	From friends	3	3	5	3	2	5	-	2	4
	From relatives	3	6	7	4	3	2	-	-	5
	From bank/NBFO	3	3	3	3	3	5	3	3	3
	From government	2	-	5	2	2	-	-	-	3
	From project/NGO	2	3	5	1	3	2	-	2	3
	Others	7	5	5	5	3	-	5	-	3

2.7 Migration

Table 2.7.1 Residence Status in Ulaanbaatar (%)

		Quintile (Income Group)					Total
		1	2	3	4	5	
Residence in UB (%)	Since birth	44	45	46	48	52	47
	More than 10 years ago	31	34	36	34	34	34
	5-9 years ago	14	12	11	11	9	11
	1-4 years ago	9	7	5	6	4	6
	Less than one year ago	2	1	2	0	1	1
	Total	100	100	100	100	100	100
Previous Address (%)	Arkhangai	4	5	5	5	4	5
	Bayan-Ulgii	1	1	0	1	1	1
	Bayankhongor	3	4	4	3	2	3
	Bulgan	1	2	1	1	2	2
	Gobi-Altai	4	3	4	3	3	3
	Dornogobi	1	1	1	1	1	1
	Dornod	1	1	1	2	2	2
	Dundgobi	2	2	2	2	2	2
	Zavkhan	4	6	5	4	5	5
	Uvurkhangai	4	5	3	4	2	4
	Umnugobi	1	0	1	1	1	1
	Sukhbaatar	2	1	2	2	2	2
	Selenge	3	3	1	3	3	3
	Tuv	10	7	7	5	5	7
	Uvs	3	3	3	3	4	3
	Khovd	3	4	4	5	3	4
	Khuvsgul	1	2	3	3	2	2
	Khetii	3	2	2	2	2	2
	Darkhan-Uul	1	1	2	1	1	1
	Ulaanbaatar	45	46	47	49	52	48
Orkhon	1	1	1	1	1	1	
Gobisumber	0	0	0	0	0	0	
Total	100	100	100	100	100	100	
Main Reasons of Transfer (%)	For education	11	12	14	12	12	12
	Job related reason	28	24	24	26	23	25
	For urgent cash needed	5	3	4	1	1	3
	Reduce housing/living cost	6	5	5	5	4	5
	For improvement of housing conditions	9	14	14	19	21	15
	For purchase of own house	12	15	16	16	19	16
	Better access to facilities & services	9	10	9	11	9	10
	Come back from abroad/another province	0	1	0	0	1	0
	Relatives/friends in neighborhood	14	10	8	5	5	9
	Other	6	5	6	4	5	5
Total	100	100	100	100	100	100	
Main Reasons of Transfer (%) (Previous Address : UB)	For education	3	4	3	3	3	3
	Job related reason	18	15	17	14	16	16
	For urgent cash needed	7	5	6	1	1	4
	Reduce housing/living cost	11	9	9	9	5	8
	For improvement of housing conditions	14	22	22	29	32	24
	For purchase of own house	22	28	23	28	26	25
	Better access to facilities & services	1	2	2	3	3	2
	Come back from abroad/another province	0	0	0	0	1	0
	Relatives/friends in neighborhood	12	6	5	3	3	6
	Other	11	9	12	9	10	10
Total	100	100	100	100	100	100	

Table 2.7.2 Length of Residence in Ulaanbaatar (No.)

District	Since birth	More than 10 years ago	5-9 years ago	1-4 years ago	Less than one year ago	Total
Chingeltei	16,946	9,350	3,999	2,131	312	32,738
Sukhbaatar	15,169	10,002	2,748	1,631	489	30,039
Songinokhairkhan	22,105	17,039	7,748	4,597	772	52,261
Bayansurkh	22,567	16,256	7,154	3,574	907	50,458
Bayangol	19,837	15,567	3,386	2,091	443	41,324
Klan-uul	11,388	7,867	1,971	839	224	22,289
Nalaikh	4,423	1,840	236	80	47	6,626
Bagakhangai	197	698	0	0	58	953
Baganuur	1,818	3,064	818	680	97	6,477
Total	114,450	81,683	28,060	15,623	3,349	243,165

Table 2.7.3 Length of Residence in Ulaanbaatar (%)

District	Since birth	More than 10 years ago	5-9 years ago	1-4 years ago	Less than one year ago	Total
Chingeltei	52	29	12	7	1	100
Sukhbaatar	50	33	9	5	2	100
Songinokhairkhan	42	33	15	9	1	100
Bayansurkh	45	32	14	7	2	100
Bayangol	48	38	8	5	1	100
Klan-uul	51	35	9	4	1	100
Nalaikh	67	28	4	1	1	100
Bagakhangai	21	73	0	0	6	100
Baganuur	28	47	13	10	1	100
Total	47	34	12	6	1	100

Table 2.7.4 Reasons for Transfer (No.)

District	For education	Job related reason	For urgent cash needed	Reduce housing/ living cost	For improvement of housing conditions	For purchase of own house	Better access to facilities & services	Come back from abroad/ another province	Relatives/ friends in neighborhood	Other	Total
Chingeltei	2,813	5,860	994	1,341	3,810	4,844	2,923	0	2,407	2,002	26,994
Sukhbaatar	3,174	5,730	709	1,324	3,059	4,439	3,043	0	1,961	1,339	24,778
Songinokhairkhan	5,557	11,280	1,039	2,472	5,577	6,832	4,537	293	5,189	2,239	45,015
Bayansurkh	5,208	10,865	1,309	1,670	5,704	7,067	4,668	51	2,973	2,437	41,952
Bayangol	5,072	7,835	381	1,228	9,138	4,619	1,724	589	1,867	1,198	33,651
Klan-uul	2,863	4,271	769	1,198	2,297	2,303	1,358	0	1,124	1,023	17,186
Nalaikh	127	1,483	244	289	877	737	308	0	637	442	5,144
Bagakhangai	0	757	0	0	0	0	0	0	196	0	953
Baganuur	293	2,371	248	327	430	581	775	0	704	152	5,881
Total	25,107	50,452	5,693	9,849	30,892	31,422	19,316	933	17,058	10,832	201,554

Table 2.7.5 Reasons for Transfer (%)

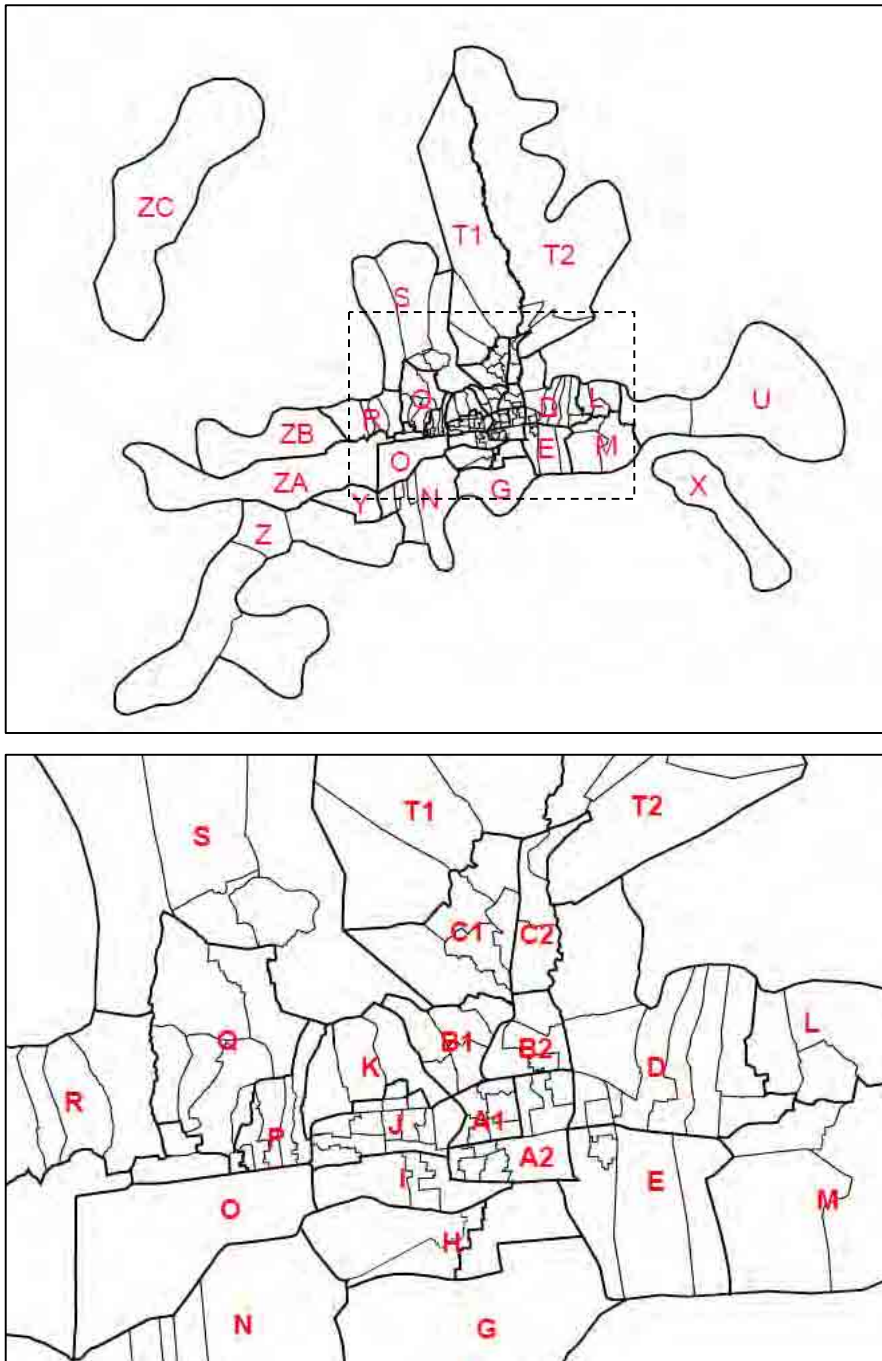
District	For education	Job related reason	For urgent cash needed	Reduce housing/ living cost	For improvement of housing conditions	For purchase of own house	Better access to facilities & services	Come back from abroad/ another province	Relatives/ friends in neighborhood	Other	Total
Chingeltei	10	22	4	5	14	18	11	0	9	7	100
Sukhbaatar	13	23	3	5	12	18	12	0	8	5	100
Songinokhairkhan	12	25	2	5	12	15	10	1	12	5	100
Bayansurkh	12	26	3	4	14	17	11	0	7	6	100
Bayangol	15	23	1	4	27	14	5	2	6	4	100
Klan-uul	17	25	4	7	13	13	8	0	7	6	100
Nalaikh	2	29	5	6	17	14	6	0	12	9	100
Bagakhangai	0	79	0	0	0	0	0	0	21	0	100
Baganuur	5	40	4	6	7	10	13	0	12	3	100
Total	12	25	3	5	15	16	10	0	8	5	100

3 URBAN AREA CHARACTERISTICS

This chapter contains analytical framework and indicators, landuse characteristics, growth of urban indicators, and socio-economic aspects of urban area.

3.1 Analytical Framework and Indicators

Figure 3.1.1 Classified Urban Area by Planning Zone



3.2 Population Distribution

1) Population Distribution

Figure 3.2.1 Population Distribution

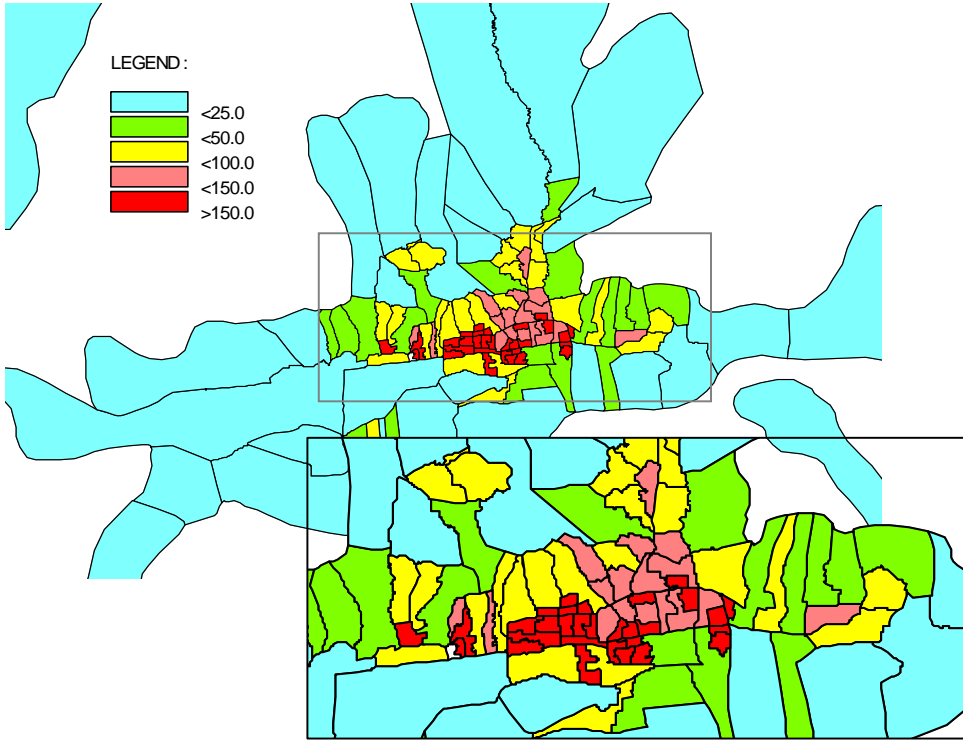


Figure 3.2.2 Daytime Population Distribution

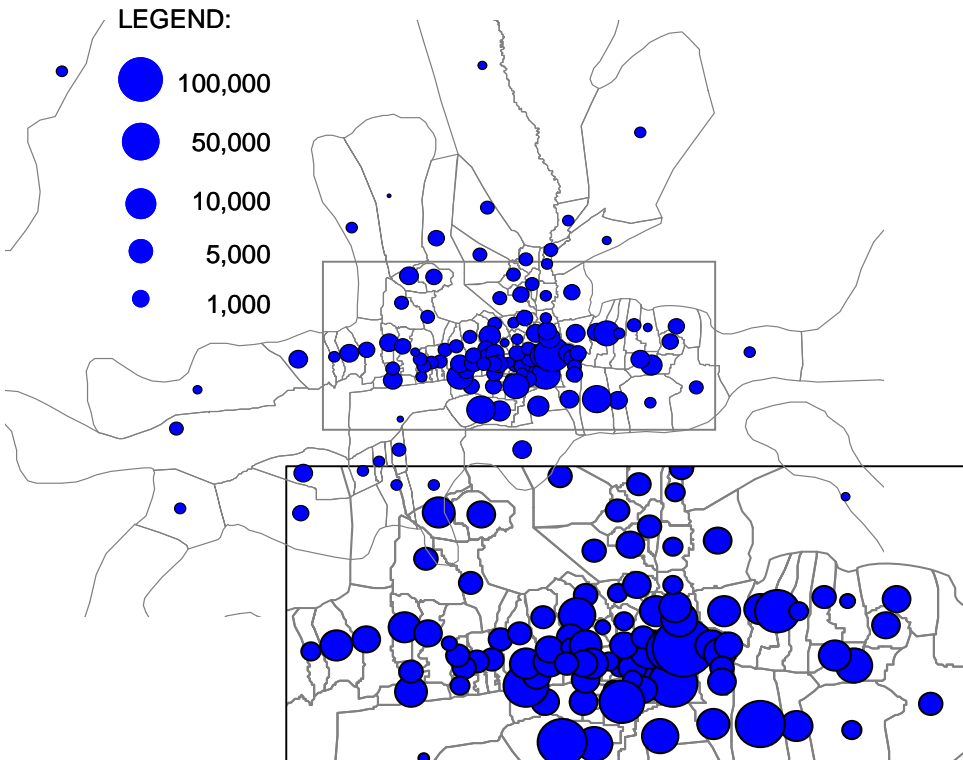
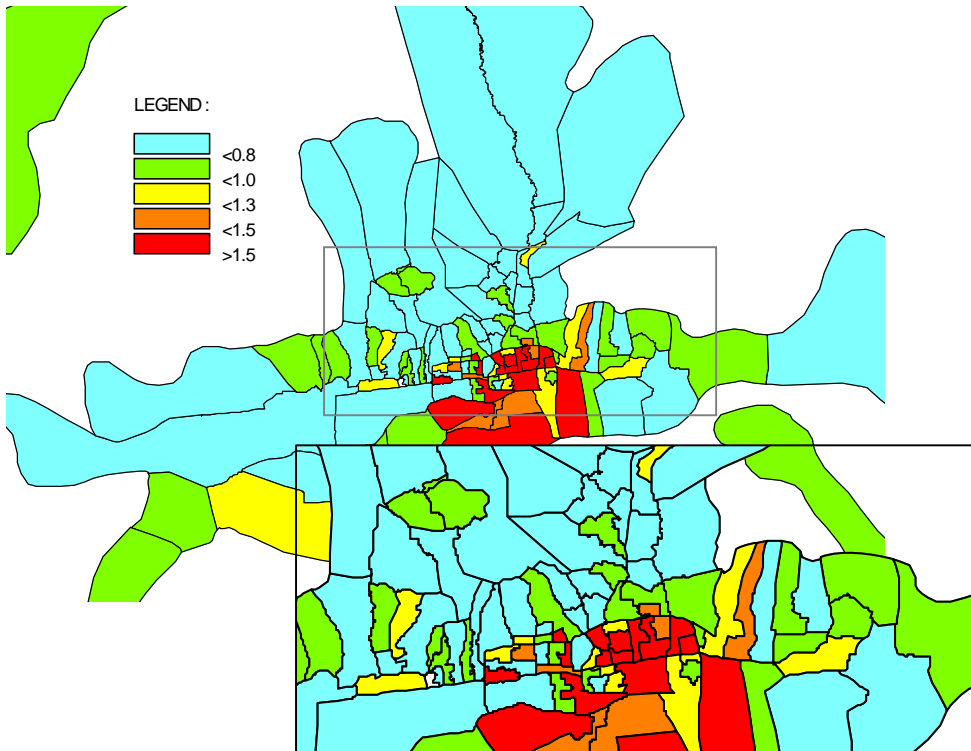


Figure 3.2.3 Daytime/Nighttime Population Distribution Ratio



2) Nighttime and Daytime Population Distribution

Figure 3.2.4 Distribution of Ger

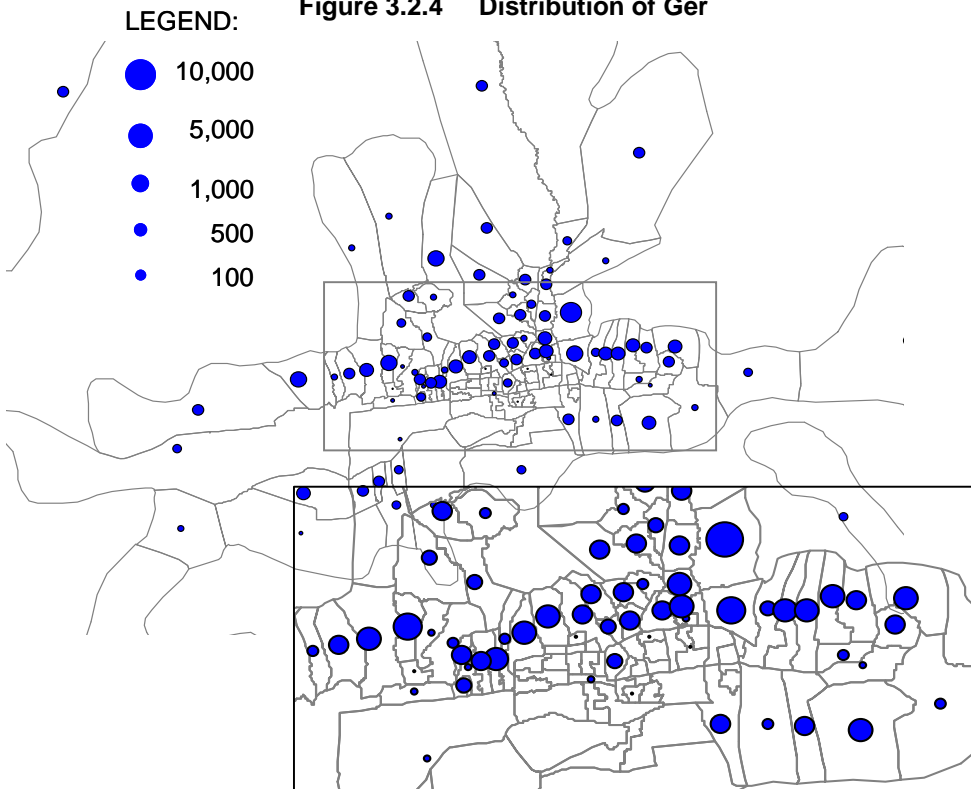
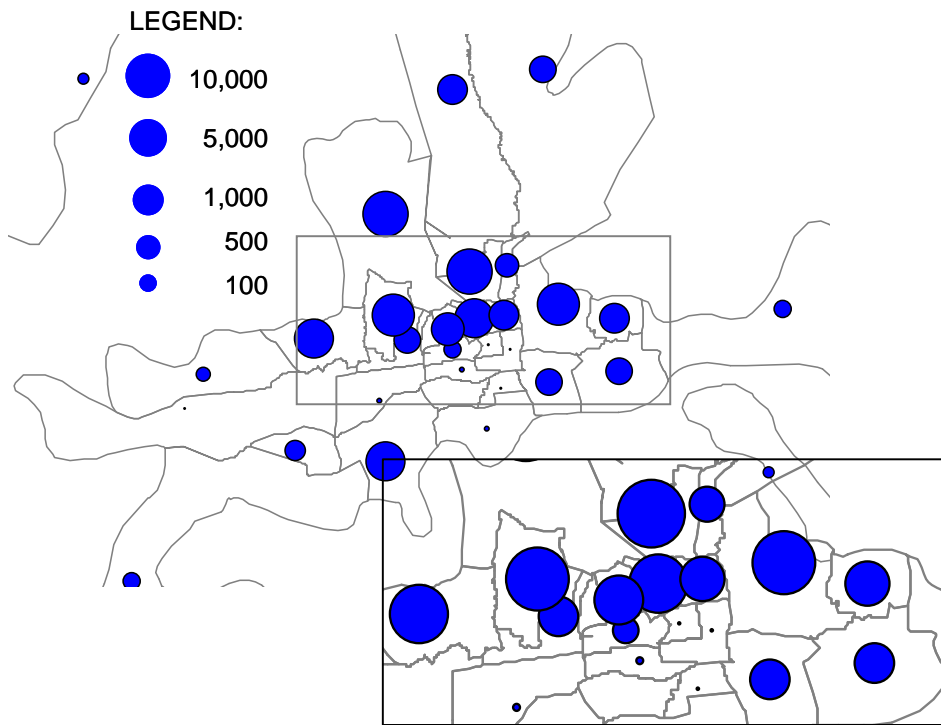
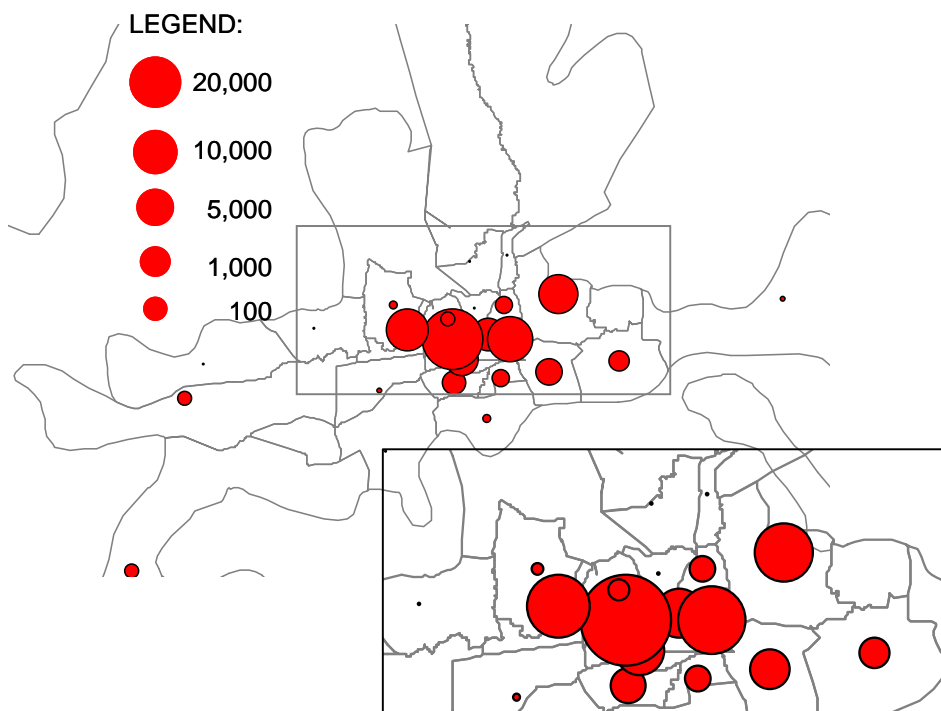


Figure 3.2.5 Distribution of Detached House



¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

Figure 3.2.6 Distribution of Apartment



3) Classification of Urban Areas by Housing Type

Table 3.2.1 Analysis of Urban Areas by Housing Type Mix

Housing Mix	Zone		Population			Economy			Landuse					
	(no)	(km ²)	2007	Growth: 00-07 (%/yr)	Density (no/ha)	Household Income tg000 /month	% of Low Income Household	% of Car Owning Household	Population		No./000 Population			
									Daytime Density (no/ha)	Day/Night Ratio	Worker		Student	
% Ger/ Detached Housing	100	38	461.9	300,433	5.48	7	174	34.5	15.0	5	0.71	32	92	15
	90 - 99	18	155.9	152,113	5.92	10	190	28.8	17.9	6	0.65	37	103	9
	80 - 89	1	1.6	12,326	3.92	76	211	12.5	22.9	74	0.97	47	212	66
	70 - 79	5	27.8	46,031	6.47	17	207	23.3	22.0	10	0.63	43	98	12
	60 - 69	3	13.7	21,700	3.37	16	217	17.1	22.6	13	0.81	29	133	23
	50 - 59	6	23.5	50,196	4.22	21	208	31.5	20.6	29	1.37	116	513	134
	40 - 49	2	15.8	11,769	2.22	7	210	19.2	21.3	9	1.26	97	259	343
	30 - 39	2	3.3	17,586	2.85	53	235	23.2	21.5	49	0.92	44	151	144
	20 - 29	4	86.3	35,188	3.53	4	222	20.5	22.1	4	0.91	68	215	31
	10 - 19	6	3.4	52,610	1.94	156	252	13.7	34.4	164	1.06	105	215	144
	1 - 9	15	10.1	120,685	1.83	119	294	12.8	22.7	148	1.24	116	321	187
	0	20	11.8	125,232	1.07	106	289	13.0	27.0	179	1.69	237	502	205
	Total	120	815.1	945,869	3.91	12	221	24.2	20.7	11	0.97	82	217	82

Figure 3.2.7 Distribution of Urban Areas (Zones) by Housing Type Mix

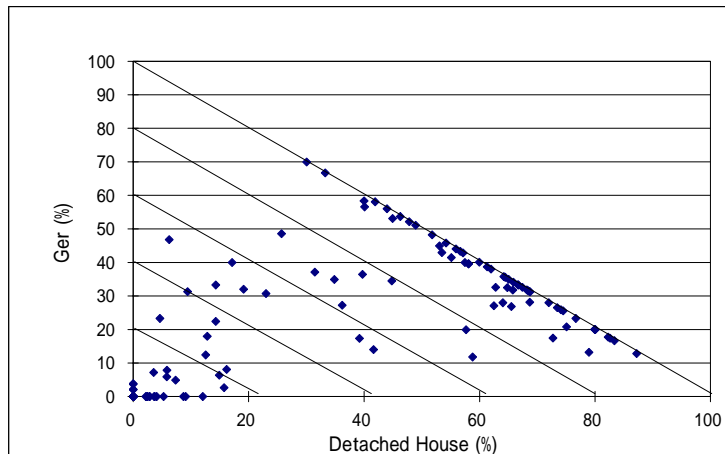


Figure 3.2.8 Population Density and Ger Housing Share

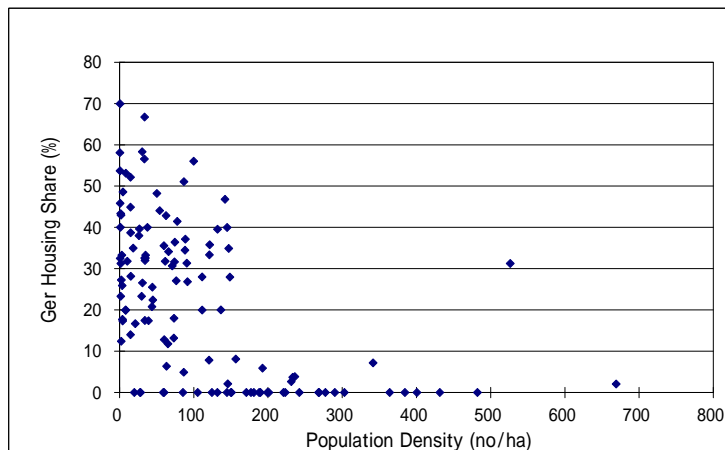


Table 3.2.2 Classification of Areas by Housing Type Mix (No. of Zones)

% of Ger/Detached	of which Ger (%)					Total
	80 - 100	60 - 79	40 - 59	20 - 39	0 - 19	
100	0	2	11	19	5	37
90 - 99	0	0	6	10	2	18
80 - 89	0	0	0	1	0	1
70 - 79	0	0	1	2	2	5
60 - 69	0	0	0	3	0	3
50 - 59	0	0	1	3	2	6
40 - 49	0	0	0	2	0	2
30 - 39	0	0	0	2	1	3
20 - 29	0	0	0	1	3	4
10 - 19	0	0	0	0	6	6
1 - 9	0	0	0	0	15	15
0	0	0	0	0	20	20
Total	0	2	19	43	56	120

Table 3.2.3 Classification of Areas by Housing Type Mix (No. of Households)

% of Ger/Detached	of which Ger (%)					Total
	80 - 100	60 - 79	40 - 59	20 - 39	0 - 19	
100	0	2,138	17,224	39,523	10,489	69,374
90 - 99	0	0	13,281	18,762	3,698	35,741
80 - 89	0	0	0	2,861	0	2,861
70 - 79	0	0	1,646	5,369	3,306	10,321
60 - 69	0	0	0	4,871	0	4,871
50 - 59	0	0	1,743	7,852	2,933	12,528
40 - 49	0	0	0	3,000	0	3,000
30 - 39	0	0	0	3,410	1,831	5,241
20 - 29	0	0	0	2,377	6,503	8,880
10 - 19	0	0	0	0	13,868	13,868
1 - 9	0	0	0	0	29,929	29,929
0	0	0	0	0	32,692	32,692
Total	0	2,138	33,894	88,025	105,249	229,306

Table 3.2.4 Classification of Areas by Housing Type Mix (No. of Population)

% of Ger/Detached	of which Ger (%)					Total
	80 - 100	60 - 79	40 - 59	20 - 39	0 - 19	
100	0	8,613	71,937	175,677	40,435	296,662
90 - 99	0	0	56,746	79,181	16,186	152,113
80 - 89	0	0	0	12,326	0	12,326
70 - 79	0	0	6,493	24,411	15,127	46,031
60 - 69	0	0	0	21,700	0	21,700
50 - 59	0	0	7,304	29,703	13,189	50,196
40 - 49	0	0	0	11,769	0	11,769
30 - 39	0	0	0	14,172	7,185	21,357
20 - 29	0	0	0	9,123	26,065	35,188
10 - 19	0	0	0	0	52,610	52,610
1 - 9	0	0	0	0	120,685	120,685
0	0	0	0	0	125,232	125,232
Total	0	8,613	142,480	378,062	416,714	945,869

3.3 Growth of Urban Indicators

Figure 3.3.1 Population Density and Growth Rate

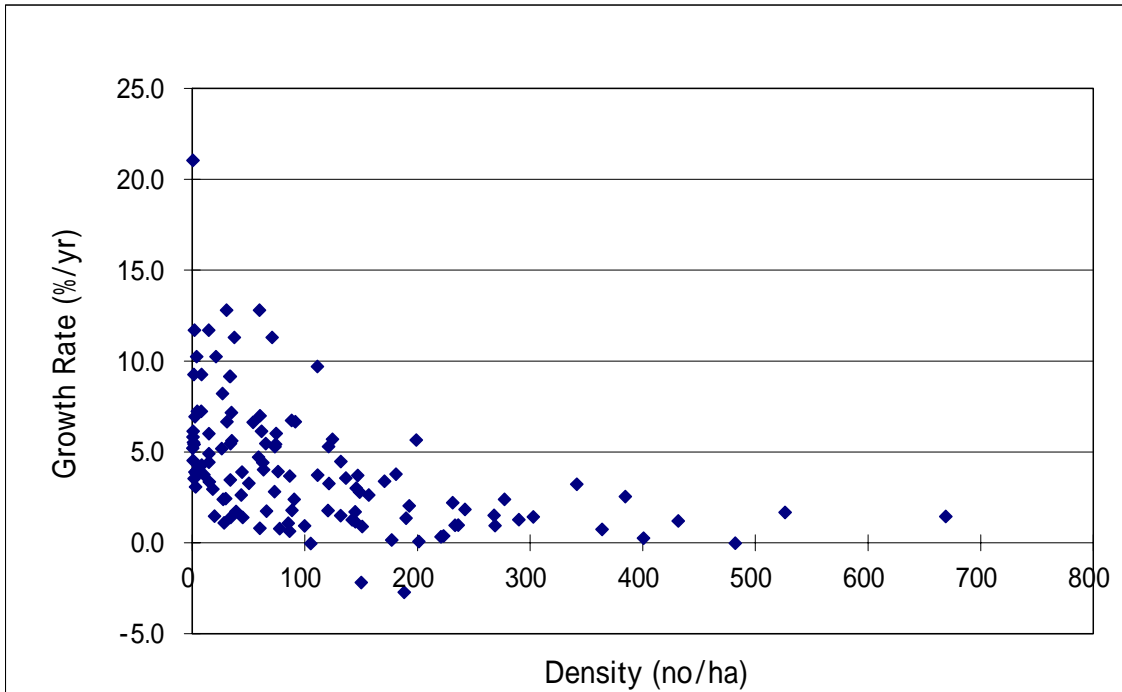


Figure 3.3.2 Population Density and Growth Rate (Planning Zone)

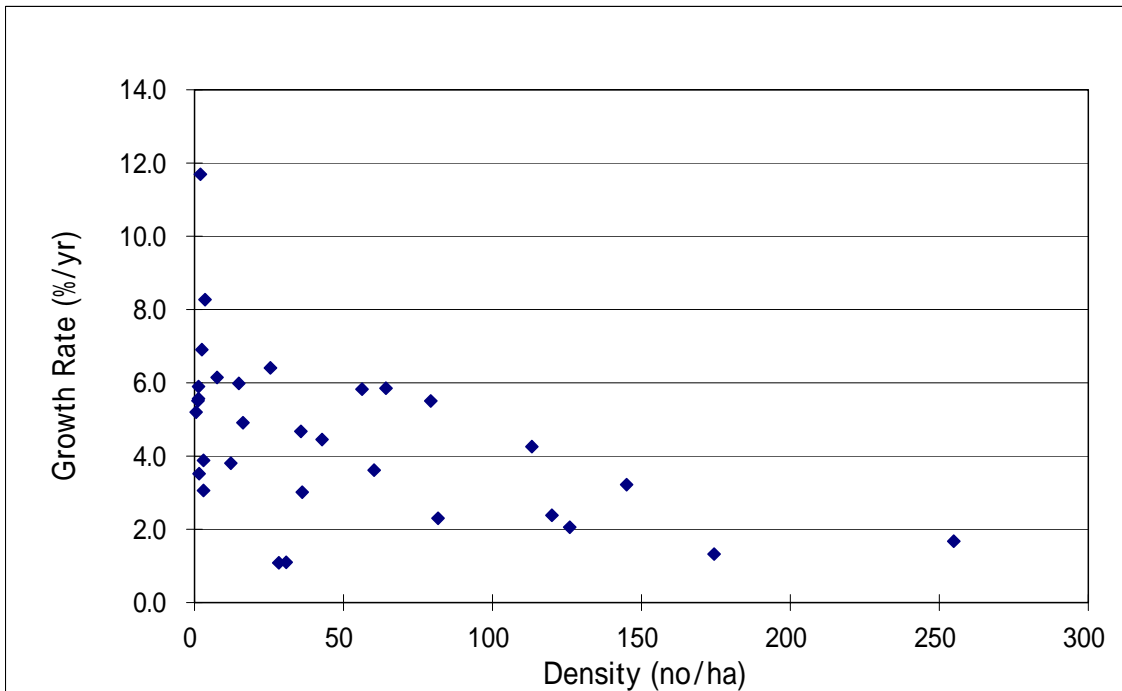


Figure 3.3.3 Population Growth and Type of House Share

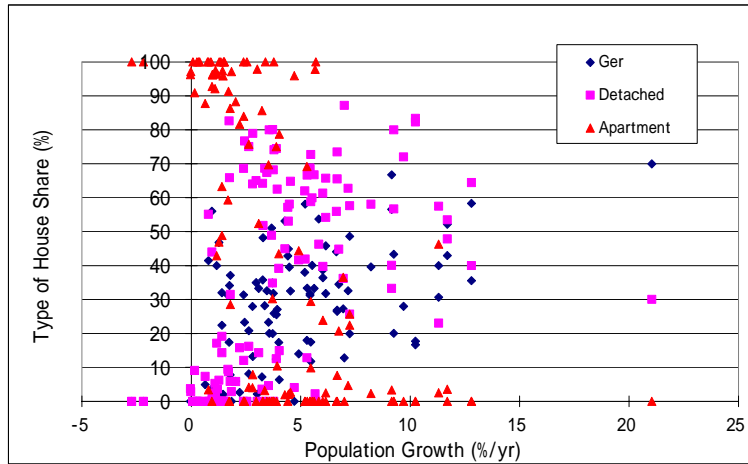


Figure 3.3.4 Population Growth and Ger Housing Share

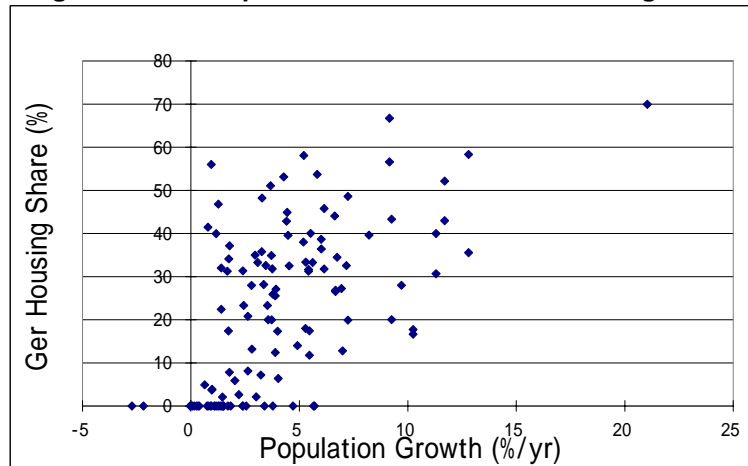
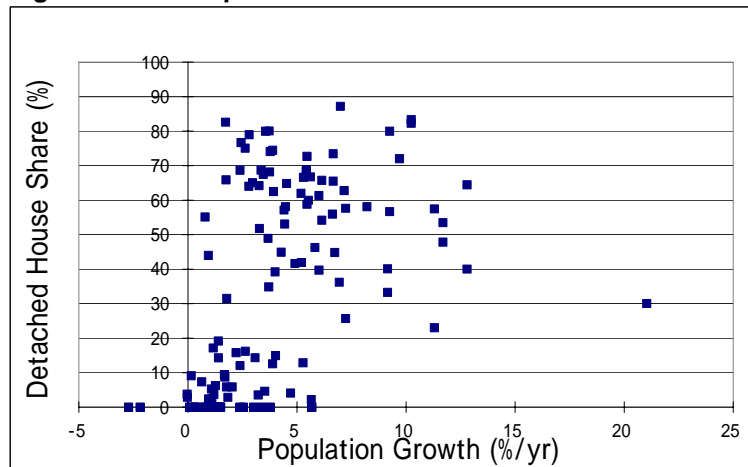


Figure 3.3.5 Population Growth and Detached House Share



¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

3.4 Socio-economic Aspects

Figure 3.4.1 Urban Areas by Car Ownership Level

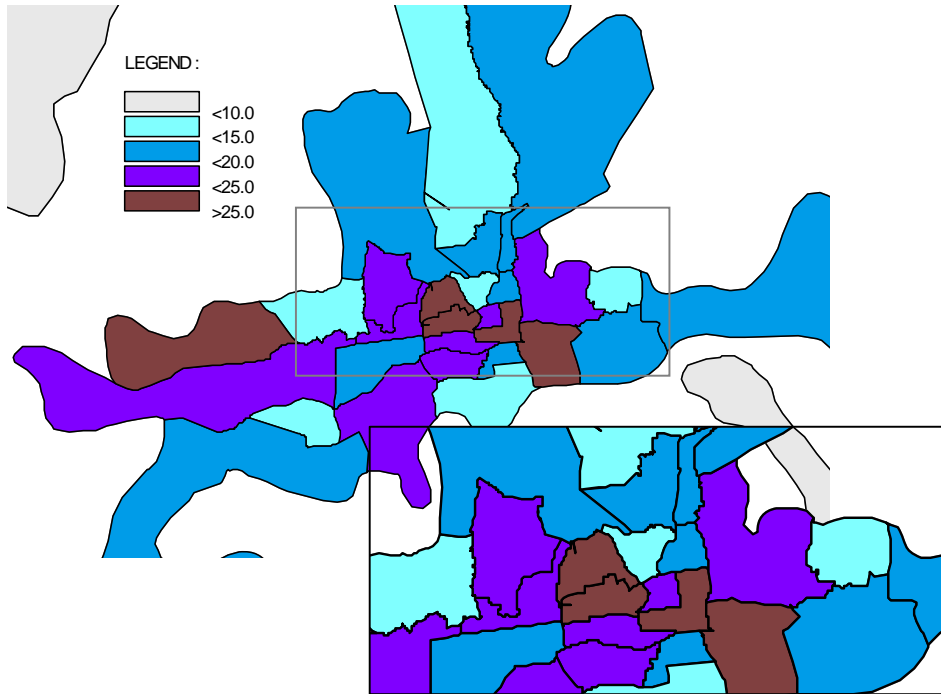
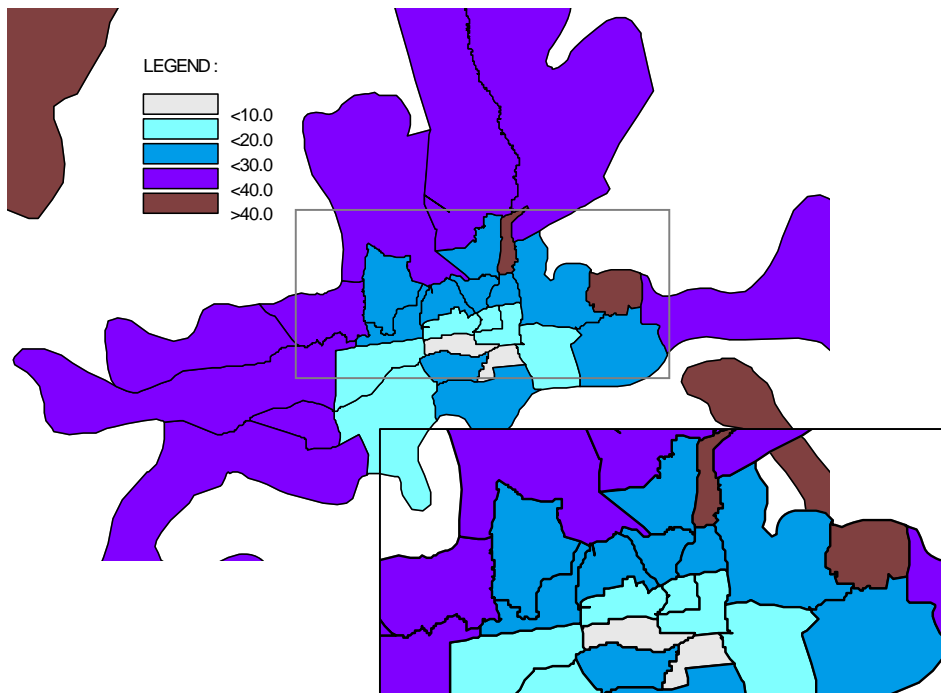


Figure 3.4.2 Urban Areas by % of Low Income Households



4 URBAN TRANSPORTATION

This chapter contains travel demand, profile of main transport users, public transport demand, assessment of transportation services, and future needs related to transport.

4.1 Travel Demand

1) Trip Rate

Table 4.1.1 Trip Rate of Ulaanbaatar Residents

	Year	Population (000)	Trip Rate: No. of Trips / day / person		
			Including Walking	Excluding Walking	
Ulaanbaatar	2007	1,006	4.0	2.7	
Vietnam	Hanoi	2005	3,186	2.7	2.0
	HCMC	2002	7,693	3.0	2.5
Manila (Philippines)	1996	13,565	2.2	1.8	
Jakarta (Indonesia)	2002	21,594	1.7	1.1	
Chendu (China)	2001	3,090	2.6	1.8	
Tokyo (Japan)	1998	34,000	2.3	N. A.	

Source: Ulaanbaatar, Vietnam, Manila, Jakarta, Chendu: JICA Studies,

Tokyo: Tokyo Metropolitan Region Transport Planning Consultant

Table 4.1.2 Trip Rate by Socio-economic Background

Occupation		Trip Rate (No/person/day)	Employment Sector		Trip Rate (No/person/day)	Vehicle Ownership		Trip Rate (No/person/day)
1	Leader	6.84	1	Agriculture	4.28	1	None	3.43
2	Profession	4.94	2	Fishery	3.82	2	Bicycle	3.37
3	Technical	5.57	3	Mining	4.57	3	M/C	5.30
4	Clerical	3.93	4	Manufacture	4.22	4	Car/Bus	5.20
5	Salesperson	5.33	5	Electricity	5.25	5	Others	4.54
6	Agriculture	4.45	6	Construction	4.64	Total		3.89
7	Craftsperson	4.32	7	Trade	5.66			
8	Operator	4.52	8	Other Industry	4.79			
9	Elementary	4.03	9	Retail	5.28			
10	Small vendor	5.74	10	Knitting	4.01			
11	Military	4.70	11	Food	5.04			
12	Pupil	3.25	12	Transport	6.81			
13	Student	3.81	13	Finantial	6.16			
14	Housewife	3.32	14	Technology	5.71			
15	Disabled	2.13	15	Real Estate	6.16			
16	Jobless	3.07	16	Public Adm.	4.90			
17	Retired	2.74	17	Restaurant	5.03			
18	Others	5.02	18	Educational	4.26			
			19	Social Work	4.32			
			20	Cultural	4.60			
			21	Party	5.19			
			22	Union	5.77			
			23	Jobless	3.19			
			24	Other Service	4.79			
						Income Level		Trip Rate (No/person/day)
						1	< 50	2.88
						2	< 75	3.10
						3	< 100	3.30
						4	< 200	3.65
						5	< 300	4.13
						6	< 400	4.78
						7	< 500	5.17
						8	> 500	5.29
						9	Unknown	3.85
						Total		3.89

2) Travel Demand by Mode and Purpose

Table 4.1.3 Travel Demand by Mode and Purpose (No.)

Mode	Trip Purpose (trips/day)					
	To Home	To Work	To School	Business	Private	Total
Walking	446,333	84,964	127,206	15,660	356,618	1,030,781
Car	306,112	172,280	28,518	46,149	263,025	816,084
Taxi	139,415	54,580	15,283	12,291	88,950	310,519
Public Bus	500,878	211,403	129,628	25,053	259,953	1,126,915
Others	29,837	20,385	1,689	12,520	22,618	87,049
Total	1,422,575	543,612	302,324	111,673	991,164	3,371,348

Table 4.1.4 Travel Demand by Mode and Purpose (% by Mode)

Mode	Trip Purpose (%)					
	To Home	To Work	To School	Business	Private	Total
Walking	31	16	42	14	36	31
Car	22	32	9	41	27	24
Taxi	10	10	5	11	9	9
Public Bus	35	39	43	22	26	33
Others	2	4	1	11	2	3
Total	100	100	100	100	100	100

Table 4.1.5 Travel Demand by Mode and Purpose (% by Purpose)

Mode	Trip Purpose (%)					
	To Home	To Work	To School	Business	Private	Total
Walking	43	8	12	2	35	100
Car	38	21	3	6	32	100
Taxi	45	18	5	4	29	100
Public Bus	44	19	12	2	23	100
Others	34	23	2	14	26	100
Total	42	16	9	3	29	100

Figure 4.1.1 Travel Demand by Purpose

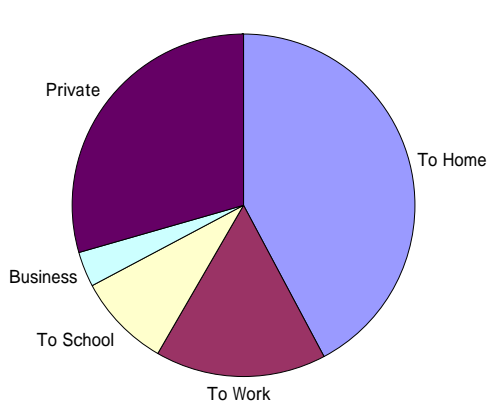
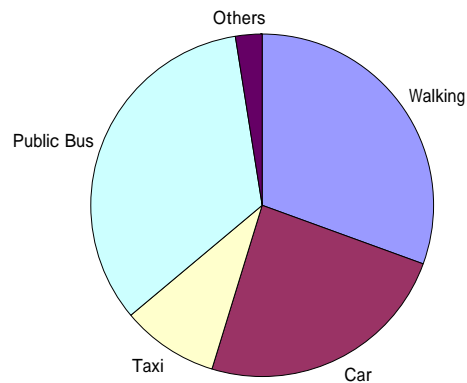


Figure 4.1.2 Travel Demand by Transport Mode

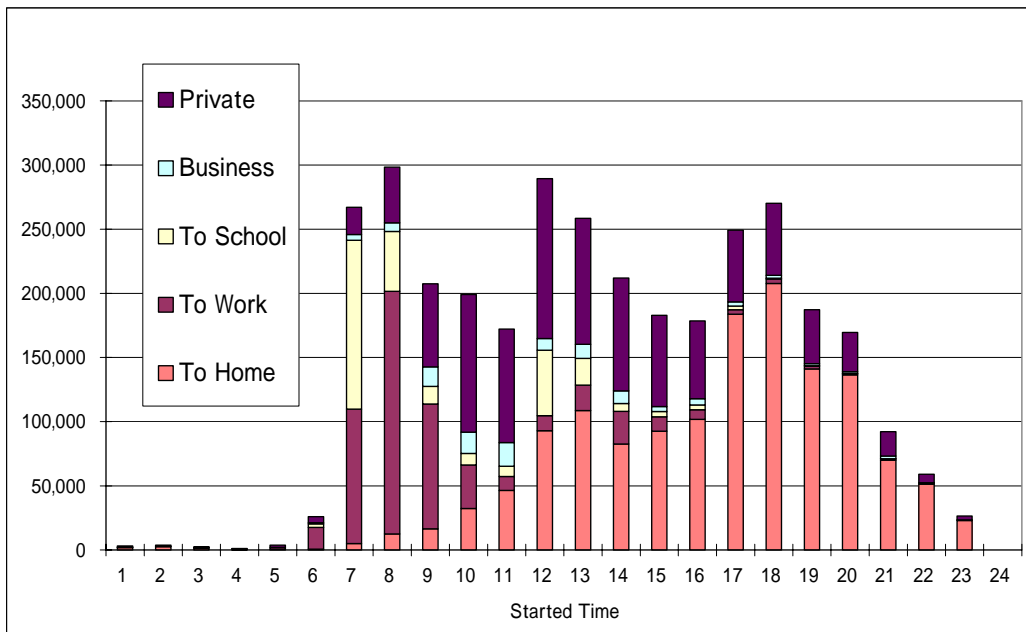


3) Hourly Distribution of Travel Demand in a Day

Table 4.1.6 Travel Demand by Trip Started Time (%)

Trip Started Time	To Work	To School	Business	Private	To Home	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	3	1	1	0	0	1
7	19	44	4	2	0	8
8	35	15	6	4	1	9
9	18	5	14	7	1	6
10	6	3	15	11	2	6
11	2	3	16	9	3	5
12	2	17	8	13	7	9
13	4	7	10	10	8	8
14	5	2	9	9	6	6
15	2	1	3	7	7	5
16	1	1	4	6	7	5
17	1	1	3	6	13	7
18	1	0	2	6	15	8
19	0	0	1	4	10	6
20	0	0	1	3	10	5
21	0	0	2	2	5	3
22	0	0	0	1	4	2
23	0	0	0	0	2	1
24	0	0	0	0	0	0
Total	100	100	100	100	100	100

Figure 4.1.3 Hourly Distribution of Travel Demand ¹⁾



1) Number of trips by time started and purpose

4) Travel Time and Distance

Table 4.1.7 Travel Demand by Mode and Travel Distance Excluding Walk (No.)

Trip Length (km)	Number of Trips by Mode (trips/day)				
	Car	Taxi	Public Bus	Others	Total
1 >	50,456	23,576	41,607	9,280	124,919
1 - 2	93,340	69,446	108,499	9,178	280,463
2 - 3	140,873	74,888	150,798	6,897	373,456
3 - 5	206,494	82,175	310,335	9,715	608,719
5 - 7.5	135,612	30,856	248,533	19,697	434,698
7.5 - 10	70,688	10,359	134,495	10,238	225,780
10 - 15	62,233	9,442	89,412	10,861	171,948
15 <=	20,244	1,983	25,039	3,429	50,695
Total	779,940	302,725	1,108,718	79,295	2,270,678

Table 4.1.8 Travel Demand by Mode and Travel Distance Excluding Walk (%)

Trip Length (km)	Number of Trips by Mode (%)				
	Car	Taxi	Public Bus	Others	Total
1 >	6	8	4	12	6
1 - 2	12	23	10	12	12
2 - 3	18	25	14	9	16
3 - 5	26	27	28	12	27
5 - 7.5	17	10	22	25	19
7.5 - 10	9	3	12	13	10
10 - 15	8	3	8	14	8
15 <=	3	1	2	4	2
Total	100	100	100	100	100

Table 4.1.9 Travel Performance Indicators

	Car	Taxi	Public Bus	Others	Total
Ave. Trip Length (km)	5.11	3.47	5.48	5.99	4.01
Ave. Travel Time (min)	30	26	41	35	29
Ave. Speed (kph)	10.2	7.9	8.0	10.4	8.3
No. of Transfer	1.83	1.88	2.12	1.96	1.40

Table 4.1.10 Perception on Travel Time by Mode

Mode	Average Travel Time (min)							
	Very Bad	Bad	So-so	Good	Very good	Total		
Private	Walking	23.3	22.6	16.6	13.1	13.3	14.3	
	Bicycle	-	-	22.2	21.8	18.4	21.8	
	Motorcycle	-	-	38.3	21.8	28.0	29.8	
	Car	20.3	43.6	36.0	31.0	30.2	31.9	
	Truck	-	-	54.2	32.7	-	34.8	
	Others	-	57.0	84.1	82.9	21.8	75.6	
	Subtotal	20.3	43.6	36.9	31.2	30.2	32.2	
Public	Bus	Minibus	48.5	46.6	40.6	36.9	45.3	40.1
		Standard Bus	51.4	50.5	43.7	41.1	40.2	43.6
		Trolley Bus	-	55.6	44.1	48.8	30.0	47.5
	Private Bus	Company Bus	-	-	44.2	40.5	26.7	40.2
		School Bus	-	-	47.9	52.3	16.3	41.4
		Tourist Bus	-	-	110.2	43.2	65.0	68.5
	Taxi	45.7	20.9	28.6	26.7	25.6	26.9	
Subtotal	49.2	47.2	40.6	33.9	33.7	38.3		
Total	37.8	43.8	34.0	25.6	25.1	29.3		

Table 4.1.11 Travel Demand by Vehicle Ownership (No.)

Household by Vehicle Ownership		Walking	Car	Taxi	Public Bus	Others	Total
Household with: (trips/day)	None	786,169	242,668	220,378	891,611	34,128	2,174,954
	Bicycle	22,754	4,149	2,234	17,808	428	47,373
	M/C	13,563	30,073	5,505	10,829	1,169	61,139
	Car/Bus	194,907	492,059	82,594	178,407	15,244	963,211
	Truck	17,628	21,083	1,668	18,894	32,360	91,633
	Others	348	2,358	386	592	0	3,684
	Total	1,035,369	792,390	312,765	1,118,141	83,329	3,341,994

Table 4.1.12 Travel Demand by Vehicle Ownership (% by Vehicle Ownership)

Household by Vehicle Ownership		Walking	Car	Taxi	Public Bus	Others	Total
Household with: (%)	None	76	31	70	80	41	65
	Bicycle	2	1	1	2	1	1
	M/C	1	4	2	1	1	2
	Car/Bus	19	62	26	16	18	29
	Truck	2	3	1	2	39	3
	Others	0	0	0	0	0	0
	Total	100	100	100	100	100	100

Table 4.1.13 Travel Demand by Vehicle Ownership (% by Mode)

Household by Vehicle Ownership		Walking	Car	Taxi	Public Bus	Others	Total
Household with: (%)	None	36	11	10	41	2	100
	Bicycle	48	9	5	38	1	100
	M/C	22	49	9	18	2	100
	Car/Bus	20	51	9	19	2	100
	Truck	19	23	2	21	35	100
	Others	9	64	10	16	0	100
	Total	31	24	9	33	2	100

Table 4.1.14 Travel Demand by Mode and Vehicle Ownership (No.)

Mode	No Vehicle		No Car		Car		Total			
	No. of Trips	%	No. of Trips	%	No. of Trips	%	No. of Trips	%		
Walking	786,169	36	36,317	33	212,883	20	1,035,369	31		
Bicycle	1,791	0	632	1	250	0	2,673	0		
Motorcycle	529	0	247	0	320	0	1,096	0		
Car	242,668	11	34,222	32	515,500	49	792,390	24		
Truck	21,432	1	0	0	43,702	4	65,134	2		
Others	1,143	0	49	0	338	0	1,530	0		
Subtotal	267,563	12	35,150	32	560,110	53	862,823	26		
Public	Bus	Minibus	560,969	26	18,173	17	123,265	12	702,407	21
		Standard Bus	324,179	15	10,166	9	73,249	7	407,594	12
		Trolley Bus	6,463	0	298	0	1,379	0	8,140	0
	Private Bus	Company Bus	8,107	0	567	1	2,339	0	11,013	0
		School Bus	794	0	102	0	655	0	1,551	0
		Tourist Bus	332	0	0	0	0	0	332	0
	Taxi	220,378	10	7,739	7	84,648	8	312,765	9	
	Subtotal	1,121,222	52	37,045	34	285,535	27	1,443,802	43	
Total	2,174,954	100	108,512	100	1,058,528	100	3,341,994	100		

Table 4.1.15 Travel Demand by Age Group (No.)

Age Group	Walking	Car	Taxi	Public Bus	Others	Total
Less 10	87,303	20,112	7,016	30,451	5,501	150,383
10 - 15	208,920	25,707	18,766	84,992	1,882	340,267
16 - 50	606,013	673,056	251,924	894,154	61,620	2,486,767
51 - 70	105,667	71,094	29,782	95,080	14,178	315,801
More than 70	27,466	2,421	5,277	13,464	148	48,776
Total	1,035,369	792,390	312,765	1,118,141	83,329	3,341,994

Table 4.1.16 Travel Demand by Age Group (% by Age Group)

Age Group	Walking	Car	Taxi	Public Bus	Others	Total
Less 10	8	3	2	3	7	4
10 - 15	20	3	6	8	2	10
16 - 50	59	85	81	80	74	74
51 - 70	10	9	10	9	17	9
More than 70	3	0	2	1	0	1
Total	100	100	100	100	100	100

Table 4.1.17 Travel Demand by Age Group (% by Mode)

Age Group	Walking	Car	Taxi	Public Bus	Others	Total
Less 10	54	8	6	33	0	100
10 - 15	44	14	5	37	1	100
16 - 50	40	10	7	43	0	100
51 - 70	33	19	7	38	4	100
More than 70	29	28	10	32	2	100
Total	23	38	13	25	1	100

Table 4.1.18 Travel Demand by Household Income Level (No.)

Household Income Level	Walking	Car	Taxi	Public Bus	Others	Total
< 50	53,361	7,539	5,655	32,997	108	99,660
< 75	72,352	22,909	8,139	61,121	972	165,493
< 100	136,859	36,016	23,675	148,112	1,622	346,284
< 200	391,942	222,556	82,364	453,966	43,302	1,194,130
< 300	196,268	191,284	66,750	218,503	14,863	687,668
< 400	81,238	130,908	45,116	88,598	2,227	348,087
< 500	45,396	71,788	32,249	46,721	8,088	204,242
> 500	40,074	87,716	40,536	45,096	10,931	224,353
Unknown	17,879	21,674	8,281	23,027	1,216	72,077
Total	1,035,369	792,390	312,765	1,118,141	83,329	3,341,994

Table 4.1.19 Travel Demand by Household Income Level (% by Income Level)

Household Income Level	Walking	Car	Taxi	Public Bus	Others	Total
< 50	5	1	2	3	0	3
< 75	7	3	3	5	1	5
< 100	13	5	8	13	2	10
< 200	38	28	26	41	52	36
< 300	19	24	21	20	18	21
< 400	8	17	14	8	3	10
< 500	4	9	10	4	10	6
> 500	4	11	13	4	13	7
Unknown	2	3	3	2	1	2
Total	100	100	100	100	100	100

Table 4.1.20 Travel Demand by Household Income Level (% by Mode)

Household Income Level	Walking	Car	Taxi	Public Bus	Others	Total
< 50	54	8	6	33	0	100
< 75	44	14	5	37	1	100
< 100	40	10	7	43	0	100
< 200	33	19	7	38	4	100
< 300	29	28	10	32	2	100
< 400	23	38	13	25	1	100
< 500	22	35	16	23	4	100
> 500	18	39	18	20	5	100
Unknown	25	30	11	32	2	100
Total	31	24	9	33	2	100

Table 4.1.21 Travel Demand by Gender (No.)

Gendar	Walking	Car	Taxi	Public Bus	Others	Total
Male	476,788	545,072	135,684	507,816	69,782	1,735,142
Female	558,581	247,318	177,081	610,325	13,547	1,606,852
Total	1,035,369	792,390	312,765	1,118,141	83,329	3,341,994

Table 4.1.22 Travel Demand by Gender (% by Gender)

Gendar	Walking	Car	Taxi	Public Bus	Others	Total
Male	46	69	43	45	84	52
Female	54	31	57	55	16	48
Total	100	100	100	100	100	100

Table 4.1.23 Travel Demand by Gender (% by Mode)

Gendar	Walking	Car	Taxi	Public Bus	Others	Total
Male	27	31	8	29	4	100
Female	35	15	11	38	1	100
Total	31	24	9	33	2	100

4.2 Profile of Main Transport Users

Table 4.2.1 Travel Demand by Occupation (No.)

Occupation	Demand by Mode (trips/day)					
	Walking	Car	Taxi	Public Bus	Others	Total
Leader of branches, administration levels and units	14,556	48,003	8,394	19,548	7,066	97,567
Professional	104,273	175,194	77,020	168,081	5,142	529,710
Technical professional	25,159	68,604	18,824	48,064	9,949	170,600
Clerical worker	21,598	8,831	4,127	40,372	422	75,350
Service workers and shop and market sales worker	37,211	61,963	25,200	71,145	16,509	212,028
Skilled agriculture, forestry, livestock breeder and fishery worker	2,214	5,492	1,492	4,803	214	14,215
Craft and related trades	4,770	5,756	2,790	14,302	234	27,852
Plant and machine operator and assembler	5,215	4,497	3,266	11,224	665	24,867
Elementary occupation	12,495	12,063	1,473	20,276	177	46,484
Small vendors	14,923	45,179	13,395	47,983	12,960	134,440
Military people, police	7,280	14,222	2,126	13,397	593	37,618
Pupils (grade 1-11)	371,448	50,191	32,451	161,832	7,906	623,828
Student (Univ. & collage)	76,663	34,421	24,115	170,937	855	306,991
Housewife	47,956	24,356	17,942	44,015	57	134,326
Disabled	15,912	8,553	4,143	15,939	17	44,564
Jobless	134,106	79,640	28,897	138,291	2,924	383,858
Retired	95,911	32,196	22,352	67,239	3,025	220,723
Others	43,610	113,229	24,758	60,210	14,614	256,421
Total	1,035,300	792,390	312,765	1,117,658	83,329	3,341,442

Table 4.2.2 Travel Demand by Occupation (% by Occupation)

Occupation	Walking	Car	Taxi	Public Bus	Others	Total
Leader of branches, administration levels and units	1	6	3	2	8	3
Professional	10	22	25	15	6	16
Technical professional	2	9	6	4	12	5
Clerical worker	2	1	1	4	1	2
Service workers and shop and market sales worker	4	8	8	6	20	6
Skilled agriculture, forestry, livestock breeder and fishery worker	0	1	0	0	0	0
Craft and related trades	0	1	1	1	0	1
Plant and machine operator and assembler	1	1	1	1	1	1
Elementary occupation	1	2	0	2	0	1
Small vendors	1	6	4	4	16	4
Military people, police	1	2	1	1	1	1
Pupils (grade 1-11)	36	6	10	14	9	19
Student (Univ. & collage)	7	4	8	15	1	9
Housewife	5	3	6	4	0	4
Disabled	2	1	1	1	0	1
Jobless	13	10	9	12	4	11
Retired	9	4	7	6	4	7
Others	4	14	8	5	18	8
Total	100	100	100	100	100	100

Table 4.2.3 Travel Demand by Occupation (% by Mode)

Occupation	Walking	Car	Taxi	Public Bus	Others	Total
Leader of branches, administration levels and units	15	49	9	20	7	100
Professional	20	33	15	32	1	100
Technical professional	15	40	11	28	6	100
Clerical worker	29	12	5	54	1	100
Service workers and shop and market sales worker	18	29	12	34	8	100
Skilled agriculture, forestry, livestock breeder and fishery worker	16	39	10	34	2	100
Craft and related trades	17	21	10	51	1	100
Plant and machine operator and assembler	21	18	13	45	3	100
Elementary occupation	27	26	3	44	0	100
Small vendors	11	34	10	36	10	100
Military people, police	19	38	6	36	2	100
Pupils (grade 1-11)	60	8	5	26	1	100
Student (Univ. & collage)	25	11	8	56	0	100
Housewife	36	18	13	33	0	100
Disabled	36	19	9	36	0	100
Jobless	35	21	8	36	1	100
Retired	43	15	10	30	1	100
Others	17	44	10	23	6	100
Total	31	24	9	33	2	100

Table 4.2.4 Travel Demand by Employment Sector (No.)

Employment Sector	Demand by Mode (trips/day)					
	Walking	Car	Taxi	Public Bus	Others	Total
Agriculture, hunting and forestry	2,490	3,864	562	2,093	258	9,267
Fishing, fishery	4,274	6,931	713	5,134	98	17,150
Mining and quarrying	5,289	13,463	7,861	7,061	740	34,414
Manufacturing	10,214	8,774	2,979	24,604	495	47,066
Electricity, gas and water supply	11,441	26,153	8,779	21,527	2,929	70,829
Construction	19,674	28,800	6,315	50,982	8,196	113,967
Trade	23,441	64,914	22,200	54,148	10,308	175,011
Other industrial sector	26,894	56,378	19,967	39,642	1,055	143,936
Whole sale and retail trade	13,032	36,137	10,673	44,044	74	103,960
Knitting and fabric	5,017	4,803	1,807	18,306	543	30,476
Food industry	8,747	9,801	5,558	21,814	6,686	52,606
Transport, storage and communication	24,996	97,607	12,032	32,537	27,056	194,228
Financial service	5,636	15,701	6,729	10,509	193	38,768
Science and technology	3,911	12,454	6,011	9,583	428	32,387
Real estate	3,999	16,451	3,777	5,037	0	29,264
Public administration, defence	26,679	47,947	14,388	33,763	1,498	124,275
Hotel and restaurant	6,159	11,152	5,391	16,183	130	39,015
Educational	58,006	38,715	18,077	64,403	129	179,330
Health care, social works etc.	17,144	15,457	11,553	25,691	49	69,894
Cultural and sport activities	3,313	7,119	3,695	7,140	331	21,598
Party and membership	1,179	974	604	650	0	3,407
Union and volunteer activities	2,386	0	1,669	2,261	0	6,316
Jobless	723,363	235,207	130,265	584,282	14,739	1,687,856
Other services	22,366	32,822	10,047	32,916	7,394	105,545
Total	1,029,650	791,624	311,652	1,114,310	83,329	3,330,565

Table 4.2.5 Travel Demand by Employment Sector (% by Employment Sector)

Employment Sector	Walking	Car	Taxi	Public Bus	Others	Total
Agriculture, hunting and forestry	0	0	0	0	0	0
Fishing, fishery	0	1	0	0	0	1
Mining and quarrying	1	2	3	1	1	1
Manufacturing	1	1	1	2	1	1
Electricity, gas and water supply	1	3	3	2	4	2
Construction	2	4	2	5	10	3
Trade	2	8	7	5	12	5
Other industrial sector	3	7	6	4	1	4
Whole sale and retail trade	1	5	3	4	0	3
Knitting and fabric	0	1	1	2	1	1
Food industry	1	1	2	2	8	2
Transport, storage and communication	2	12	4	3	32	6
Financial service	1	2	2	1	0	1
Science and technology	0	2	2	1	1	1
Real estate	0	2	1	0	0	1
Public administration, defence	3	6	5	3	2	4
Hotel and restaurant	1	1	2	1	0	1
Educational	6	5	6	6	0	5
Health care, social works etc.	2	2	4	2	0	2
Cultural and sport activities	0	1	1	1	0	1
Party and membership	0	0	0	0	0	0
Union and volunteer activities	0	0	1	0	0	0
Jobless	70	30	42	52	18	51
Other services	2	4	3	3	9	3
Total	100	100	100	100	100	100

Table 4.2.6 Travel Demand by Employment Sector (% by Mode)

Employment Sector	Walking	Car	Taxi	Public Bus	Others	Total
Agriculture, hunting and forestry	27	42	6	23	3	100
Fishing, fishery	25	40	4	30	1	100
Mining and quarrying	15	39	23	21	2	100
Manufacturing	22	19	6	52	1	100
Electricity, gas and water supply	16	37	12	30	4	100
Construction	17	25	6	45	7	100
Trade	13	37	13	31	6	100
Other industrial sector	19	39	14	28	1	100
Whole sale and retail trade	13	35	10	42	0	100
Knitting and fabric	16	16	6	60	2	100
Food industry	17	19	11	41	13	100
Transport, storage and communication	13	50	6	17	14	100
Financial service	15	40	17	27	0	100
Science and technology	12	38	19	30	1	100
Real estate	14	56	13	17	0	100
Public administration, defence	21	39	12	27	1	100
Hotel and restaurant	16	29	14	41	0	100
Educational	32	22	10	36	0	100
Health care, social works etc.	25	22	17	37	0	100
Cultural and sport activities	15	33	17	33	2	100
Party and membership	35	29	18	19	0	100
Union and volunteer activities	38	0	26	36	0	100
Jobless	43	14	8	35	1	100
Other services	21	31	10	31	7	100
Total	31	24	9	33	3	100

4.3 Public Transport Demand

Table 4.3.1 Market for Public Transport (1) (No.)

Occupation	No. of Trips (trips/day)					
	Public				Private	Total
	Minibus	Standard Bus	Trolley Bus	Total		
Leader of branches, administration levels and units	13,307	6,047	194	19,548	78,019	97,567
Professional	108,987	58,162	932	168,081	361,629	529,710
Technical professional	32,590	14,604	870	48,064	122,536	170,600
Clerical worker	28,927	11,221	224	40,372	34,978	75,350
Service workers and shop and market sales worker	56,310	14,296	539	71,145	140,883	212,028
Skilled agriculture, forestry, livestock breeder and fishery worker	3,673	1,024	106	4,803	9,412	14,215
Craft and related trades	10,655	3,647	0	14,302	13,550	27,852
Plant and machine operator and assembler	8,089	3,015	120	11,224	13,643	24,867
Elementary occupation	14,413	5,580	283	20,276	26,208	46,484
Small vendors	40,455	7,374	154	47,983	86,457	134,440
Military people, police	8,897	4,258	242	13,397	24,221	37,618
Pupils (grade 1-11)	93,430	67,201	1,201	161,832	461,996	623,828
Student (Univ. & collage)	70,109	100,271	557	170,937	136,054	306,991
Housewife	32,141	11,819	55	44,015	90,311	134,326
Disabled	8,260	7,500	179	15,939	28,625	44,564
Jobless	94,601	42,535	1,155	138,291	245,567	383,858
Retired	33,143	33,080	1,016	67,239	153,484	220,723
Others	43,937	15,960	313	60,210	196,211	256,421
Total	701,924	407,594	8,140	1,117,658	2,223,784	3,341,442

Table 4.3.2 Market for Public Transport (1) (% by Occupation)

Occupation	Demand (%)					
	Public				Private	Total
	Minibus	Standard Bus	Trolley Bus	Total		
Leader of branches, administration levels and units	2	1	2	2	4	3
Professional	16	14	11	15	16	16
Technical professional	5	4	11	4	6	5
Clerical worker	4	3	3	4	2	2
Service workers and shop and market sales worker	8	4	7	6	6	6
Skilled agriculture, forestry, livestock breeder and fishery worker	1	0	1	0	0	0
Craft and related trades	2	1	0	1	1	1
Plant and machine operator and assembler	1	1	1	1	1	1
Elementary occupation	2	1	3	2	1	1
Small vendors	6	2	2	4	4	4
Military people, police	1	1	3	1	1	1
Pupils (grade 1-11)	13	16	15	14	21	19
Student (Univ. & collage)	10	25	7	15	6	9
Housewife	5	3	1	4	4	4
Disabled	1	2	2	1	1	1
Jobless	13	10	14	12	11	11
Retired	5	8	12	6	7	7
Others	6	4	4	5	9	8
Total	100	100	100	100	100	100

Table 4.3.3 Market for Public Transport (1) (% by Mode)

Occupation	Demand (%)					
	Public				Private	Total
	Minibus	Standard Bus	Trolley Bus	Total		
Leader of branches, administration levels and units	14	6	0	20	80	100
Professional	21	11	0	32	68	100
Technical professional	19	9	1	28	72	100
Clerical worker	38	15	0	54	46	100
Service workers and shop and market sales worker	27	7	0	34	66	100
Skilled agriculture, forestry, livestock breeder and fishery worker	26	7	1	34	66	100
Craft and related trades	38	13	0	51	49	100
Plant and machine operator and assembler	33	12	0	45	55	100
Elementary occupation	31	12	1	44	56	100
Small vendors	30	5	0	36	64	100
Military people, police	24	11	1	36	64	100
Pupils (grade 1-11)	15	11	0	26	74	100
Student (Univ. & collage)	23	33	0	56	44	100
Housewife	24	9	0	33	67	100
Disabled	19	17	0	36	64	100
Jobless	25	11	0	36	64	100
Retired	15	15	0	30	70	100
Others	17	6	0	23	77	100
Total	21	12	0	33	67	100

Table 4.3.4 Market for Public Transport (2) (% by Vehicle Ownership and Income Level)

		%					
		Minibus	Standard	Trolley Bus	Public Total	Private	Total
Vehicle Ownership	None	80	80	79	80	58	65
	Bicycle	2	2	2	2	1	1
	M/C	1	1	2	1	2	2
	Car/Bus	16	16	17	16	35	29
	Truck	2	2	0	2	3	3
	Others	0	0	0	0	0	0
	Total	100	100	100	100	100	100
Household Income Level (tg000/month)	< 50	3	3	2	3	3	3
	< 75	5	6	9	5	5	5
	< 100	14	12	14	13	9	10
	< 200	41	41	38	41	33	36
	< 300	20	19	13	20	21	21
	< 400	8	9	7	8	12	10
	< 500	5	4	2	4	7	6
	> 500	4	4	12	4	8	7
	Unknown	2	2	3	2	2	2
	Total	100	100	100	100	100	100

Table 4.3.5 Market for Public Transport (2) (% by Mode)

		%					
		Minibus	Standard	Trolley Bus	Public Total	Private	Total
Vehicle Ownership	None	19	14	0	33	67	100
	Bicycle	22	15	0	37	63	100
	M/C	28	14	0	43	57	100
	Car/Bus	24	14	0	38	62	100
	Truck	20	11	0	32	68	100
	Others	15	10	0	25	75	100
	Total	16	7	0	23	77	100
Household Income Class (tg000/month)	< 50	19	14	0	33	67	100
	< 75	22	15	0	37	63	100
	< 100	28	14	0	43	57	100
	< 200	24	14	0	38	62	100
	< 300	20	11	0	32	68	100
	< 400	15	10	0	25	75	100
	< 500	16	7	0	23	77	100
	> 500	12	7	0	20	80	100
	Unknown	19	12	0	32	68	100
Total	21	12	0	33	67	100	

Table 4.3.6 Public Transport Use of Residents (%)

		Frequency of Public Transportation Use					
		Daily	3/week	Once a week	Rarely	Never	Total
Car Ownership	Yes	46	7	2	26	18	100
	No	58	8	3	24	8	100
	Total	55	8	3	24	10	100
Gender	Male	55	8	3	24	10	100
	Female	55	8	3	25	9	100
	Total	55	8	3	24	10	100
Occupation	Leader of branches, administration levels and units	38	10	5	21	26	100
	Professional	56	9	2	22	10	100
	Technical professional	59	10	4	21	6	100
	Clerical worker	40	8	0	42	10	100
	Service workers and shop and market sales worker	48	9	5	27	11	100
	Skilled agriculture, forestry, livestock breeder and fishery worker	71	0	0	14	14	100
	Craft and related trades	57	7	0	21	14	100
	Plant and machine operator and assembler	38	19	6	25	13	100
	Elementary occupation	73	10	3	13	3	100
	Small vendors	54	1	10	21	13	100
	Military people, police	64	16	0	8	12	100
	Pupils (grade 1-11)	57	7	2	23	10	100
	Student (Univ. & collage)	68	6	1	19	6	100
	Housewife	50	8	1	31	11	100
	Disabled	33	10	4	40	14	100
	Jobless	50	8	4	28	11	100
	Retired	41	10	4	36	9	100
Others	0	8	5	21	10	100	
Total	55	8	3	24	10	100	

4.4 Assessment of Transportation Services

1) Reason for the Choice of Transportation Modes

Table 4.4.1 Reason for the Choice of Modes (%)

Mode	Travel time	Comfort	Convenience	Cost	Safety	No other choice	Total	
Walking	3	2	26	6	1	62	100	
Bicycle	4	2	22	10	2	60	100	
Car	7	30	18	2	5	38	100	
Subtotal	8	27	18	2	5	39	100	
Public Bus	Minibus	17	5	19	17	2	39	100
	Standard Bus	5	1	19	24	2	48	100
	Trolley Bus	2	1	11	49	1	36	100
Total	10	12	20	9	3	46	100	

Table 4.4.2 Assessment of Travel Modes (%)

Mode		Walking	Bicycle	Car	Public Bus			Taxi
					Minibus	Standard Bus	Trolley Bus	
Travel Time	Good/ Very Good	72	59	78	37	31	31	75
	So-so	27	41	18	56	60	44	23
	Bad/ Very Bad	2	0	4	7	9	25	2
Convenient	Good/ Very Good	70	62	84	34	29	29	79
	So-so	27	38	14	54	58	53	20
	Bad/ Very Bad	2	0	2	12	13	18	1
Safety	Good/ Very Good	67	55	79	31	28	31	73
	So-so	28	39	19	51	55	57	24
	Bad/ Very Bad	4	6	3	18	17	12	3
Overall Assessment	Good/ Very Good	70	63	82	34	30	33	77
	So-so	28	37	17	56	60	51	21
	Bad/ Very Bad	2	0	1	10	10	16	2

2) Assessment of Transport Services by Mode

Table 4.4.3 Assessment of Transport Services by Mode (%)

	Walking	2-wheel	Car	Public Bus	Taxi	Truck	Other Private	Other Public	Total
Expense of Travel (tg/trip)	453	192	746	262	1,086	673	365	665	464
Parking Place	Sidewalk	24	0	3	16	19	0	0	3
	On-Road	8	33	15	24	55	0	0	14
	Off-road	52	58	47	45	26	63	67	48
	Inside house	15	9	35	15	0	37	33	35
	Total	100	100	100	100	100	100	100	100
Reason of Mode Choice	Travel time	3	3	7	13	25	20	2	11
	Comfort	2	4	30	4	31	0	9	12
	Convenience	26	22	18	19	12	12	16	32
	Cost	6	8	2	20	3	3	5	9
	Safety	1	2	5	2	9	8	2	3
	No other choice	62	61	38	42	20	59	66	53
	Total	100	100	100	100	100	100	100	100
Travel Time	Very Bad	0	0	1	1	0	0	0	0
	Bad	1	0	4	8	1	4	3	4
	So-so	27	40	18	57	23	8	28	34
	Good	67	51	69	33	70	88	61	57
	Very Good	4	9	8	1	5	0	9	4
	Total	100	100	100	100	100	100	100	100
Convenient	Very Bad	0	0	0	0	0	0	0	0
	Bad	2	0	2	12	1	0	0	5
	So-so	27	36	14	55	20	4	28	33
	Good	66	55	75	31	73	96	60	58
	Very Good	5	9	9	1	6	0	12	4
	Total	100	100	100	100	100	100	100	100
Safety	Very Bad	0	0	0	1	0	0	0	0
	Bad	4	4	2	17	3	4	1	8
	So-so	28	39	19	52	24	17	29	33
	Good	63	48	71	29	67	79	57	54
	Very Good	5	9	8	1	6	0	13	4
	Total	100	100	100	100	100	100	100	100
Overall	Very Bad	0	0	0	0	0	0	0	0
	Bad	2	0	1	10	1	0	0	4
	So-so	28	37	17	57	21	10	28	34
	Good	63	52	72	31	70	90	59	56
	Very Good	6	11	10	2	7	0	13	6
	Total	100	100	100	100	100	100	100	100
Overall (Travel Time (min))	Very Bad	23	-	20	50	46	-	-	38
	Bad	23	-	44	48	21	-	57	44
	So-so	17	27	36	42	29	54	47	34
	Good	13	22	31	38	27	33	42	26
	Very Good	13	26	30	43	26	-	25	25
	Total	14	24	32	41	27	35	41	86

3) Assessment of Existing Transport Situation

Table 4.4.4 People's Assessment of Existing Traffic Situation (%)

Profile of Respondents		Assessment of Congestion (%)				
		Very Bad	Bad	So-so	Good /Very Good	Total
Car Ownership	Yes	31	53	13	3	100
	No	29	52	16	3	100
Gender	Male	29	53	15	3	100
	Female	30	52	15	3	100
Age Group	10>	27	53	17	3	100
	10 - 15	30	52	14	4	100
	16 - 50	30	52	15	3	100
	51 - 70	31	51	15	3	100
	71<=	22	56	19	3	100

Profile of Respondents		Assessment of Convenience (%)				
		Very Bad	Bad	So-so	Good /Very Good	Total
Car Ownership	Yes	18	51	29	3	100
	No	14	51	31	4	100
Gender	Male	15	50	31	4	100
	Female	15	51	30	3	100
Age Group	10>	14	51	32	3	100
	10 - 15	15	54	27	5	100
	16 - 50	15	50	32	3	100
	51 - 70	19	50	28	2	100
	71<=	15	51	30	4	100

Profile of Respondents		Assessment of Walking Environment (%)				
		Very Bad	Bad	So-so	Good /Very Good	Total
Car Ownership	Yes	19	45	30	6	100
	No	18	45	32	6	100
Gender	Male	18	44	33	6	100
	Female	18	46	30	6	100
Age Group	10>	19	45	32	5	100
	10 - 15	18	44	32	7	100
	16 - 50	18	45	31	6	100
	51 - 70	21	45	31	4	100
	71<=	15	44	33	8	100

Profile of Respondents		Assessment of Car Parking (%)				
		Very Bad	Bad	So-so	Good /Very Good	Total
Car Ownership	Yes	14	46	34	6	100
	No	12	44	38	6	100
Gender	Male	12	44	38	6	100
	Female	12	45	36	7	100
Age Group	10>	12	46	37	5	100
	10 - 15	13	42	37	8	100
	16 - 50	12	45	37	6	100
	51 - 70	13	46	35	7	100
	71<=	11	44	40	5	100

Table 4.4.5 Assessment of Traffic Situation by District (%)

		District									Total
		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	
Congestion	Very Bad	27	37	29	27	36	29	11	0	10	29
	Bad	53	50	51	54	54	57	49	44	37	52
	Fair	18	12	17	17	9	13	29	39	24	15
	Good	2	1	3	2	1	2	11	17	29	3
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	101	100	100	100	100
Safety	Very Bad	17	27	16	14	22	20	5	0	5	18
	Bad	53	51	52	54	55	54	41	39	30	52
	Fair	27	21	29	29	22	24	47	44	37	27
	Good	3	1	3	3	2	2	7	17	28	3
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	101	100	100	100	100	100
Convenience	Very Bad	12	21	16	13	20	14	6	0	2	15
	Bad	48	50	53	53	54	51	38	39	34	51
	Fair	36	28	29	31	24	31	46	39	39	30
	Good	3	0	3	3	2	3	10	22	25	4
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	99	99	101	100	100	99	100	100	100	100
Exhaust Gas	Very Bad	34	48	37	37	41	37	27	6	21	38
	Bad	43	39	44	45	46	43	30	39	29	43
	Fair	21	12	16	15	12	18	35	39	25	16
	Good	2	1	3	2	1	2	8	17	24	3
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	99	100	100	100	101	100	100
Walking Environment for Pedestrians	Very Bad	13	24	18	17	20	19	13	0	12	18
	Bad	49	44	45	46	49	44	26	28	21	45
	Fair	34	29	30	33	26	32	51	56	40	31
	Good	4	2	7	5	5	4	10	17	27	6
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Public Transportation	Very Bad	6	11	9	8	11	9	4	0	2	9
	Bad	30	31	28	30	32	32	20	22	21	30
	Fair	47	45	45	46	41	48	57	61	41	45
	Good	17	14	17	16	15	11	19	17	36	16
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Car Parking	Very Bad	9	16	13	11	15	15	4	0	2	12
	Bad	47	49	42	44	48	49	29	22	29	45
	Fair	40	32	38	39	31	32	60	61	40	37
	Good	4	3	8	7	6	4	7	17	29	6
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100

Table 4.4.6 Negative Cause of Traffic Congestion and Safety (%)

		District									Total
		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	
Cause of Traffic Congestion	Increase of car traffic	34	34	34	33	32	34	34	31	39	33
	Mixture of other traffic modes	7	6	8	7	6	4	6	13	10	7
	Lack of traffic lights	5	5	6	5	7	4	3	0	1	6
	Lack of roads	14	11	10	13	16	15	16	0	8	13
	Bad road condition	13	11	14	12	10	15	9	13	4	12
	Undisciplined people's driving manner	19	23	18	19	19	19	20	31	28	20
	Insufficiency of public transport	1	2	2	2	2	2	2	0	1	2
	Lack of traffic management and enforcement	4	5	5	5	6	5	6	13	7	5
	Behaviour of pedestrians crossing road	2	2	2	3	2	1	4	0	2	2
	Others	1	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Cause of Traffic Safety	Increase of car traffic	18	18	18	17	18	19	15	0	10	18
	Mixture of other traffic modes	8	5	7	5	7	6	6	0	0	6
	Lack of traffic lights	9	10	10	10	9	9	15	0	15	10
	Lack of roads	16	12	13	12	14	11	16	21	26	13
	Bad road condition	20	22	21	21	19	18	24	43	26	21
	Undisciplined people's driving manner	20	23	18	21	21	25	17	14	11	21
	Insufficiency of public transport	2	2	4	2	3	3	2	0	2	3
	Lack of traffic management and enforcement	2	5	6	5	7	6	3	7	6	5
	Behaviour of pedestrians crossing road	4	4	3	6	3	4	3	14	3	4
	Others	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100

Table 4.4.7 Comparison of Traffic Situation to that 5 Years Ago (No. and %)

		District									Total
		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	
Congestion	Very much worse	137	169	204	199	178	83	5	0	3	978
	Worse	264	274	512	523	409	209	61	8	49	2,309
	Worse but not much	153	76	122	188	86	101	40	0	37	803
	Same	31	14	56	45	20	8	22	3	23	222
	Better	1	9	11	6	6	2	3	4	8	50
	Don't know	11	8	37	26	41	13	5	3	10	154
	Total	597	550	942	987	740	416	136	18	130	4,516
Safety	Very much worse	83	131	144	144	112	55	4	0	3	676
	Worse	281	278	475	509	410	209	46	7	45	2,260
	Worse but not much	157	85	169	194	121	110	61	0	40	937
	Same	53	28	90	82	48	23	16	4	24	368
	Better	8	18	26	30	6	4	4	4	8	108
	Don't know	15	9	40	32	45	15	5	3	10	174
	Total	597	549	944	991	742	416	136	18	130	4,523
Convenience	Very much worse	42	86	107	113	79	46	8	0	5	486
	Worse	256	255	406	478	343	185	42	5	40	2,010
	Worse but not much	164	108	210	209	144	120	40	0	32	1,027
	Same	84	52	106	96	99	39	34	6	37	553
	Better	35	39	71	65	32	9	6	4	7	268
	Don't know	15	10	44	30	43	16	6	3	10	177
	Total	596	550	944	991	740	415	136	18	131	4,521
Exhaust Gas	Very much worse	185	227	330	328	253	131	33	0	26	1,513
	Worse	224	225	383	427	324	142	31	8	35	1,799
	Worse but not much	137	58	114	157	82	97	38	0	29	712
	Same	37	23	69	48	42	32	24	3	25	303
	Better	4	9	10	6	4	1	3	4	6	47
	Don't know	10	8	36	24	37	13	7	3	10	148
	Total	597	550	942	990	742	416	136	18	131	4,522
Walking Environment for Pedestrians	Very much worse	47	90	154	125	97	65	14	0	14	606
	Worse	236	217	347	405	305	133	36	5	28	1,712
	Worse but not much	168	144	162	213	125	128	42	0	39	1,021
	Same	98	61	155	146	115	57	35	6	28	701
	Better	37	27	82	73	55	19	4	4	12	313
	Don't know	11	11	42	30	45	14	5	3	10	171
	Total	597	550	942	992	742	416	136	18	131	4,524
Public Transportation	Very much worse	30	44	72	61	49	25	4	0	3	288
	Worse	137	176	222	265	201	97	29	5	26	1,158
	Worse but not much	158	125	194	217	132	130	48	0	27	1,031
	Same	134	89	201	227	158	70	35	6	29	949
	Better	125	102	208	189	154	77	14	4	36	909
	Don't know	13	14	47	31	48	17	6	3	10	189
	Total	597	550	944	990	742	416	136	18	131	4,524

Table 4.4.8 Assessment of Traffic Conditions and Required Improvement Measures by District

		UB and Study Area					UB by Districts									
		6 Districts	Bagak hangai	Baga nuur	Nalaikh	Total	Chingeltei	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uul	Nalaikh	Bagak hangai	Baga nuur	Total
Overall Traffic Conditions (% Bad/Very Bad)	Congestion	83	44	47	60	82	81	88	80	81	90	86	60	44	47	82
	Safety	71	39	35	46	70	70	78	68	68	76	74	46	39	35	70
	Convenience	67	39	36	44	66	60	71	69	66	74	65	44	39	36	66
	Exhaust gas	82	44	50	57	81	77	87	81	82	86	80	57	44	50	81
	Walking Environment for pedestrians	64	28	33	39	63	62	69	63	63	69	64	39	28	33	63
	Public Transportation	39	22	23	24	38	36	41	38	38	43	42	24	22	23	38
	Car Parking	58	22	31	33	57	56	65	55	55	63	64	33	22	31	57
Required Improvement Measures (% Support/Strongly support)	Construction/improvement of arterial roads	97	94	98	100	97	98	99	96	96	94	99	100	94	98	97
	Construction/improvement of district roads	96	94	97	99	96	98	98	96	96	92	99	99	94	97	96
	Strict control of traffic	96	94	97	98	96	97	98	96	96	93	99	98	94	97	96
	Increasing car registration tax	55	72	40	65	54	53	51	57	60	48	53	65	72	40	54
	Installation of traffic signals	95	94	95	99	95	96	96	95	95	93	97	99	94	95	95
	Strict control of car parking	96	94	97	99	96	97	97	96	96	94	98	99	94	97	96
	Improvement of bus and taxi stops	97	94	98	100	97	97	96	97	97	94	98	100	94	98	97
	Improvement of conditions for pedestrians	96	94	96	99	96	96	96	97	96	94	97	99	94	96	96
	Introduction of bus lanes	94	94	95	100	95	93	96	96	95	89	98	100	94	95	95
	Expansion of bus routes	95	94	92	99	95	94	96	95	95	91	98	99	94	92	95
	Expansion of bus capacity	91	94	85	91	91	90	92	92	93	88	92	91	94	85	91
	Restriction of minibus	73	89	65	75	73	72	70	72	77	74	69	75	89	65	73
	Restriction of truck traffic entering to city center	75	89	66	78	75	76	72	73	79	75	71	78	89	66	75
Introduction of bus for the disabled	92	89	84	93	92	93	90	94	95	87	90	93	89	84	92	

4) Assessment of Public Transportation Services

Table 4.4.9 Assessment of Public Transport Services (%)

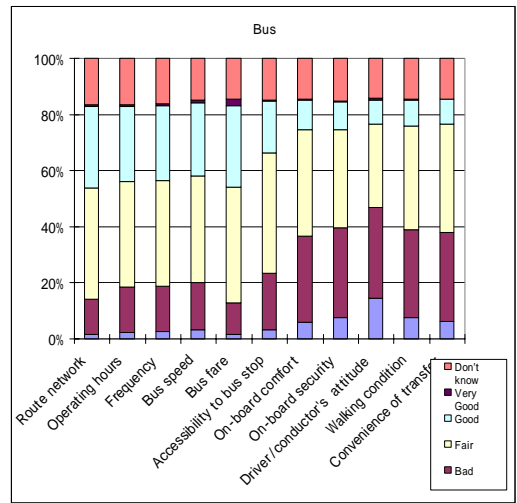
		No. of Trips					Total
		Minibus	Standard Bus	Trolley Bus	Public Total	Private	
Reason of Mode Choice	Travel time	17	5	2	13	8	10
	Comfort	5	1	1	4	16	12
	Convenience	19	19	11	19	21	20
	Cost	17	24	49	20	4	9
	Safety	2	2	1	2	4	3
	No other choice	39	48	36	42	47	46
	Total	100	100	100	100	100	100
Travel Time	Very Bad	0	1	2	1	0	0
	Bad	7	9	24	8	2	4
	So-so	56	60	44	57	23	34
	Good	36	29	31	33	69	57
	Very Good	1	1	0	1	6	4
	Total	100	100	100	100	100	100
Convenient	Very Bad	0	0	0	0	0	0
	Bad	11	13	18	12	2	5
	So-so	54	58	53	55	21	33
	Good	33	28	29	31	71	58
	Very Good	1	1	0	1	6	4
	Total	100	100	100	100	100	100
Safety	Very Bad	1	1	0	1	0	0
	Bad	17	16	12	17	3	8
	So-so	51	55	57	52	24	33
	Good	30	27	31	29	67	54
	Very Good	1	1	0	1	6	4
	Total	100	100	100	100	100	100
Overall	Very Bad	0	0	0	0	0	0
	Bad	9	10	16	10	1	4
	So-so	56	60	51	57	23	34
	Good	32	28	33	31	68	56
	Very Good	2	2	0	2	8	6
	Total	100	100	100	100	100	100
Overall (Travel Time (min))	Very Bad	49	51	-	50	25	38
	Bad	47	51	56	48	29	44
	So-so	41	44	44	42	24	34
	Good	37	41	49	38	23	26
	Very Good	45	40	30	43	23	25
	Total	40	44	47	41	23	29

Table 4.4.10 People's Assessment of Bus Services (% of Bad & Very Bad)

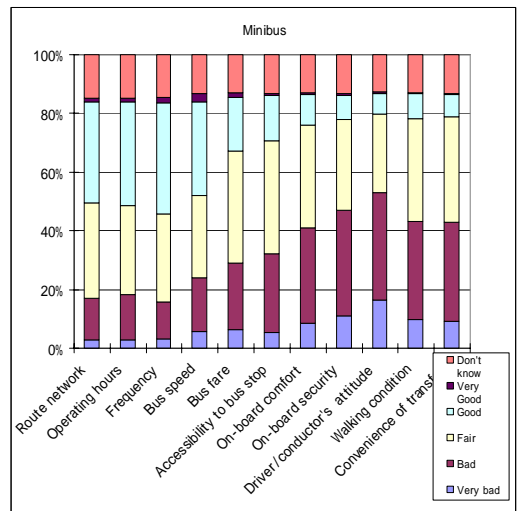
		Overall	Car Ownership		Frequent Bus Users
			Yes	No	
Standard Bus	Route Network	17	19	17	18
	Frequency	23	24	22	23
	Fare	15	16	15	15
	On-board comfort	43	45	42	44
	Driver attitude	54	54	55	56
	Transfer convenience	44	45	44	46
Minibus	Route Network	20	23	19	20
	Frequency	18	20	18	18
	Fare	33	34	33	33
	On-board comfort	47	50	47	47
	Driver attitude	61	59	61	62
Trolley Bus	Transfer convenience	49	50	49	50
	Route Network	27	29	27	28
	Frequency	36	40	35	37
	Fare	16	16	16	16
	On-board comfort	45	44	46	48
Driver attitude	46	43	47	48	
Transfer convenience	46	45	47	47	

Table 4.4.11 / Figure 4.4.1 Assessment of Bus Services

Standard Bus	Very Bad	Bad	Fair	Good	Very Good	Don't know
Route network	73	574	1,774	1,320	32	741
Operating hours	102	739	1,697	1,206	27	752
Frequency	115	739	1,696	1,213	31	729
Bus speed	147	761	1,712	1,185	44	672
Bus fare	76	502	1,866	1,321	98	655
Accessibility to bus stop	142	914	1,945	828	21	671
On-board comfort	266	1,390	1,720	473	15	659
On-board security	347	1,446	1,581	440	13	690
Driver/conductor's attitude	660	1,451	1,348	397	19	645
Walking condition	341	1,412	1,672	428	16	651
Convenience of transfer	277	1,439	1,736	407	8	651



Minibus	Very Bad	Bad	Fair	Good	Very Good	Don't know
Route network	133	639	1,468	1,549	61	668
Operating hours	135	692	1,368	1,593	67	665
Frequency	138	576	1,352	1,716	89	650
Bus speed	257	823	1,268	1,445	123	598
Bus fare	278	1,034	1,721	824	67	590
Accessibility to bus stop	240	1,209	1,747	698	23	601
On-board comfort	388	1,470	1,579	473	19	590
On-board security	505	1,620	1,393	381	16	606
Driver/conductor's attitude	747	1,641	1,221	313	21	576
Walking condition	447	1,506	1,584	378	15	591
Convenience of transfer	411	1,528	1,627	342	13	599



Trolley Bus	Very Bad	Bad	Fair	Good	Very Good	Don't know
Route network	120	495	1,128	499	15	2,259
Operating hours	117	609	1,046	454	16	2,272
Frequency	136	695	1,001	437	22	2,222
Bus speed	282	879	804	339	44	2,168
Bus fare	86	292	753	928	317	2,136
Accessibility to bus stop	124	589	1,194	397	33	2,176
On-board comfort	224	840	1,033	234	18	2,166
On-board security	124	589	1,194	397	33	2,176
Driver/conductor's attitude	380	715	954	294	21	2,155
Walking condition	235	790	1,092	219	13	2,169
Convenience of transfer	246	842	1,065	195	9	2,162

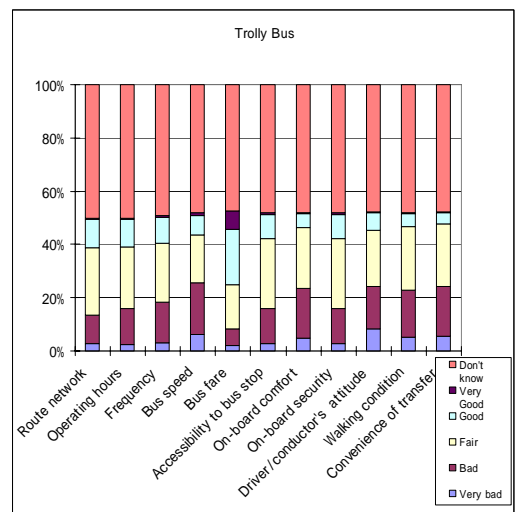


Table 4.4.12 Assessment of Public Transportation Service by District (%)

		UB and Study Area					UB by Districts									
		6 Districts	Bagak hangar	Baga nuur	Nalaikh	Total	Ching elter	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uul	Nalaikh	Bagak hangar	Baga nuur	Total
Use of Public Transport (%)	Daily	46	11	5	15	44	50	49	50	49	34	49	15	11	5	44
	Once a week	11	0	2	6	11	13	10	10	12	9	15	6	0	2	11
	3 times a week	8	6	8	13	8	6	7	8	7	10	8	13	6	8	8
	5 times a week	3	0	5	7	3	1	1	3	2	5	2	7	0	5	3
	Rarely	24	50	49	46	24	20	23	21	23	28	21	46	50	49	24
	Never	9	33	31	13	10	10	8	8	8	14	5	13	33	31	10
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Reason for Not Using Public Transport (%)	Far from bus stops	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	No available bus route	2	0	2	0	2	1	1	4	1	2	0	0	0	2	2
	Not punctual schedule	1	0	0	0	1	2	1	1	1	1	1	0	0	0	1
	Uncomfortable on-board	3	0	2	0	3	4	2	3	2	5	1	0	0	2	3
	Low frequency of bus operation	1	0	0	0	1	1	1	1	0	1	1	0	0	0	1
	Using another transport mode	19	0	4	9	18	13	14	19	22	27	11	9	0	4	18
	Too high fare	1	0	0	0	0	1	0	2	0	0	1	0	0	0	0
	Take too much time	3	0	0	1	2	2	5	3	2	4	0	1	0	0	2
	Others	70	100	92	90	72	77	75	67	71	58	83	90	100	92	72
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Assessment of Bus Service (Bus) (% Bad/Very Bad)	Route network	15	17	1	9	14	13	16	14	14	17	9	17	1	14	
	Operating hours	19	11	2	15	19	17	24	18	18	21	21	15	11	2	19
	Frequency	19	11	5	17	19	19	21	18	19	20	22	17	11	5	19
	Bus speed	21	11	4	12	20	20	20	22	22	20	19	12	11	4	20
	Bus fare	13	11	5	11	13	12	11	15	14	11	13	11	11	5	13
	Accessibility to bus stop	24	11	4	10	23	24	25	22	27	23	26	10	11	4	23
	On-board comfort	38	11	3	15	37	36	41	37	38	40	41	15	11	3	37
	On-board security	41	11	2	24	40	39	45	42	41	40	43	24	11	2	40
	Driver/conductor's attitude	48	11	15	35	47	50	54	47	47	41	55	35	11	15	47
	Walking condition	40	11	2	29	39	39	40	42	40	40	41	29	11	2	39
Convenience of transfer	39	11	4	27	38	37	38	39	39	43	42	27	11	4	38	
Assessment of Bus Service (Minibus) (% Bad/Very Bad)	Route network	17	11	8	11	17	12	15	19	15	25	19	11	11	8	17
	Operating hours	19	11	8	13	18	14	19	19	17	22	23	13	11	8	18
	Frequency	16	11	8	9	16	13	15	17	17	17	19	9	11	8	16
	Bus speed	24	11	8	13	24	21	23	26	24	29	25	13	11	8	24
	Bus fare	29	11	18	20	29	28	29	31	28	31	32	20	11	18	29
	Accessibility to bus stop	33	11	11	18	32	31	33	32	33	38	32	18	11	11	32
	On-board comfort	42	11	12	24	41	39	44	43	40	47	43	24	11	12	41
	On-board security	48	11	13	30	47	47	49	49	47	52	50	30	11	13	47
	Driver/conductor's attitude	54	11	31	42	53	55	57	54	51	51	62	42	11	31	53
	Walking condition	44	11	17	32	43	42	43	46	45	43	49	32	11	17	43
Convenience of transfer	44	11	15	30	43	39	43	44	44	48	48	30	11	15	43	
Assessment of Bus Service (Trolley Bus) (% Bad/Very Bad)	Route network	14	11	2	4	14	12	12	15	14	19	11	4	11	2	14
	Operating hours	17	11	2	6	16	13	15	17	18	22	12	6	11	2	16
	Frequency	19	11	2	4	18	16	17	19	21	27	12	4	11	2	18
	Bus speed	26	11	2	5	26	25	25	28	28	34	19	5	11	2	26
	Bus fare	9	11	1	3	8	8	7	11	9	9	7	3	11	1	8
	Accessibility to bus stop	16	11	1	7	16	15	14	15	19	21	12	7	11	1	16
	On-board comfort	24	11	0	10	24	23	25	25	25	30	19	10	11	0	24
	On-board security	24	11	3	13	24	23	23	25	25	29	20	13	11	3	24
	Driver/conductor's attitude	25	11	16	18	24	28	29	23	23	23	25	18	11	16	24
	Walking condition	23	11	1	15	23	24	19	24	26	26	21	15	11	1	23
Convenience of transfer	25	11	1	15	24	25	20	26	25	32	20	15	11	1	24	
Desire for Public Transport Improvement (%)	Overall (% Yes)	98	83	93	99	97	98	97	98	98	96	99	99	83	93	97
	Type1. Taxi	7	0	10	4	7	7	5	8	8	8	6	4	0	10	7
	Type2. Bus	28	33	22	34	28	29	28	29	29	25	29	34	33	22	28
	Type3. Microbus	10	23	17	24	10	14	6	9	12	6	8	24	23	17	10
	Type4. Rapid bus	12	20	5	8	12	11	12	12	13	13	10	8	20	5	12
	Type5. Elevated railway	13	10	19	13	13	12	16	12	11	15	15	13	10	19	13
	Type6. Trolley bus	6	3	2	2	6	6	5	5	6	6	8	2	3	2	6
	Type7. Underground railway	24	10	25	15	24	22	28	25	22	27	24	15	10	25	24
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

Table 4.4.13 Assessment of Bus Services by District (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur
Route Network	Very bad	1	3	1	1	2	1	0	0
	Bad	12	13	13	13	15	14	17	1
	Fair	43	40	42	42	34	40	30	6
	Good	32	32	27	30	24	38	37	6
	Very good	1	1	0	1	0	1	1	0
	Don't know	10	12	16	14	25	4	23	72
Total	100	100	100	100	100	100	100	100	100
Operating Hours	Very bad	1	3	3	2	2	2	3	0
	Bad	15	20	15	16	18	19	12	11
	Fair	41	36	42	41	33	38	22	11
	Good	31	27	23	27	22	36	39	6
	Very good	1	1	1	0	1	0	1	0
	Don't know	11	12	16	14	25	4	23	72
Total	100	100	100	100	100	100	100	100	100
Frequency	Very bad	2	3	3	2	3	3	3	0
	Bad	17	17	15	17	17	19	14	11
	Fair	40	40	41	40	32	39	21	11
	Good	30	27	22	27	25	35	35	6
	Very good	1	1	1	1	0	0	4	0
	Don't know	10	12	17	14	23	4	23	72
Total	100	100	100	100	100	100	100	100	100
Bus Speed	Very bad	3	5	4	4	3	2	1	0
	Bad	17	15	18	19	17	17	10	11
	Fair	42	41	37	40	35	43	28	11
	Good	28	27	24	25	24	34	34	6
	Very good	1	1	1	0	1	1	4	0
	Don't know	9	10	16	13	20	4	23	72
Total	100	100	100	100	100	100	100	100	100
Bus Fare	Very bad	1	2	3	1	2	1	1	0
	Bad	12	8	13	13	9	11	10	11
	Fair	43	44	40	44	37	48	35	11
	Good	32	32	27	28	30	34	25	6
	Very good	4	3	2	1	2	2	6	0
	Don't know	9	10	15	12	19	4	23	72
Total	100	100	100	100	100	100	100	100	100
Accessibility to Bus Stop	Very bad	2	4	3	3	4	4	1	0
	Bad	22	21	20	24	19	22	10	11
	Fair	48	48	44	41	38	48	44	11
	Good	18	17	17	19	19	21	22	6
	Very good	1	0	1	0	0	1	0	0
	Don't know	9	11	16	13	19	4	24	72
Total	100	100	100	100	100	100	100	100	100
On-board Comfort	Very bad	5	9	5	6	6	8	1	0
	Bad	31	32	32	31	34	33	15	11
	Fair	45	41	35	39	32	42	42	11
	Good	10	7	11	10	10	12	18	6
	Very good	0	0	0	0	0	1	1	0
	Don't know	9	11	16	12	18	4	24	72
Total	100	100	100	100	100	100	100	100	100
On-board Security	Very bad	6	11	8	7	9	7	2	0
	Bad	33	33	34	34	31	36	22	11
	Fair	43	37	29	36	32	41	35	11
	Good	8	7	12	10	9	11	16	6
	Very good	1	0	0	0	1	0	0	0
	Don't know	10	11	16	13	19	4	24	72
Total	100	100	100	100	100	100	100	100	100
Driver/Conductor's Attitude	Very bad	9	15	8	7	7	9	10	0
	Bad	19	14	15	16	17	17	9	11
	Fair	20	16	20	26	25	21	13	0
	Good	3	6	8	7	6	8	4	11
	Very good	0	0	1	0	0	1	1	0
	Don't know	48	49	48	43	45	45	64	78
Total	100	100	100	100	100	100	100	100	100
Walking Condition	Very bad	4	6	5	6	7	3	3	0
	Bad	20	13	19	20	18	18	13	11
	Fair	25	28	21	24	24	29	16	0
	Good	3	4	6	6	4	5	4	11
	Very good	0	0	1	0	0	0	1	0
	Don't know	49	49	49	43	46	45	64	78
Total	100	100	100	100	100	100	100	100	100
Convenience of Transfer	Very bad	4	7	5	6	7	3	4	0
	Bad	21	13	20	18	25	18	11	11
	Fair	23	29	20	27	19	29	18	0
	Good	3	3	6	5	4	5	3	11
	Very good	0	0	0	0	0	0	0	0
	Don't know	49	49	48	43	45	45	64	78
Total	100	100	100	100	100	100	100	100	100

Table 4.4.14 Assessment of Minibus Services by District (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur
Route Network	Very bad	2	3	3	3	4	3	1	0
	Bad	10	12	15	13	20	15	10	8
	Fair	37	31	33	34	29	31	31	17
	Good	40	36	34	33	22	44	48	17
	Very good	2	3	1	1	1	0	1	0
	Don't know	9	15	13	16	23	6	10	56
Total	100	100	100	100	100	100	100	100	100
Operating Hours	Very bad	1	4	4	3	4	4	0	0
	Bad	13	15	16	15	17	18	13	11
	Fair	35	27	31	32	27	29	30	22
	Good	40	38	35	35	26	42	45	11
	Very good	3	1	1	1	2	1	5	0
	Don't know	9	15	13	16	23	6	7	56
Total	100	100	100	100	100	100	100	100	100
Frequency	Very bad	1	3	4	3	3	5	1	0
	Bad	11	12	13	14	14	14	8	11
	Fair	34	28	30	31	26	32	32	22
	Good	42	40	38	36	32	42	48	11
	Very good	3	2	2	1	3	1	4	0
	Don't know	9	15	13	15	23	6	7	56
Total	100	100	100	100	100	100	100	100	100
Bus Speed	Very bad	3	7	5	5	9	7	1	0
	Bad	18	16	21	19	19	18	12	11
	Fair	29	25	27	31	27	30	32	22
	Good	39	33	32	30	23	38	39	11
	Very good	3	4	2	1	3	2	8	0
	Don't know	8	15	13	14	19	5	8	56
Total	100	100	100	100	100	100	100	100	100
Bus Fare	Very bad	6	7	5	5	5	10	6	0
	Bad	22	21	26	22	26	22	14	11
	Fair	40	35	39	40	36	43	38	22
	Good	21	19	17	17	14	18	28	11
	Very good	3	3	1	1	1	2	6	0
	Don't know	8	15	12	14	18	5	8	56
Total	100	100	100	100	100	100	100	100	100
Accessibility to Bus Stop	Very bad	4	5	6	5	8	7	2	0
	Bad	27	29	26	28	30	25	15	11
	Fair	41	39	37	39	33	44	57	22
	Good	19	13	18	13	11	18	18	11
	Very good	1	0	0	1	1	0	0	0
	Don't know	8	15	13	14	18	5	8	56
Total	100	100	100	100	100	100	100	100	100
On-board Comfort	Very bad	6	12	8	8	11	11	1	0
	Bad	33	33	35	32	36	32	22	11
	Fair	42	33	32	37	28	40	47	22
	Good	10	8	12	9	7	12	21	11
	Very good	1	0	1	0	1	0	1	0
	Don't know	8	15	12	14	17	5	8	56
Total	100	100	100	100	100	100	100	100	100
On-board Security	Very bad	9	14	12	10	13	14	4	0
	Bad	38	35	37	37	39	35	26	11
	Fair	37	30	28	32	26	32	40	22
	Good	7	6	9	7	5	13	20	11
	Very good	1	0	1	0	0	0	1	0
	Don't know	9	16	13	14	17	5	8	56
Total	100	100	100	100	100	100	100	100	100
Driver/Conductor's Attitude	Very bad	17	23	17	16	16	19	6	0
	Bad	38	34	37	35	35	43	36	11
	Fair	31	25	25	27	26	27	36	22
	Good	6	4	8	7	5	6	14	11
	Very good	1	0	0	0	1	0	0	0
	Don't know	7	15	12	14	16	5	8	56
Total	100	100	100	100	100	100	100	100	100
Walking Condition	Very bad	7	10	12	10	10	12	8	0
	Bad	35	32	34	35	33	37	24	11
	Fair	42	38	31	32	31	40	45	22
	Good	8	4	10	9	8	6	14	11
	Very good	1	0	1	0	1	0	0	0
	Don't know	8	15	13	14	17	5	9	56
Total	100	100	100	100	100	100	100	100	100
Convenience of Transfer	Very bad	7	9	9	9	13	11	4	0
	Bad	32	34	35	35	35	37	26	11
	Fair	45	37	33	35	29	41	45	22
	Good	8	4	10	7	5	6	15	11
	Very good	1	0	0	0	0	0	1	0
	Don't know	8	15	13	14	18	5	9	56
Total	100	100	100	100	100	100	100	100	100

Table 4.4.15 Assessment of Trolley Bus Services by District (%)

District	Chingeltei	Sukhbaatar	Songinokhairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagakhangai	Baganuur
Route Network	Very bad	2	3	3	2	6	1	1	0
	Bad	11	9	12	11	14	10	3	11
	Fair	29	26	23	27	20	29	18	6
	Good	8	11	11	14	8	14	14	6
	Very good	0	0	1	0	0	0	1	0
	Don't know	50	51	49	45	52	45	63	78
Total	100	100	100	100	100	100	100	100	
Operating Hours	Very bad	2	3	3	2	5	0	1	0
	Bad	12	12	14	16	17	12	5	11
	Fair	28	25	21	24	19	28	14	6
	Good	8	9	11	13	6	14	16	6
	Very good	0	0	1	0	1	0	0	0
	Don't know	51	51	50	46	52	45	64	78
Total	100	100	100	100	100	100	100	100	
Frequency	Very bad	2	4	3	3	6	1	0	0
	Bad	14	13	16	18	20	11	4	11
	Fair	26	25	19	22	19	27	20	6
	Good	8	9	11	12	5	16	13	6
	Very good	0	0	1	1	0	0	1	0
	Don't know	49	49	50	44	49	45	63	78
Total	100	100	100	100	100	100	100	100	
Bus Speed	Very bad	6	10	6	6	9	4	1	0
	Bad	19	14	22	22	26	15	4	11
	Fair	17	20	16	20	14	24	18	6
	Good	8	7	7	8	4	13	12	6
	Very good	1	1	1	1	1	1	2	0
	Don't know	49	48	49	43	47	44	63	78
Total	100	100	100	100	100	100	100	100	
Bus Fare	Very bad	1	2	3	2	3	0	0	0
	Bad	7	5	8	7	6	6	3	11
	Fair	15	13	17	19	18	18	17	0
	Good	20	23	19	23	18	26	9	11
	Very good	10	8	5	6	8	7	7	0
	Don't know	47	48	48	43	46	43	64	78
Total	100	100	100	100	100	100	100	100	
Accessibility to Bus Stop	Very bad	2	3	3	4	5	1	1	0
	Bad	13	11	13	15	16	12	6	11
	Fair	29	27	24	27	26	31	22	0
	Good	7	10	10	10	6	11	6	11
	Very good	1	0	1	1	0	0	1	0
	Don't know	49	49	49	43	46	45	65	78
Total	100	100	100	100	100	100	100	100	
On-board Comfort	Very bad	3	8	4	6	6	3	1	0
	Bad	20	17	20	19	23	16	8	11
	Fair	24	22	20	25	21	29	22	0
	Good	4	4	6	6	4	8	4	11
	Very good	0	0	0	1	0	0	0	0
	Don't know	49	49	48	43	46	45	64	78
Total	100	100	100	100	100	100	100	100	
On-board Security	Very bad	4	9	5	6	7	3	1	0
	Bad	19	15	20	18	22	17	13	11
	Fair	23	23	19	26	21	28	18	0
	Good	4	4	6	6	5	7	4	11
	Very good	1	0	1	1	0	0	0	0
	Don't know	50	50	48	43	46	45	64	78
Total	100	100	100	100	100	100	100	100	
Driver/Conductor's Attitude	Very bad	9	15	8	7	7	9	10	0
	Bad	19	14	15	16	17	17	9	11
	Fair	20	16	20	26	25	21	13	0
	Good	3	6	8	7	6	8	4	11
	Very good	0	0	1	0	0	1	1	0
	Don't know	48	49	48	43	45	45	64	78
Total	100	100	100	100	100	100	100	100	
Walking Condition	Very bad	4	6	5	6	7	3	3	0
	Bad	20	13	19	20	18	18	13	11
	Fair	25	28	21	24	24	29	16	0
	Good	3	4	6	6	4	5	4	11
	Very good	0	0	1	0	0	0	1	0
	Don't know	49	49	49	43	46	45	64	78
Total	100	100	100	100	100	100	100	100	
Convenience of Transfer	Very bad	4	7	5	6	7	3	4	0
	Bad	21	13	20	18	25	18	11	11
	Fair	23	29	20	27	19	29	18	0
	Good	3	3	6	5	4	5	3	11
	Very good	0	0	0	0	0	0	0	0
	Don't know	49	49	48	43	45	45	64	78
Total	100	100	100	100	100	100	100	100	

4.5 Future Needs

Table 4.5.1 Needed Measures for Improvements of Current Transport Situation in the City (%)

		District									Total
		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	
Construction/ Improvement of Arterial Roads	Strongly Support	38	37	29	23	26	34	35	6	20	30
	Support	60	61	67	73	68	65	65	89	78	67
	Not Sure	2	1	3	4	6	1	0	0	2	3
	Not Support	0	0	1	0	1	0	0	6	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Construction/ Improvement of District Roads	Strongly Support	37	32	28	24	23	34	36	6	21	29
	Support	61	66	68	72	69	65	63	89	76	68
	Not Sure	2	2	3	3	7	1	0	0	3	3
	Not Support	0	0	1	0	2	0	1	6	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Strict Control of Traffic	Strongly Support	32	31	27	23	27	33	39	6	16	28
	Support	65	67	69	73	66	66	59	89	81	69
	Not Sure	2	2	3	3	6	1	2	0	3	3
	Not Support	0	0	1	1	1	0	0	6	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Increasing Car Registration Tax	Strongly Support	20	13	15	15	13	17	29	6	10	16
	Support	33	37	41	45	35	36	35	67	31	39
	Not Sure	23	24	23	21	22	21	15	0	34	22
	Not Support	24	25	20	19	29	26	21	28	26	23
	Total	100	100	100	100	100	100	100	100	100	100
Installation of Traffic Signals	Strongly Support	28	29	26	23	26	29	40	11	16	26
	Support	67	67	69	72	68	68	60	83	79	69
	Not Sure	3	3	4	4	6	2	1	0	5	4
	Not Support	0	1	1	1	1	0	0	6	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Strict Control of Car Parking	Strongly Support	32	27	26	23	24	30	41	11	19	27
	Support	64	69	70	73	70	68	58	83	78	70
	Not Sure	3	3	3	4	5	2	1	0	3	3
	Not Support	0	0	1	0	0	0	0	6	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Improvement of Bus and Taxi Stops	Strongly Support	33	25	28	24	28	27	38	11	24	28
	Support	64	71	68	73	66	71	62	83	74	69
	Not Sure	3	4	3	3	6	2	0	0	2	3
	Not Support	0	0	1	0	0	0	0	6	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Improvement of Conditions for Pedestrians	Strongly Support	36	33	33	28	29	32	40	11	33	32
	Support	60	63	64	68	65	65	59	83	63	64
	Not Sure	3	4	3	3	6	3	0	0	4	4
	Not Support	1	0	1	0	1	0	1	6	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Introduction of Bus Lanes	Strongly Support	29	27	27	23	22	27	42	11	21	26
	Support	64	69	68	73	68	70	58	83	74	69
	Not Sure	7	4	4	4	10	2	0	0	5	5
	Not Support	1	0	1	1	1	0	0	6	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Expansion of Bus Routes	Strongly Support	32	30	28	25	22	30	43	11	21	28
	Support	63	66	67	70	68	67	56	83	71	67
	Not Sure	5	4	4	4	8	2	1	0	8	4
	Not Support	1	0	1	1	2	0	1	6	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Expansion of Bus Capacity	Strongly Support	35	35	29	24	29	34	38	11	25	30
	Support	55	57	63	69	59	59	53	83	60	61
	Not Sure	7	7	5	5	10	7	7	0	14	7
	Not Support	3	1	2	2	2	1	1	6	1	2
	Total	100	100	100	100	100	100	100	100	100	100
Restriction of Minibus	Strongly Support	27	23	18	17	18	24	33	6	22	21
	Support	45	47	54	59	55	45	42	83	43	52
	Not Sure	16	17	17	14	15	16	13	6	24	16
	Not Support	12	13	11	9	11	15	12	6	11	11
	Total	100	100	100	100	100	100	100	100	100	100
Restriction of Truck Traffic Entering to City Center	Strongly Support	27	20	19	17	19	26	38	11	21	21
	Support	49	52	55	61	56	45	40	78	46	54
	Not Sure	14	17	18	14	14	18	11	6	25	16
	Not Support	10	11	9	7	11	12	11	6	8	10
	Total	100	100	100	100	100	100	100	100	100	100
Introduction of Bus for the Disabled	Strongly Support	36	31	34	29	31	34	42	17	27	32
	Support	57	60	60	66	56	56	51	72	57	60
	Not Sure	5	9	5	4	9	9	7	6	16	7
	Not Support	2	1	2	0	4	2	0	6	0	2
	Total	100	100	100	100	100	100	100	100	100	100

Table 4.5.2 Future Need for Public Transport Service (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur
Yes	98	97	98	98	96	99	99	83	93
No	1	1	1	1	0	0	0	0	1
Not sure	1	3	2	2	4	1	1	17	6
Total	100	100	100	100	100	100	100	100	100

Table 4.5.3 Type of Public Transport Required by District of Residents (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Taxi	7	5	8	8	8	6	4	0	10	7
Standard Bus	29	28	29	29	25	29	34	33	22	28
Microbus	14	6	9	12	6	8	24	23	17	10
Rapid bus	11	12	12	13	13	10	8	20	5	12
Elevated railway	12	16	12	11	15	15	13	10	19	13
Trolley bus	6	5	5	6	6	8	2	3	2	6
Under-ground railway	22	28	25	22	27	24	15	10	25	24
Total	100	100	100	100	100	100	100	100	100	100

5 URBAN UTILITIES AND SERVICES

This chapter contains the existing conditions of urban utilities and services, overall assessment of urban utilities, and the satisfaction on urban utilities at urban level.

5.1 Existing Conditions of Urban Utilities and Services

1) Water Supply

Table 5.1.1 Water Supply Conditions (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Type of Water Source (%)	Central water supply system	27	50	27	37	78	43	31	10	40	43
	Vendor/kiosk (from truck)	1	2	2	2	2	1	1	0	1	2
	Vendor/kiosk (from well)	65	47	66	56	20	47	58	48	51	51
	Protected well/ tube well	6	1	4	4	0	7	10	43	8	4
	Unprotected well/ open well	0	0	0	0	0	0	0	0	0	0
	River/pond	0	0	0	0	0	0	0	0	0	0
	Spring water	0	0	0	0	0	0	0	0	0	0
	Other sources	0	1	1	1	0	1	1	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Ownership of Water Source (%)	Private well	8	3	11	7	7	7	9	0	10	8
	USAG	92	96	85	89	92	92	90	57	90	90
	Other	0	0	4	3	2	1	2	43	0	2
	Total	100	100	100	100	100	100	100	100	100	100
Who carry water (%)	Father	15	20	16	16	13	16	12	0	26	16
	Mother	7	8	11	8	3	6	12	17	8	8
	Son	32	31	38	36	41	39	27	19	44	36
	Daughter	14	11	11	8	10	11	11	11	11	11
	Grand parents	0	0	1	1	2	0	0	0	0	1
	Not decided	30	28	22	28	27	26	33	53	11	26
	Others	2	2	1	2	4	2	4	0	0	2
	Total	100	100	100	100	100	100	100	100	100	100
How to carry water (%)	By hand	26	18	16	21	32	10	6	0	1	19
	By push cart	72	80	83	77	65	89	94	100	97	80
	By car	1	2	1	2	3	1	0	0	1	1
	By draught animal	0	0	0	0	0	0	0	0	0	0
	By delivery service	1	0	0	0	0	0	0	0	0	0
		Total	100	100	100	100	100	100	100	100	100
How often to buy water (%)	Almost everyday	29	41	32	29	18	86	29	61	31	32
	Alternative days	31	33	27	33	23	97	17	14	34	31
	3-5 times a week	32	21	30	30	21	72	32	12	17	29
	Once a week	8	4	10	7	4	17	1	0	15	8
	Once in every 10 days	0	0	0	0	0	1	0	7	0	0
	Once in every two weeks	0	0	0	0	0	0	0	0	1	0
	Others	0	1	0	1	0	2	2	7	0	0
		Total	100	100	100	100	66	275	81	100	100
Average consumption (l/week)		290	294	279	287	307	283	374	202	251	288
Average Payment	Cold Season (tog/month)	4,055	7,322	4,042	5,341	13,792	4,804	5,723	1,952	4,118	6,457
	Warm Season (tog/month)	4,043	6,666	4,050	5,267	13,480	4,512	5,747	1,950	4,091	6,278
Average Time Spent for (min)		9	12	12	11	11	12	10	17	11	11

2) Drainage

Table 5.1.2 Drainage Conditions (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total		
Frequency of Flood	All the time even without heavy rain	0	1	1	1	2	0	0	0	0	1		
	Every time when it rains heavily	5	7	5	3	8	3	4	0	8	5		
	Sometimes when it rains heavily	5	4	3	3	6	2	4	6	3	4		
	Spring when snow melts	0	0	1	0	0	0	0	0	0	0		
	Rarely	3	3	4	5	5	6	5	12	5	4		
	Never	81	78	77	80	68	85	87	69	81	78		
	No idea	5	7	10	8	11	4	0	12	3	8		
Total	100	100	100	100	100	100	100	100	100	100	100		
Normal Flooding	Water Level	Up to ankles	36	51	27	32	37	27	61	0	52	35	
		Up to knees	8	11	10	8	9	5	28	0	9	9	
		More than knees	1	3	3	3	1	4	0	0	0	2	
		No idea	55	35	60	57	53	64	11	100	39	53	
		Total	100	100	100	100	100	100	100	100	100	100	100
	Duration of the Flood	Less than half day	4	8	5	2	7	3	0	0	0	5	
		Half day - one day	5	6	7	2	4	4	0	0	0	4	
		One to three days	6	4	4	3	3	2	0	0	9	4	
		Almost one week	7	5	13	8	13	5	5	0	0	9	
		More than one week	0	4	1	2	3	13	29	0	0	3	
		No idea	78	74	69	83	70	74	66	100	91	75	
		Total	100	100	100	100	100	100	100	100	100	100	100
	Duration	1-5 minutes	1	5	2	1	3	4	0	0	0	2	
		5-10 minutes	4	7	4	3	2	0	5	0	0	3	
		10-20 minutes	2	5	1	2	2	1	0	0	4	2	
		More than 20 minutes	12	7	20	9	18	13	29	0	4	14	
		No idea	80	75	74	85	75	82	66	100	91	78	
		Total	100	100	100	100	100	100	100	100	100	100	100
	Most Serious Flooding in the last 3 years	Water Level	Up to ankles	14	26	9	9	18	14	39	20	39	15
			Up to knees	11	11	11	7	11	4	28	0	4	10
More than knees			3	11	11	6	7	7	5	0	0	7	
No idea			72	53	69	79	65	75	28	80	57	68	
Total		100	100	100	100	100	100	100	100	100	100	100	
Duration of the Flood		Less than half day	7	11	9	8	13	6	10	20	0	9	
		Half day - one day	8	13	7	2	5	1	0	0	4	6	
		One to three days	7	11	10	6	6	1	17	0	30	8	
		Almost one week	9	8	10	8	12	5	17	0	4	9	
		More than one week	1	5	0	4	2	9	23	0	0	3	
		No idea	67	52	64	72	62	77	33	80	61	64	
		Total	100	100	100	100	100	100	100	100	100	100	100
Duration		1-5 minutes	4	12	5	2	5	4	0	0	0	5	
		5-10 minutes	4	10	6	6	5	1	16	0	0	6	
		10-20 minutes	7	10	2	4	3	4	16	0	17	5	
		More than 20 minutes	14	12	19	11	19	12	34	0	22	16	
		No idea	71	55	68	77	68	79	33	100	61	69	
		Total	100	100	100	100	100	100	100	100	100	100	100
Most serious Flooding in the Past		Water Level	Up to ankles	10	11	5	3	10	8	24	0	14	8
			Up to knees	2	9	2	4	5	6	18	0	0	4
	More than knees		5	8	14	3	6	11	0	0	0	7	
	No idea		83	72	80	90	79	75	58	100	86	81	
	Total	100	100	100	100	100	100	100	100	100	100	100	
	Duration of the Flood	Less than half day	22	29	21	17	20	15	10	0	9	20	
		Half day - one day	8	9	8	11	9	1	16	0	9	9	
		One to three days	13	11	10	10	9	4	28	0	35	10	
		Almost one week	7	9	6	10	11	4	12	0	4	8	
		More than one week	3	5	0	5	2	10	23	0	0	3	
		No idea	47	37	55	48	50	66	11	100	44	49	
		Total	100	100	100	100	100	100	100	100	100	100	100
	Duration	1-5 minutes	13	14	9	11	10	5	5	0	9	10	
		5-10 minutes	10	17	9	8	9	8	22	0	4	10	
		10-20 minutes	4	16	8	11	7	7	17	0	26	10	
		More than 20 minutes	20	16	16	16	15	13	35	0	13	16	
		No idea	53	39	58	54	59	67	21	100	48	54	
		Total	100	100	100	100	100	100	100	100	100	100	100

3) Sanitation

Table 5.1.3 Sanitation Conditions (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Methods of Solid Waste Collection	Public collection by truck	91	82	66	79	67	71	94	61	88	76
	Dust chute/Dumping place	8	18	20	17	32	24	6	34	12	19
	Treat in own land	0	0	1	1	0	1	0	5	0	0
	Throw to nearby drainage or river	0	0	9	1	1	3	0	0	0	3
	Others	0	0	4	1	0	1	0	0	0	1
	Others	0	0	2	2	0	0	0	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Frequency of Solid Waste Collection Services	Daily	1	5	1	2	5	7	9	0	3	5
	2-4 times a week	10	24	10	11	24	14	8	0	35	14
	Once a week	7	21	7	5	21	4	3	0	3	8
	Once in 2 week	8	14	8	6	14	6	1	57	3	8
	Once a month	47	25	47	56	25	50	48	43	26	47
	Every month	5	2	5	6	2	5	2	0	19	5
	> one month	12	4	12	8	4	6	26	0	12	9
	No idea	9	4	9	6	4	7	2	0	0	5
Total	100	100	100	100	100	100	100	100	100	100	100
Fee	Cold season (tog/month)	2,571	2,371	2,001	2,551	2,894	2,264	1,516	1,384	1,700	2,393
	Warm season (tog/month)	2,591	2,346	1,968	2,569	2,886	2,347	1,664	1,384	1,695	2,401
Latrine Condition	Flush toilet	24	51	27	37	78	39	30	2	40	42
	Suilabh toilet	0	0	0	0	0	0	0	0	1	0
	Pit latrin	76	49	73	62	21	60	70	18	59	58
	Composting toilet	0	0	0	1	0	0	0	0	0	0
	No fixed place	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Sewage Condition	Connect to urban sewerage system	24	50	29	39	78	42	32	10	41	43
	On-site sanitation facility	5	3	8	7	2	3	3	0	3	5
	Waste collecting system	1	1	2	2	1	3	1	6	0	2
	No sanitation treatment and fill by soil	65	40	52	47	16	48	60	84	49	45
	Covered by wood chips/chemical/salt	4	5	10	5	3	5	3	0	8	6
	Total	100	100	100	100	100	100	100	100	100	100

4) Heating System and Electricity

Table 5.1.4 Heating and Hot Water Supply Conditions (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Type of Heating System	Central heating	25	47	29	37	76	39	31	10	37	41
	Electric stove	2	6	3	5	2	4	5	0	5	3
	Stove	72	46	67	57	20	56	63	90	58	54
	Private central heating system	1	1	1	2	2	1	0	0	1	1
	Gas	0	0	0	0	0	0	0	0	0	0
Total		100	100	100	100	100	100	100	100	100	100
Type of Fuel Source and Obtaining Method	Type of Fuel Source	Firewood	18	26	17	20	16	20	20	0	19
		Coal	81	73	81	78	82	77	80	88	94
		Garbage/plastic	0	0	1	0	0	0	0	0	0
		Tire	0	0	0	0	0	0	0	0	0
		Briquette	0	0	1	0	0	0	0	0	0
		Other	1	1	1	3	3	2	0	12	1
		Total	100	100	100	101	101	100	100	100	101
	Place to Get Fuel	Roadside	39	56	31	26	36	45	0	26	17
		Market	44	27	52	54	45	27	8	0	3
		To get by themselves	2	2	5	5	3	5	7	12	4
		From mining	12	11	8	11	8	17	83	28	73
		Other	3	5	4	5	7	5	2	34	4
		Total	100	100	100	100	100	100	100	100	100
		Average min. by walk	37	27	37	41	42	42	68	22	27
	Person to Go to Shop	Father	40	40	39	42	42	42	49	30	57
		Mother	10	9	15	10	6	10	13	20	8
		Son	19	18	18	17	18	21	9	18	14
		Daughter	3	5	3	4	3	2	2	0	5
		Not decided	27	25	21	26	24	24	22	32	15
		Others	2	2	3	2	7	1	6	0	0
		Total	100	100	100	100	100	100	100	100	100
	How to Carry	By hand	10	10	6	7	11	6	5	0	0
		By push cart	34	41	33	28	25	41	11	26	21
		By car	40	34	47	50	47	38	45	56	62
		By draught animal	1	0	1	1	0	1	2	0	0
		By delivery service	15	15	13	15	17	14	37	19	17
		Total	100	100	100	100	100	100	100	100	100
Frequency of Purchase of Fuel	In Winter	Almost everyday	19	26	18	13	18	19	2	7	6
		Alternative days	3	5	2	3	2	6	3	14	4
		3-5 times a week	17	12	11	10	13	12	6	5	3
		Once a week	5	6	9	8	7	11	7	0	4
		Once in every 10 day	3	3	3	4	6	4	0	0	0
		Once in every two	3	7	4	3	3	3	0	7	0
		Every month	8	5	7	9	10	5	2	11	4
		Once in season	39	29	39	44	42	37	77	57	59
		Whenever money is available	4	6	6	5	1	4	4	0	21
		Total	100	100	100	100	100	100	100	100	100
	In Summer	Almost everyday	4	3	3	9	5	2	0	12	0
		Alternative days	10	17	12	11	6	9	1	0	3
		3-5 times a week	4	2	3	3	2	4	5	5	0
		Once a week	6	6	6	3	5	6	0	0	3
		Once in every 10 day	5	4	4	3	4	6	0	0	6
		Once in every two	6	11	8	4	2	7	2	0	7
		Every month	4	4	4	4	5	2	1	0	4
		Once in season	10	7	12	15	11	9	30	0	8
		Whenever money is available	12	12	8	12	6	9	9	5	18
		No purchase	40	33	40	35	54	46	52	77	53
Total	100	100	100	100	100	100	100	100	100		
Payment (tog/month)	In cold season	61,165	31,092	51,696	51,394	27,575	39,703	50,279	77,949	37,990	44,649
	In warm season	16,273	9,996	17,359	19,742	12,121	13,985	23,077	34,946	11,965	15,395

5) Access to Urban Facilities/Services in Neighborhood

Table 5.1.5 Accessibility to Urban Facilities/Services in Neighborhood (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Accessibility to Urban Facilities/ Services in Neighborhood	Health care service provider	14	12	18	16	16	13	14	9	13	15
	Emergency health care	3	4	4	3	3	2	1	0	4	3
	Emergency health care for children	2	2	2	2	2	2	1	4	1	2
	Public administrative office	4	4	4	3	4	5	5	6	3	4
	Welfare service facility	5	4	5	5	4	4	6	6	5	4
	Neighborhood park/play park	17	18	13	14	15	17	14	28	14	15
	City park	12	13	8	8	10	13	12	13	12	10
	Market for daily grocery	5	5	7	6	7	5	7	4	8	6
	Market for special shopping	3	3	2	2	2	3	5	0	4	3
	Entertainment facilities	8	9	6	7	5	12	11	11	8	8
	Public transportation stop	5	6	7	8	7	5	6	11	6	7
	Kindergarden	5	4	5	7	5	3	2	0	5	5
	Elementary school	3	2	2	4	3	2	1	2	5	3
	Police station	4	3	6	4	5	4	1	0	4	4
	Library	6	3	5	5	6	6	5	6	5	5
Gymnasium/Sport hall	5	7	5	5	8	6	7	2	4	6	
Total	100	100	100	100	100	100	100	100	100	100	100
Type of Common Sickness	Infected diseases	0	1	2	1	2	0	0	0	1	1
	Cough	79	78	81	80	82	77	79	83	67	80
	Asthma	1	0	1	1	2	1	0	0	1	1
	Diarrhea	1	0	0	0	0	0	0	0	0	0
	Nothing	17	19	13	16	13	18	19	17	27	16
	Allergy	1	1	1	0	1	1	1	0	1	1
	Other	2	1	1	2	1	2	1	0	4	2
	Total	100	100	100	100	100	100	100	100	100	100

Table 5.1.6 Assessment of Primary Education (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Assessment for Elementary School Facilities	Very bad	2	2	2	3	3	2	1	0	4	2
	Bad	11	7	9	12	11	7	4	0	3	10
	Fair	29	31	33	34	37	27	30	39	27	32
	Good	40	43	37	33	27	47	42	50	49	37
	Very good	0	0	1	1	1	0	0	0	2	1
	Don't know	17	17	18	17	20	16	23	11	16	18
	Total	100	100	100	100	100	100	100	100	100	100
Problems of School Facility	Overcrowded	26	28	44	36	49	43	14	-	56	38
	Far distance	10	2	3	16	1	0	29	-	0	7
	Bad access	6	0	7	3	3	0	0	-	0	3
	Bad school facilities	11	6	5	6	5	0	14	-	0	6
	High school fee and costs	29	46	18	16	18	23	14	-	11	22
	No problem	0	0	1	3	1	0	0	-	22	1
	Others	13	17	12	13	15	20	0	-	11	14
	Don't know	5	2	11	7	9	15	29	-	0	8
Total	100	100	100	100	100	100	100	-	100	100	100

5.2 Overall Assessment to Urban Utilities

1) Water Supply

Table 5.2.1 Connectivity to and Assessment of Urban Utilities by Type of Housing (%)

		Ger	Detached	Apartment	Others	Total	
Electricity	Connectivity (%)	95	96	100	100	97	
	Satisfaction (%)	Good	51	54	66	81	58
		So-so	34	34	28	19	32
		Bad	15	12	5	0	10
Water Supply	Connectivity (%)	34	35	99	79	61	
	Satisfaction (%)	Good	51	55	63	79	58
		So-so	40	37	28	21	34
		Bad	9	7	9	0	8
Latrine/ Sewerage	Connectivity (%)	9	10	99	70	47	
	Satisfaction (%)	Good	27	29	67	61	45
		So-so	58	58	27	30	45
		Bad	15	13	5	9	10
Heating/ Hot Water	Connectivity (%)	5	8	99	81	45	
	Satisfaction (%)	Good	38	39	63	81	49
		So-so	52	52	26	19	41
		Bad	10	9	10	0	10
Solid Waste	Connectivity (%)	45	48	96	89	67	
	Satisfaction (%)	Good	30	27	54	61	39
		So-so	47	49	37	21	43
		Bad	23	24	9	18	18
Drainage	Connectivity (%)	10	11	71	37	35	
	Satisfaction (%)	Good	25	26	41	35	32
		So-so	56	53	44	40	50
		Bad	19	20	15	25	18

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

Table 5.2.2 Desired Improvement of Urban Utilities Services by Type of Housing (%)

		Ger	Detached	Apartment	Others	Total	
Water Supply	Desired Improvement	Distance to get water	22	13	3	-	11
		Water pressure	8	11	40	-	23
		Water quality	32	31	40	-	35
		Price	23	25	13	-	20
		Hours of supply	15	20	4	-	12
	Possible Contribution for Improvement	Manpower contribution	45	35	18	-	30
		Financial contribution	10	6	19	-	12
		Don't want to do anything	9	4	6	-	6
		No idea	37	55	57	-	51
Heating System	Desired Improvement	Central heating connecting public system	41	30	57	-	44
		Electricity stove	13	19	7	-	12
		Stove	13	9	2	-	7
		Private central heating system	22	35	26	-	28
		Gas	11	7	8	-	8
	Possible Contribution for Improvement	Manpower contribution	29	33	19	-	26
		Financial contribution	9	13	21	-	15
		Don't want to do anything	7	3	10	-	7
		No idea	55	51	50	-	52
Solid Waste	Desired Improvement	Frequency of collection	61	54	38	50	52
		Method of collection	8	13	14	0	12
		Fee	10	9	10	0	10
		Cleanness of dump site	13	12	29	0	17
		Distance to collection site	3	4	3	50	4
	Possible Contribution for Improvement	No idea	5	7	5	0	6
		Manpower contribution	52	47	41	100	47
		Financial contribution	9	12	15	0	12
		Don't want to do anything	4	3	8	0	5
No idea	34	38	36	0	36		

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

5.3 Satisfaction on Urban Utilities at District Level

1) Water Supply

Table 5.3.1 Assessment of Water Supply Services (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Connection with public service	Yes	48	62	53	61	85	54	52	100	69	61
	No	52	38	47	39	15	46	48	0	31	39
	Total	100	100	100	100	100	100	100	100	100	100
Level of satisfaction	Very Bad	1	1	2	2	1	1	1	25	0	1
	Bad	6	5	8	8	7	7	4	12	2	7
	OK	31	28	43	34	31	33	34	23	30	34
	Good	59	63	46	55	59	56	59	40	67	56
	Very Good	4	2	1	1	2	3	1	0	1	2
	Total	100	100	100	100	100	100	100	100	100	100
Main Factors for Improvement	Distance to get water	6	12	17	10	6	10	19	0	50	11
	Water pressure	17	28	15	30	29	17	41	0	0	23
	Water quality	35	35	33	33	40	34	30	44	17	35
	Price	24	17	17	19	22	28	10	11	17	20
	Hours of supply	18	9	17	9	4	10	0	44	17	12
	Others	0	0	0	0	0	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Possible Contribution for Improvement	Manpower contribution	42	38	34	19	15	44	18	100	67	30
	Financial contribution	9	9	8	14	24	10	16	0	0	12
	Don't want to do anything	9	2	10	9	3	0	0	0	0	6
	No idea	41	51	49	58	58	46	66	0	33	51
	Total	100	100	100	100	100	100	100	100	100	100

2) Drainage and Sanitation

Table 5.3.2 Assessment of Drainage and Sanitation (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Connection with public service	Yes	24	39	28	31	61	33	26	5	28	35
	No	76	61	72	69	39	67	74	95	72	65
	Total	100	100	100	100	100	100	100	100	100	100
Level of satisfaction	Very Bad	4	5	6	4	6	1	8	0	10	5
	Bad	16	9	18	11	14	11	9	0	11	13
	OK	49	50	51	55	42	56	42	34	55	50
	Good	31	34	25	30	36	31	39	66	21	31
	Very Good	0	2	1	1	3	1	2	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100
Assessment of Sanitary Condition	Very Bad	13	14	14	12	10	12	1	0	2	12
	Bad	28	25	33	28	25	20	32	6	18	27
	OK	47	40	41	48	45	55	50	22	50	46
	Good	12	21	12	12	19	13	17	72	31	15
	Very Good	0	0	0	0	1	0	0	0	0	0
	Total	100	100	100	100	100	100	100	100	100	100
Possible Contribution for Sanitary Improvement	Manpower contribution	46	42	41	39	36	42	61	0	60	41
	Financial contribution	8	6	8	10	13	12	7	0	12	9
	Don't want to do anything	1	3	1	1	1	2	16	0	0	2
	Don't know	45	48	49	50	50	44	16	100	28	47
	Total	100	100	100	100	100	100	100	100	100	100

3) Solid Waste Collection

Table 5.3.3 Solid Waste Collection (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Connection with Public Service	Yes	59	72	57	67	87	57	74	83	73	67
	No	41	28	43	33	13	43	26	17	27	33
	Total	100	100	100	100	100	100	100	100	100	100
Level of Satisfaction	Very Bad	3	6	8	5	2	3	7	0	3	5
	Bad	14	10	21	12	10	9	15	6	7	13
	OK	48	42	43	47	37	47	28	23	45	43
	Good	33	40	27	35	49	40	47	71	38	37
	Very Good	1	3	1	1	2	1	3	0	6	2
Total	100	100	100	100	100	100	100	100	100	100	100
Main Factor for Improvement	Frequency of collection	54	42	52	53	54	52	72	100	57	52
	Method of collection	14	16	13	6	11	16	7	0	0	12
	Fee	11	20	4	12	10	10	14	0	9	10
	Cleanliness of dump site	14	17	17	21	18	14	4	0	26	17
	Distance to collection area	3	2	7	3	1	0	3	0	8	4
	No idea	5	3	7	6	6	8	0	0	0	6
	Total	100	100	100	100	100	100	100	100	100	100
Possible Contribution for Improvement	Manpower contribution	43	40	52	46	41	46	72	100	36	47
	Financial contribution	14	12	13	9	17	11	0	0	0	12
	Don't want to do anything	2	8	5	5	6	0	7	0	0	5
	No idea	40	40	30	40	36	43	21	0	64	36
	Total	100	100	100	100	100	100	100	100	100	100

4) Heating System and Electricity

Table 5.3.4 Assessment of Heating System and Electricity (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Heating/ Hot Water Supply System	Connection with public service	Yes	27	51	33	41	79	42	32	10	39	45
		No	73	49	67	59	21	58	68	90	61	55
		Total	100	100	100	100	100	100	100	100	100	100
	Level of satisfaction	Very Bad	1	1	2	1	3	1	1	0	0	1
		Bad	7	7	10	8	8	9	8	6	4	8
		OK	43	35	46	46	30	43	46	24	50	41
		Good	45	55	41	43	55	47	43	69	44	47
Very Good	4	3	1	1	4	1	2	0	2	2		
Total	100	100	100	100	100	100	100	100	100	100	100	
Electricity	Connection with public service	Yes	98	99	95	97	98	99	98	100	99	97
		No	2	1	5	3	2	1	2	0	1	3
		Total	100	100	100	100	100	100	100	100	100	100
	Level of satisfaction	Very Bad	1	2	4	3	1	2	1	0	1	2
		Bad	5	6	13	8	4	8	4	6	3	8
		OK	29	30	38	31	29	31	24	24	36	32
		Good	60	57	44	56	63	54	64	69	59	55
Very Good	6	4	1	2	3	5	6	0	1	3		
Total	100	100	100	100	100	100	100	100	100	100	100	
Main Factor for Improvement	Central heating connecting public	41	48	35	46	56	57	0	0	17	44	
	Electricity stove	10	19	15	13	9	4	10	100	17	12	
	Stove	3	2	10	8	2	14	0	0	21	7	
	Private central heating system	40	25	28	27	20	21	77	0	46	28	
	Gas	6	5	11	6	13	4	13	0	0	8	
Total	100	100	100	100	100	100	100	100	100	100	100	
Possible Contribution for Improvement	Manpower contribution	27	37	26	28	14	26	17	100	46	26	
	Financial contribution	8	12	21	12	16	20	33	0	0	15	
	Don't want to do	7	4	9	6	10	5	0	0	0	7	
	No idea	59	47	45	54	61	49	50	0	54	52	
	Total	100	100	100	100	100	100	100	100	100	100	

5) Government Healthcare Services/Facilities and Primary Education

Table 5.3.5 Assessment of Government Healthcare Services / Facilities (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Facility for People who has mental diseases	Very Bad	2	1	2	1	2	1	0	0	0	1
	Bad	3	5	5	4	6	4	0	0	2	4
	Fair	5	9	11	8	6	8	6	0	5	8
	Good	1	2	3	3	3	1	0	6	6	2
	Very Good	0	0	0	0	0	0	0	0	0	0
	Never Used	89	83	79	85	83	85	94	94	94	87
Total	100	100	100	100	100	100	100	100	100	100	100
Facility for People with disability	Very Bad	1	1	3	1	1	1	0	0	0	1
	Bad	4	5	6	4	7	2	1	0	2	5
	Fair	5	7	10	9	8	8	7	0	8	8
	Good	2	3	3	2	3	2	1	6	8	3
	Very Good	0	0	0	0	0	0	0	0	0	0
	Never Used	88	83	78	84	82	86	92	94	83	83
Total	100	100	100	100	100	100	100	100	100	100	100
Government Hospital in the district and Khoroo level	Very Bad	2	1	2	1	2	1	1	0	0	1
	Bad	7	7	9	8	13	7	1	0	6	8
	Fair	32	28	35	35	36	29	31	0	27	33
	Good	21	25	17	20	22	25	18	6	27	21
	Very Good	0	0	1	0	1	0	0	0	0	0
	Never Used	39	39	36	35	26	38	50	94	40	36
Total	100	100	100	100	100	100	100	100	100	100	100
Government Clinic/Family Doctor in the district and Khoroo level	Very Bad	3	5	6	5	3	5	1	0	0	5
	Bad	12	10	15	13	17	12	11	0	11	13
	Fair	32	29	32	38	28	33	32	39	31	32
	Good	15	19	16	12	18	20	16	6	18	16
	Very Good	0	0	1	1	1	0	1	0	0	1
	Never Used	37	37	30	31	33	30	39	56	41	33
Total	100	100	100	100	100	100	100	100	100	100	100
Family Hospital	Very Bad	1	1	1	2	2	1	0	0	2	2
	Bad	8	7	11	12	11	7	4	0	7	10
	Fair	45	36	44	45	33	34	50	39	31	40
	Good	36	43	33	30	39	51	38	11	53	37
	Very Good	0	0	1	1	2	1	1	0	2	1
	Never Used	10	13	9	10	13	6	7	50	6	10
Total	100	100	100	100	100	100	100	100	100	100	100
Emergency Healthcare Service Facility	Very Bad	1	1	1	2	2	2	1	0	1	1
	Bad	10	6	10	13	13	6	3	0	5	10
	Fair	45	39	45	46	37	42	57	33	40	43
	Good	30	35	25	24	28	41	32	22	46	29
	Very Good	0	0	1	0	0	0	1	0	0	0
	Never Used	14	19	17	16	21	9	7	44	8	16
Total	100	100	100	100	100	100	100	100	100	100	100

6 HOUSING

This chapter contains existing housing conditions and assessment of the residents, housing conditions by district, and needs for housing improvement.

6.1 Existing Housing Conditions and Assessment of the Residents

Table 6.1.1 Existing Housing Conditions by Housing Type (No.)

		Ger	Detached			Apartment		Town house	Others		Total		
			Wood	Wood	Brick	> 5F	< 6F		Hut	Non			
Household	Household	no	55,171	26,853	39,828	20,270	60,935	38,731	254	239	402	242,683	
		% to Total	23	11	16	8	25	16	0	0	0	100	
	Household Member	no (000)	232	120	173	87	237	151	1	1	1	1,003	
		% to Total	23	12	17	9	24	15	0	0	0	100	
		Average years	4	4	4	4	4	4	4	4	4	4	
House Size & Age	% Household Male Head		76	81	78	84	76	74	39	52	15	77	
	Average No. of Gainful Workers		1	1	1	2	1	1	2	2	2	1	
	Living Area (m ² or walls)		5	36	31	42	35	38	63	31	20	-	
	No. of Rooms		1	2	2	2	2	2	4	2	1	2	
Years of Residence in UB	Age (years)		13	12	14	11	27	21	3	-	15	18	
	Since birth		19	9	21	10	24	16	0	0	0	100	
	More than 10 years ago		14	12	19	8	29	18	0	0	0	100	
	5-9 years ago		27	15	16	9	21	12	0	0	0	100	
	1-4 years ago		34	10	10	8	23	14	0	0	1	100	
	Less than one year ago		40	5	8	7	23	17	0	0	1	100	
House Sharing	Apartment	No	10	13	15	14	13	14	14	5	2	13	
		1	1	2	3	9	90	83	24	23	67	37	
		2 or more	0	1	1	1	1	1	0	0	0	2	
	Khasha	No	49	60	60	60	4	8	36	26	33	35	
		1	27	25	23	21	1	1	39	24	0	15	
		2 or more	22	12	13	8	0	0	0	0	0	9	
	Ownership (%)	Land	Self-owned	50	73	67	70	11	13	56	24	0	53
			House	92	95	94	93	89	93	81	77	15	92
			Rented	3	2	3	5	8	6	19	23	0	5
		Other Lands	Others	5	3	3	2	3	2	0	0	85	3
Summer House			1	1	1	1	3	4	0	0	0	2	
Income (tq 000/mo)			153	194	174	219	262	298	421	123	67	217	
Economy	% of Low-income Household	39	28	30	22	16	12	0	26	82	25		
	For House (tq 000/m)	24	50	34	51	85	122	-	-	-	78		
	For Land (tq 000/m)	45	22	13	23	54	9	-	-	-	31		
Living Area (%)	Apartment	Below 30m ²	-	51	54	34	43	32	0	47	100	43	
		30 - 50 m ²	-	35	39	41	44	53	39	53	0	43	
		50 - 75 m ²	-	10	6	19	12	13	22	0	0	12	
		75 or more	-	4	1	7	1	2	38	0	0	2	
		Average	-	36	31	42	35	38	63	31	20	0	
	Ger	4 walls	20	-	-	-	-	-	-	-	-	20	
		5 walls	72	-	-	-	-	-	-	-	-	72	
		6 or more	6	-	-	-	-	-	-	-	-	6	
		Average	5	-	-	-	-	-	-	-	-	5	
No. of Rooms	1	96	38	32	24	22	14	0	47	100	34		
	2	3	41	49	43	44	44	24	26	0	39		
	3	0	12	15	22	29	37	0	26	0	21		
	4 or more	1	9	4	12	5	5	76	0	0	5		
	Average	1	2	2	2	2	2	4	2	1	2		
Age of House (%)	less than 1	10	2	3	7	2	1	0	0	0	4		
	2 - 4	6	10	5	12	3	1	58	0	0	5		
	5 - 9	5	16	8	11	1	1	0	0	0	6		
	10 - 19	6	14	12	7	6	14	0	0	34	9		
	20 - 29	4	7	7	3	11	17	0	0	0	9		
	30 or more	3	4	4	5	16	3	0	0	0	6		
	Unknown	66	46	61	55	62	62	42	100	66	61		
Maintenance Condition (%)	Very Bad	1	1	0	1	1	0	0	0	0	14	1	
	Bad	10	15	11	7	5	3	0	23	74	8		
	So-so	68	54	62	43	46	34	0	50	12	52		
	Good	21	27	25	41	42	51	100	26	0	34		
	Very Good	1	2	2	8	7	12	0	0	0	0	5	

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

Table 6.1.2 Assessment of Housing Conditions by Housing Type and by Income Level (%)

	Ger	Detached			Apartment		Town house	Others		Total	Income Classification					Total	
		Wood	Wood mortar	Brick	> 5F	< 6F		Hut	Non housing		1	2	3	4	5		
Improvement Needs (%)	Transfer	13	5	9	7	8	7	20	0	29	8	10	8	7	9	8	8
	Rebuild	25	10	13	10	3	3	0	0	14	11	13	12	12	11	9	11
	Improve	36	50	39	44	41	44	0	67	57	41	41	44	42	40	40	41
	Nothing	26	35	39	39	48	46	80	33	0	39	36	37	38	40	44	39
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Reason for Improvement (%)	Small living space	20	18	20	17	15	16	0	33	29	18	18	18	18	19	16	18
	Not suitable design	18	21	19	18	17	16	0	0	19	18	18	18	18	18	18	18
	Poor structure	15	16	15	14	13	12	0	33	5	14	15	15	14	14	14	14
	Bad air sealing/ventilation	5	8	8	7	10	12	0	0	24	8	7	8	8	8	9	8
	Poor sunlight	3	2	3	3	3	3	0	33	5	3	3	3	3	2	3	3
	Poor connection to basic utility services	5	7	8	11	10	9	0	0	5	8	6	7	8	9	8	8
	High rent	1	0	0	1	2	2	33	0	0	1	1	1	1	1	1	1
	Loss of traditional and cultural value	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1
	Insecure from natural disaster	5	5	4	4	3	4	0	0	0	4	5	4	4	4	4	4
	No feel of attachment for the place	2	2	1	2	2	1	33	0	5	2	2	2	2	2	2	2
	Inconvenience for daily life	9	6	7	7	5	6	0	0	5	7	7	8	7	5	7	7
	Difficult to earn income for living and find a job	4	3	4	3	2	1	0	0	5	3	5	2	3	2	2	3
	Bad neighborhood's security	4	5	4	5	6	6	0	0	0	5	5	4	5	5	6	5
	Bad relationship among neighboring	1	1	1	1	2	1	0	0	0	1	1	1	1	1	1	1
	Bad environmental conditions	5	5	5	6	8	8	33	0	0	6	5	6	6	6	7	6
	Others	2	1	1	1	2	2	0	0	0	2	1	2	2	1	2	2
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Desired Type of Housing (%)	Traditional house (Ger)	4	3	3	0	1	3	0	-	33	3	4	3	4	1	0	2
	Detached house by wooden astructure	19	10	7	2	5	8	0	-	0	12	16	11	12	10	8	12
	Detached house by wood mortar structure	11	8	6	3	3	0	0	-	0	7	8	12	8	3	5	7
	Detached house by brick structure	27	24	20	21	7	6	0	-	33	21	23	23	21	23	14	21
	Mid-rise apartment (-5F)	21	29	28	35	33	24	100	-	33	26	28	23	29	27	23	26
	High-rise apartment (5F-)	11	15	22	21	24	17	0	-	0	16	13	14	15	16	23	16
	Town house	7	10	14	16	27	38	0	-	0	14	7	14	10	17	24	14
	Other	1	1	1	2	1	5	0	-	0	1	1	0	1	2	3	1
Total	100	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	
Desired Improvement (%)	Living space	24	23	24	22	22	22	-	25	25	23	21	24	22	24	23	23
	Design	27	29	27	27	25	26	-	25	13	27	29	27	27	25	25	27
	Structure of house	18	15	19	18	18	18	-	0	13	18	17	18	17	18	18	18
	Air sealing/ventilation	8	12	7	9	12	12	-	0	50	10	10	10	11	10	10	10
	Warmth in winter	10	10	8	7	5	4	-	0	0	7	9	7	8	8	6	7
	Sanitaion/toilet	3	2	3	6	3	4	-	0	0	3	3	3	3	4	4	3
	Power connection	5	3	4	6	6	5	-	25	0	5	5	4	5	5	5	5
	Privacy	2	3	2	0	3	3	-	25	0	2	2	2	3	2	4	2
	Accessibility of water	2	2	3	3	2	2	-	0	0	2	2	2	2	1	3	2
	Sunlight	1	1	2	1	2	3	-	0	0	2	1	2	2	2	2	2
	Others	1	1	1	1	2	2	-	0	0	1	1	1	2	1	2	1
	Total	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	100
Key Factors for Housing (%)	Housing conditions	21	24	21	22	22	22	13	11	19	22	20	23	21	23	22	22
	Connection to basic utility services	14	14	14	15	16	15	33	11	14	15	14	15	14	15	15	15
	Rent	2	1	1	1	1	2	0	22	5	2	2	1	1	1	1	2
	Neighborhood's security and safety	13	13	13	12	13	14	13	11	24	13	14	13	14	13	13	13
	Environmental conditions	13	10	14	15	14	13	13	0	5	13	13	13	13	13	15	13
	Attachment for the place	3	4	4	3	3	2	0	11	0	3	4	3	3	3	2	3
	Convenience for daily life	16	16	14	14	14	16	7	22	10	15	16	14	16	15	15	15
	Easy to earn income for living and find a job	7	6	6	5	4	4	0	11	0	5	5	5	6	5	5	5
	Understand values of tradition and culture	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1
	Relationship among neighboring	2	2	2	2	2	2	7	0	5	2	2	2	2	2	2	2
	Expectation for future development of the present location	5	5	5	6	6	5	7	0	14	5	6	5	5	6	5	5
	Road condition	3	3	4	3	4	4	7	0	5	3	4	4	3	3	4	3
Others	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Desired Space	Apartment (m ²)	52	59	55	63	65	58	-	40	30	58	51	56	53	63	67	58
	Ger (walls)	6	6	4	-	-	-	-	-	-	6	6	6	6	6	7	6
Affordability (tg 000/mo)		70	75	87	102	78	110	150	-	20	80	56	72	82	89	103	79

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

Table 6.2.2 Assessment of Housing Conditions by District (%)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Present Housing Condition	Want to move	8	10	11	8	6	9	4	0	5	8	
	Want to rebuilt	13	12	13	11	7	12	10	11	13	11	
	Want to improve	38	35	41	42	49	40	40	33	45	41	
	Do not need to do anything	40	43	35	39	37	39	47	56	37	39	
	Total	100	100	100	100	100	100	100	100	100	100	
Reason for Transfer/ Rebuilding/ Improvement	Small living space	20	20	17	20	16	18	14	17	13	18	
	Not suitable design	19	20	16	20	15	18	19	25	21	18	
	Poor structure	15	14	13	15	12	16	15	25	21	14	
	Bad air sealing/ventilation	8	9	7	7	8	8	12	4	13	8	
	Poor sunlight	1	2	4	3	4	2	3	4	4	3	
	Poor connection to basic utility services	8	8	6	8	9	10	9	0	4	8	
	High rent	1	1	1	1	1	1	0	0	0	1	
	Loss of traditional and cultural value	0	0	1	1	1	1	0	0	0	1	
	Insecure from natural disaster	4	6	5	3	3	4	4	4	6	4	
	No feel of attachment for the place	2	2	3	2	1	1	2	0	1	2	
	Inconvenience for daily life	6	7	8	6	7	8	7	0	7	7	
	Difficult to earn income for living and find a job	3	1	4	2	2	4	7	8	3	3	
	Bad neighborhood's security	4	3	6	4	8	4	2	0	2	5	
	Bad relationship among neighboring	1	1	1	1	2	1	1	0	1	1	
	Bad environmental conditions	6	5	7	5	10	3	3	4	2	6	
	Others	2	1	2	1	2	1	1	8	4	2	
	Total	100	100	100	100	100	100	100	100	100	100	
Desired Type of Housing	Traditional house (Ger)	3	1	4	2	5	0	6	0	0	3	
	Detached house by wooden structure	17	7	10	19	7	5	17	0	14	12	
	Detached house by wood mortar structure	10	8	6	7	5	8	11	0	9	7	
	Detached house by brick structure	19	17	25	26	9	15	28	50	32	21	
	Mid-rise apartment (-5F)	20	20	30	24	35	32	11	0	23	26	
	High-rise apartment (5F-)	14	28	13	11	10	28	17	0	18	16	
	Town house	15	18	11	10	25	12	6	50	5	14	
	Other	2	1	0	2	3	0	6	0	0	1	
	Total	100	100	100	100	100	100	100	100	100	100	
Important Factors for Housing	Housing conditions	22	24	19	23	20	23	18	19	24	22	
	Connection to basic utility services	15	16	13	17	12	17	12	6	13	15	
	Rent	2	1	2	1	1	1	1	0	2	2	
	Neighborhood's security and safety	12	13	13	13	14	12	13	17	16	13	
	Environmental conditions	13	14	13	13	13	15	14	9	15	13	
	Attachment for the place	4	3	2	3	2	4	5	4	5	3	
	Convenience for daily life	14	15	17	14	16	14	14	13	14	15	
	Easy to earn income for living and find a job	5	5	6	5	5	5	8	15	5	5	
	Understand values of tradition and culture	1	1	1	1	1	1	2	0	0	1	
	Relationship among neighboring	2	1	2	2	2	1	3	2	2	2	
	Expectation for future development of the present location	6	5	6	4	6	4	7	6	3	5	
	Road condition	3	2	4	3	5	3	4	11	2	3	
	Others	1	0	0	0	0	0	0	0	1	0	
Total	100	100	100	100	100	100	100	100	100	100		
Parts of Housing for Improvement	Living space	28	19	20	26	23	22	13	42	15	23	
	Design	27	27	27	26	24	26	34	25	37	27	
	Structure of house	15	18	17	18	18	24	15	8	25	18	
	Air sealing/ventilation	12	14	9	10	7	9	18	8	11	10	
	Warmth in winter	6	8	10	8	6	5	8	17	5	7	
	Sanitation/toilet	3	4	3	3	4	2	2	0	2	3	
	Power connection	5	5	5	5	6	4	4	0	4	5	
	Privacy	2	2	2	2	4	3	2	0	0	2	
	Accessibility of water	1	1	3	2	3	2	2	0	1	2	
	Sunlight	1	1	2	1	4	1	2	0	0	2	
	Others	0	1	2	2	2	1	0	0	0	1	
	Total	100	100	100	100	100	100	100	100	100	100	
	Desired Space for Housing	Apartment	Below 30 sqm	6	6	10	10	8	21	33	25	11
30 - 50 sqm			44	49	38	41	32	36	33	0	50	40
50 - 75 sqm			40	34	37	35	49	25	27	50	28	38
75 - 100 sqm			2	0	1	1	1	0	7	0	0	1
100 - 150 sqm			7	9	14	9	8	15	0	25	11	10
More than 151 sqm			2	2	0	3	2	4	0	0	0	2
Total		100	100	100	100	100	100	100	100	100	100	
Ger		4 walls	0	0	11	0	0	0	0	0	100	7
		5 walls	0	0	44	22	0	33	0	0	0	23
		6 walls	25	100	0	56	50	33	0	0	0	33
	7 walls	75	0	44	22	50	33	0	0	0	37	
Total	100	100	100	100	100	100	0	0	0	100		
Affordability for Housing	Answered	106	88	152	141	70	72	14	0	16	-	
Average	70,679	75,386	77,645	84,305	101,286	75,306	70,000	-	-	83,125	-	

7 LIVING CONDITIONS

This chapter contains assessment of living environment by district and assessment of living environment by housing type and income class.

7.1 Assessment of Living Environment by District

Table 7.1.1 Assessment of Access to Public Facility, Healthcare Services and Primary Education by District (%)

		UB and Study Area					UB by Districts										
		6 Districts	Bagak hangai	Baga nuur	Nalaikh	Total	Ching eltei	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uul	Nalaikh	Bagak hangai	Baga nuur	Total	
Access to Facility (% of Bad/ Very Bad)	Health care service provider	15	9	13	14	15	14	12	18	16	16	13	14	9	13	15	
	Emergency health care	3	0	4	1	3	3	4	4	3	3	2	1	0	4	3	
	Emergency health care for children	2	4	1	1	2	2	2	2	2	2	2	1	4	1	2	
	Public administrative office	4	6	3	5	4	4	4	4	3	4	5	5	6	3	4	
	Welfare service facility	4	6	5	6	4	5	4	5	5	4	4	6	6	5	4	
	Neighborhood park/play park	15	28	14	14	15	17	18	13	14	15	17	14	28	14	15	
	City park	10	13	12	12	10	12	13	8	8	10	13	12	13	12	10	
	Market for daily grocery	6	4	8	7	6	5	5	7	6	7	5	7	4	8	6	
	Market for special shopping	3	0	4	5	3	3	3	2	2	2	3	5	0	4	3	
	Entertainment facilities	8	11	8	11	9	8	9	6	7	5	12	11	11	8	8	
	Public transportation stop	7	11	6	6	7	5	6	7	8	7	5	6	11	6	7	
	Kindergarden	5	0	5	2	5	5	4	5	7	5	3	2	0	5	5	
	Elementary school	3	2	5	1	3	3	2	2	4	3	2	1	2	5	3	
	Police station	5	0	4	1	4	4	3	6	4	5	4	1	0	4	4	
	Library	5	6	5	5	5	6	3	5	5	6	6	5	6	5	5	
	Gymnasium/Sport hall	6	2	4	7	6	5	7	5	5	8	6	7	2	4	6	
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Health Care Services	Common Sickness (Summer) (%)	Infected diseases	1	0	0	0	1	0	0	1	1	0	0	0	0	1	
		Cough	24	6	23	18	24	24	25	24	24	26	25	18	6	23	24
		Asthma	1	0	1	0	1	1	0	2	1	3	0	0	0	1	1
		Diarrhea	2	0	2	0	2	3	2	3	2	2	1	0	0	2	2
		Nothing	60	89	62	73	60	62	62	58	60	54	62	73	89	62	60
		Allergy	9	0	3	4	9	7	9	9	9	11	7	4	0	3	9
		Other	3	6	10	5	3	2	3	3	3	3	4	5	6	10	3
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Common Sickness (Winter) (%)	Infected diseases	1	0	1	0	1	0	1	2	1	2	0	0	0	1	1
		Cough	80	83	67	79	80	79	78	81	80	82	77	79	83	67	80
		Asthma	1	0	1	0	1	1	0	1	1	2	1	0	0	1	1
		Diarrhea	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
		Nothing	16	17	27	19	16	17	19	13	16	13	18	19	17	27	16
		Allergy	1	0	1	1	1	1	1	1	0	1	1	1	0	1	1
		Other	1	0	4	1	2	2	1	1	2	1	2	1	0	4	2
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Satisfaction to Government Facilities (% of Bad/ Very Bad)	Neighborhood Cleaness (% bad/very Bad)	40	6	19	33	39	41	39	47	40	35	32	33	6	19	39
		Facility for people who has mental diseases	6	0	2	0	6	4	5	7	5	7	5	0	0	2	6
		Facility for people with disability	6	0	2	1	6	5	6	8	5	8	4	1	0	2	6
		Government hospital in the district and Khoroo level	10	0	6	1	10	8	8	11	9	15	8	1	0	6	10
		Government clinic/family doctor in the district and Khoroo level	18	0	11	12	18	15	15	20	19	20	17	12	0	11	18
		Family hospital	11	0	8	4	11	9	8	13	14	14	8	4	0	8	11
Emergency health care service facility		11	0	6	4	11	11	7	12	14	14	8	4	0	6	11	
Manpower contribution		41	0	60	61	41	46	42	41	39	36	42	61	0	60	41	
Financial contribution		9	0	12	7	9	8	6	8	10	13	12	7	0	12	9	
Don't want to do anything		2	0	0	16	2	1	3	1	1	1	2	16	0	0	2	
Don't know	48	100	28	16	47	45	48	49	50	50	44	16	100	28	47		
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Primary Education	Satisfaction (%)	Bad/Very Bad	15	0	8	7	15	16	12	13	18	18	11	7	0	8	15
		Fair	40	44	32	39	39	35	37	40	41	47	33	39	44	32	39
		Good/Very Good	46	56	60	54	46	48	52	46	41	36	56	54	56	60	46
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Problems Facing (%)	Overcrowded	41	-	56	20	42	28	28	49	39	53	50	20	-	56	42
		Far distance	8	-	0	40	8	11	2	3	18	1	0	40	-	0	8
		Bad access	4	-	0	0	4	7	0	8	3	3	0	0	-	0	4
		Bad school facilities	6	-	0	20	6	12	6	5	7	5	0	20	-	0	6
		High school fee and costs	24	-	11	20	24	30	47	20	17	20	26	20	-	11	24
		No problem	1	-	22	0	2	0	0	1	3	1	0	0	-	22	2
Others		15	-	11	0	15	13	17	13	14	17	24	0	-	11	15	
Total	100	0	100	100	100	100	100	100	100	100	100	100	0	100	100		

Table 7.1.2 Assessment of Safety / Security Environment by District (%)

		UB and Study Area					UB by Districts										
		6 Districts	Bagak hangai	Baga nuur	Nalaikh	Total	Ching eltei	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uu	Nalaikh	Bagak hangai	Baga nuur	Total	
Access to Government Institution Services (%)	Bad/Very Bad	26	0	21	18	26	28	21	27	26	32	21	18	0	21	26	
	Fair	54	56	54	55	54	52	55	52	55	52	55	56	54	54	54	
	Good/Very Good	20	44	25	27	21	20	24	21	19	16	24	27	44	25	21	
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Safety/ Security	Relationship with Neighbors (%)	Helping each other	16	39	21	28	16	22	16	13	17	11	17	28	39	21	16
		Visiting each other often	24	61	30	38	24	21	23	31	25	14	28	38	61	30	24
		Discussing community problem	4	0	8	3	4	5	3	4	4	4	6	3	0	8	4
		Greeting	41	0	33	28	41	39	43	37	41	51	42	28	0	33	41
		Don't know who lives in neighborhood	8	0	4	1	8	6	11	9	7	11	5	1	0	4	8
		Bad relation	6	0	5	2	6	9	4	6	6	10	2	2	0	5	6
		Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Participation to Community Activities (%)	Not at all	32	22	21	32	32	30	33	30	34	35	30	32	22	21	32
		Cleaning neighborhood	42	44	47	46	42	45	35	48	44	33	40	46	44	47	42
		Supporting children activities	4	0	5	1	4	4	4	4	4	3	4	1	0	5	4
		Improving natural environment	6	6	5	5	6	7	8	5	6	4	8	5	6	5	6
		Improving neighbor security	2	6	4	1	2	2	3	3	2	2	2	1	6	4	2
		Attending neighborhood meetings	8	11	5	7	8	6	7	7	7	13	8	7	11	5	8
Cultural act/festival		4	0	6	5	4	5	9	2	2	5	5	5	0	6	4	
Others		2	11	8	4	2	2	2	1	2	3	3	4	11	8	2	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Feeling of Safety in Neighborhood (%)	Safety/security against crimes	43	11	22	21	42	33	45	51	42	45	37	21	11	22	42	
	Traffic safety	44	39	18	24	43	39	41	49	43	52	38	24	39	18	43	
	Safety against flood	18	0	4	9	17	15	19	21	18	20	13	9	0	4	17	
	Safety against land slides	10	6	2	7	10	9	8	11	12	11	11	7	6	2	10	
	Safety against earthquakes	11	6	2	11	11	9	9	12	11	11	10	11	6	2	11	
Consultation on Safety with: (%)	Nobody	12	39	1	7	12	9	13	11	12	15	12	7	39	1	12	
	Khoroo officer	36	17	53	47	37	37	35	38	32	37	39	47	17	53	37	
	Heseg leader	29	17	23	20	28	27	29	31	33	24	25	20	17	23	28	
	Neighbor	9	28	9	7	9	9	9	10	10	7	8	7	28	9	9	
	Others	15	0	14	19	15	18	15	11	13	18	15	19	0	14	15	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Assessment of Safety in CBD	Safety/security against crimes	39	0	22	20	38	34	42	40	40	43	33	20	0	22	38	
	Traffic safety	48	56	47	38	48	44	50	49	48	55	42	38	56	47	48	
	Safety against fire	25	0	8	14	25	23	27	28	27	29	16	14	0	8	25	
	Safety against flood	21	0	8	15	21	15	22	24	22	26	14	15	0	8	21	
	Safety against land slides	26	0	5	22	25	17	24	28	29	43	12	22	0	5	25	
Safety against earthquakes	25	0	7	24	25	17	22	28	29	42	11	24	0	7	25		
Consultation on Safety with:	Not to discuss with anyone	7	39	2	3	7	5	8	8	7	7	8	3	39	2	7	
	City government officer	3	0	4	1	3	3	3	3	4	3	5	1	0	4	3	
	District officer	2	0	2	1	2	3	2	3	2	2	1	1	0	2	2	
	Khoroo officer	13	0	18	13	13	12	15	16	10	14	10	13	0	18	13	
	Heseg leader	6	0	10	7	7	7	7	7	7	7	4	7	0	10	7	
	Family members	15	6	2	13	14	14	11	14	15	22	9	13	6	2	14	
	Neighbor	6	22	4	13	6	6	7	5	6	3	7	13	22	4	6	
	Police	47	33	59	49	47	50	47	43	48	40	55	49	33	59	47	
	Friends	1	0	1	1	1	1	1	1	1	2	1	1	0	1	1	
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		

Table 7.1.3 Assessment of Park / Greenery Space, Landscape and Environment by District (%)

		UB and Study Area					UB by Districts										
		6 Districts	Bagak hangai	Baga nuur	Nalaikh	Total	Ching eltei	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uul	Nalaikh	Bagak hangai	Baga nuur	Total	
Park/ Green Space	Importance of Access to Park at Neighborhood (% yes)	97	100	99	99	97	98	99	95	97	95	99	99	100	99	97	
	Desired Function of Park (%)	To take a rest	29	0	33	25	29	27	21	26	33	33	28	25	0	33	29
		To do exercise	4	0	3	3	4	4	4	3	4	5	2	3	0	3	4
		To take a walk	5	0	6	8	5	5	5	5	4	4	4	8	0	6	5
		To play with children	8	0	7	5	7	4	7	10	7	9	6	5	0	7	7
		To gather with friends	5	0	1	2	5	5	5	6	3	6	6	2	0	1	5
		To see performance	1	0	0	0	1	1	1	0	1	0	0	0	0	0	1
		Others	1	0	0	1	1	0	1	1	0	0	1	1	0	0	1
		Total	49	100	50	54	50	54	56	49	47	41	53	54	100	50	50
	Overall Assessment of Parks in UB (%)	Bad/Very Bad	59	0	27	48	58	62	58	56	60	69	50	48	0	27	58
		Fair	35	27	55	47	36	33	35	38	34	28	42	47	27	55	36
		Good/Very Good	6	73	17	5	6	5	7	5	6	3	8	5	73	17	6
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Desired Type of Park (%)	Big park	23	19	22	24	23	23	24	22	22	25	25	24	19	22	23
		Small park	7	3	6	12	7	8	7	6	8	6	6	12	3	6	7
		Square	31	42	35	27	31	30	33	32	30	29	27	42	35	31	
		Street trees	24	19	27	27	24	23	23	25	24	22	22	27	19	27	24
		Greenery	14	17	11	9	14	15	13	14	13	17	17	9	17	11	14
		Others	1	0	0	0	1	1	1	0	1	1	0	0	0	0	1
		Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
		Overall Assessment of Greenery in UB (%)	Bad/Very Bad	58	22	26	41	57	60	59	54	58	67	51	41	22	26
	Fair		35	11	62	53	36	33	34	38	35	29	41	53	11	62	36
	Good/Very Good		7	67	12	6	7	7	8	8	6	5	8	6	67	12	7
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Possible Contribution for Improvement (%)	Manpower contribution	55	17	41	54	55	61	54	58	51	53	62	54	17	41	55	
	Financial contribution	15	17	18	10	15	12	13	16	15	15	17	10	17	18	15	
	Don't want to do anything	3	0	3	3	3	3	3	3	4	2	3	3	0	3	3	
	Don't know	27	67	38	33	27	24	30	24	30	30	19	33	67	38	27	
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Negative Factors for City Landscape (%)	Openness of Space	32	6	34	24	32	31	28	34	32	38	32	24	6	34	32	
	Building Design	29	0	18	23	28	29	23	27	28	37	31	23	0	18	28	
	Design of wall/fence	40	0	28	30	39	38	36	37	38	50	43	30	0	28	39	
	High-rise building	29	17	38	39	29	31	27	23	28	28	39	39	17	38	29	
	Encroachment of building	48	33	50	49	48	49	49	44	47	54	50	49	33	50	48	
	Advertisement	76	89	85	82	76	73	76	73	76	78	80	82	89	85	76	
	Electric wire	26	11	38	37	26	27	23	25	24	28	30	37	11	38	26	
	Parking on sidewalk	65	83	80	65	66	63	72	62	66	63	69	65	83	80	66	
	Greenery	54	39	66	65	55	57	56	51	55	53	56	65	39	66	55	
	Lots of vehicles on the street	47	44	47	63	47	52	43	43	43	51	49	63	44	47	47	
Unsatisfaction to Environment	Air Quality	81	83	49	46	80	74	87	83	81	91	70	46	83	49	80	
	Water quality	41	53	27	29	41	43	42	42	40	37	44	29	53	27	41	
	Noise	22	11	13	12	22	15	22	27	22	26	19	12	11	13	22	
	Odor/bad smell	36	0	11	13	35	41	27	35	34	38	43	13	0	11	35	
	Dust	40	6	18	23	40	37	40	43	37	55	27	23	6	18	40	
Possible Contribution to Improve Environment Situation	Air Quality	Manpower	11	0	5	5	11	9	10	13	11	13	5	0	5	11	
		Financial	4	0	2	3	4	5	3	3	4	6	5	3	0	2	4
		Others	84	100	94	92	85	85	88	84	85	81	82	92	100	94	85
	Water Quality	Manpower	21	0	0	16	21	16	32	25	12	17	32	16	0	0	21
		Financial	30	0	18	21	30	25	14	36	31	40	26	21	0	18	30
		Others	49	100	82	63	50	59	55	39	56	43	43	63	100	82	50
	Noise	Manpower	22	0	0	13	21	22	19	25	17	23	27	13	0	0	21
		Financial	8	0	0	0	8	11	7	7	7	9	15	0	0	0	8
		Others	70	100	100	88	71	67	74	69	76	67	58	88	100	100	71
	Odor/bad smell	Manpower	36	0	23	29	35	31	48	34	34	37	35	29	0	23	35
		Financial	35	22	37	35	35	42	25	38	32	38	30	35	22	37	35
		Others	29	78	40	36	30	27	28	27	35	24	35	36	78	40	30
	Dust	Manpower	29	0	13	13	29	28	31	33	26	27	34	13	0	13	29
		Financial	9	0	4	3	9	12	5	7	9	9	14	3	0	4	9
		Others	62	100	83	84	63	61	63	60	65	64	52	84	100	83	63

Table 7.1.4 Overall Assessment of Urban Issues and Living Environment by District (%)

		UB and Study Area					UB by Districts									
		Ulaan baatar	Bagak hangai	Baga nuur	Nalaikh	Total	Ching eltei	Sukh baatar	Songinok hairkhan	Bayan surkh	Bayan gol	Khan-uul	Nalaikh	Bagak hangai	Baga nuur	Total
Improvement Needs (%)	Transfer	9	0	5	4	8	8	10	11	8	6	9	4	0	5	8
	Rebuild	11	11	13	10	11	13	12	13	11	7	12	10	11	13	11
	Improve	41	33	45	40	41	38	35	41	42	49	40	40	33	45	41
	Nothing	39	56	37	47	39	40	43	35	39	37	39	47	56	37	39
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Reason for Improvement (%)	Small living space	18	17	13	14	18	20	20	17	20	16	18	14	17	13	18
	Not suitable design	18	25	21	19	18	19	20	16	20	15	18	19	25	21	18
	Poor structure	14	25	21	15	14	15	14	13	15	12	16	15	25	21	14
	Bad air sealing/ventilation	8	4	13	12	8	8	9	7	7	8	8	12	4	13	8
	Poor sunlight	3	4	4	3	3	1	2	4	3	4	2	3	4	4	3
	Poor connection to basic utility services	8	0	4	9	8	8	8	6	8	9	10	9	0	4	8
	High rent	1	0	0	0	1	1	1	1	1	1	1	0	0	0	1
	Loss of traditional and cultural value	1	0	0	0	1	0	0	1	1	1	1	0	0	0	1
	Insecure from natural disaster	4	4	6	4	4	4	6	5	3	3	4	4	4	6	4
	No feel of attachment for the place	2	0	1	2	2	2	2	3	2	1	1	2	0	1	2
	Inconvenience for daily life	7	0	7	7	7	6	7	8	6	7	8	7	0	7	7
	Difficult to earn income for living and find a job	3	8	3	7	3	3	1	4	2	2	4	7	8	3	3
	Bad neighborhood's security	5	0	2	2	5	4	3	6	4	8	4	2	0	2	5
	Bad relationship among neighboring	1	0	1	1	1	1	1	1	1	2	1	1	0	1	1
	Bad environmental conditions	6	4	2	3	6	6	5	7	5	10	3	3	4	2	6
	Others	2	8	4	1	2	2	1	2	1	2	1	1	8	4	2
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Desired Type of Housing (%)	Traditional house (Ger)	3	0	0	6	3	3	1	4	2	5	0	6	0	0	3
	Detached house by wooden structure	12	0	14	17	12	17	7	10	19	7	5	17	0	14	12
	Detached house by wood mortar structure	7	0	9	11	7	10	8	6	7	5	8	11	0	9	7
	Detached house by brick structure	20	50	32	28	21	19	17	25	26	9	15	28	50	32	21
	Mid-rise apartment (-5F)	26	0	23	11	26	20	20	30	24	35	32	11	0	23	26
	High-rise apartment (5F-)	16	0	18	17	16	14	28	13	11	10	28	17	0	18	16
	Town house	14	50	5	6	14	15	18	11	10	25	12	6	50	5	14
	Other	1	0	0	6	1	2	1	0	2	3	0	6	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Desired Improvement (%)	Living space	23	42	15	13	23	28	19	20	26	23	22	13	42	15	23
	Design	26	25	37	34	27	27	27	27	26	24	26	34	25	37	27
	Structure of house	17	8	25	15	18	15	18	17	16	18	24	15	8	25	18
	Air sealing/ventilation	10	8	11	18	10	12	14	9	10	7	9	18	8	11	10
	Warmth in winter	7	17	5	8	7	6	8	10	8	6	5	8	17	5	7
	Sanitation/toilet	3	0	2	2	3	3	4	3	3	4	2	2	0	2	3
	Power connection	5	0	4	4	5	5	5	5	5	6	4	4	0	4	5
	Privacy	3	0	0	2	2	2	2	2	2	4	3	2	0	0	2
	Accessibility of water	2	0	1	2	2	1	1	3	2	3	2	2	0	1	2
	Sunlight	2	0	0	2	2	1	1	2	1	4	1	2	0	0	2
	Others	1	0	0	0	1	0	1	2	2	2	1	0	0	0	1
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Key Factors for Housing (%)	Housing conditions	22	19	24	18	22	22	24	19	23	20	23	18	19	24	22
	Connection to basic utility services	15	6	13	12	15	15	16	13	17	12	17	12	6	13	15
	Rent	2	0	2	1	2	2	1	2	1	1	1	1	0	2	2
	Neighborhood's security and safety	13	17	16	13	13	12	13	13	13	14	12	13	17	16	13
	Environmental conditions	13	9	15	14	13	13	14	13	13	13	15	14	9	15	13
	Attachment for the place	3	4	5	5	3	4	3	2	3	2	4	5	4	5	3
	Convenience for daily life	15	13	14	14	15	14	15	17	14	16	14	14	13	14	15
	Easy to earn income for living and find a job	5	15	5	8	5	5	5	6	5	5	5	8	15	5	5
	Understand values of tradition and culture	1	0	0	2	1	1	1	1	1	1	1	2	0	0	1
	Relationship among neighboring	2	2	2	3	2	2	1	2	2	2	1	3	2	2	2
	Expectation for future development of the present location	5	6	3	7	5	6	5	6	4	6	4	7	6	3	5
	Road condition	3	11	2	4	3	3	2	4	3	5	3	4	11	2	3
Others	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Desired Space	Apartment (m ²)	58	68	53	43	58	57	56	58	58	59	59	43	68	53	58
	Ger (walls)	6	-	4	-	6	7	6	6	6	7	6	-	-	4	6
	Affordability (tg 000/month)	80	-	83	70	80	71	75	78	84	101	75	70	-	83	80

7.2 Assessment of Living Environment by Housing Type and Income Class

Table 7.2.1 Assessment of Living Environment (Public Facilities, Healthcare Services and Primary Education) by Housing Type and Income Class (%)

	Ger	Detached			Apartment		Town house	Others		Total	Income Classification					Total	
		Wood	Wood mortar	Brick	> 5F	< 6F		Hut	Non housing		1	2	3	4	5		
Desired Facility Nearby House	Health care service provider	16	17	13	15	15	16	20	11	10	15	15	15	16	14	16	15
	Emergency health care	3	3	3	4	3	3	0	0	10	3	3	4	3	3	3	3
	Emergency health care for children	2	2	1	2	2	2	0	0	10	2	2	3	2	2	2	2
	Public administrative office	3	3	4	5	3	4	0	11	0	4	4	3	4	4	4	4
	Welfare service facility	5	5	5	5	4	3	0	0	10	4	5	5	5	4	4	4
	Neighborhood park/play park	14	12	17	13	17	15	7	11	14	15	15	15	15	15	15	15
	City park	9	8	10	9	12	11	0	0	5	10	10	9	9	11	11	10
	Market for daily grocery	6	8	5	5	6	8	7	0	10	6	7	6	6	6	6	6
	Market for special shopping	3	2	3	2	2	2	0	11	0	3	3	3	2	3	2	3
	Entertainment facilities	7	7	10	8	7	7	13	11	0	8	7	8	7	8	8	8
	Public transportation stop	8	9	6	7	5	6	13	11	0	7	8	6	7	7	6	7
	Kindergarten	6	5	5	6	5	4	7	11	5	5	4	5	6	6	5	5
	Elementary school	4	3	3	3	2	2	7	11	0	3	3	3	3	3	2	3
	Police station	4	6	5	5	4	3	7	11	19	5	5	4	5	5	3	5
	Library	4	4	5	5	6	6	7	0	5	5	5	5	5	5	6	5
	Gymnasium/Sport hall	4	5	5	6	7	8	13	0	5	6	4	5	6	6	8	6
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Health Care Service	Common Sickness (Summer)	Infected diseases	1	0	1	1	1	1	0	0	0	1	1	1	0	1	1
		Cough	23	29	21	31	22	24	0	67	57	24	21	25	26	25	23
		Asthma	1	1	1	1	2	1	0	0	0	1	1	1	1	1	2
		Diarrhea	3	2	3	3	1	1	0	0	0	2	2	3	2	2	2
		Nothing	62	58	63	55	60	58	80	33	29	60	64	58	58	59	62
		Allergy	7	7	7	8	10	11	20	0	14	9	7	8	9	10	8
		Other	3	2	4	2	4	4	0	0	0	3	3	5	3	2	3
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Common Sickness (Winter)	Infected diseases	1	1	1	2	1	1	0	0	0	1	1	2	1	2	1
		Cough	80	79	83	82	76	78	60	100	86	79	78	80	79	78	81
		Asthma	1	2	0	0	1	1	0	0	14	1	1	1	1	1	1
		Diarrhea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Nothing	15	16	13	15	18	18	20	0	0	16	17	14	17	17	16
		Allergy	1	1	0	1	1	1	20	0	0	1	1	0	1	0	1
		Other	2	1	2	1	2	1	0	0	0	2	2	3	1	2	1
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Neighborhood Cleanliness (% Bad/Very Bad)	44	39	50	39	33	28	60	67	43	39	40	40	39	39	36	
	Satisfaction to Government Facilities (% Bad/Very Bad)	Facility for people who has mental diseases	5	4	6	6	6	7	0	0	14	6	5	5	6	6	
		Facility for people with disability	5	4	7	6	6	7	20	0	14	6	5	6	6	7	
		Government hospital in the district and Khoroo level	9	11	9	8	11	10	0	0	14	10	9	12	11	8	
		Government clinic/family doctor in the district and Khoroo level	17	21	16	15	18	18	20	0	0	18	15	20	18	18	
Family hospital		10	13	11	14	10	11	40	0	0	11	10	12	12	11		
Emergency health care service facility	11	13	11	12	10	12	40	0	0	11	10	12	12	10			
Contribution for Improvement	Manpower contribution	44	41	40	44	41	37	0	50	67	41	46	45	41	39		
	Financial contribution	7	9	6	10	16	12	0	0	0	9	4	9	10	12		
	Don't want to do anything	1	3	1	3	2	3	0	0	0	2	3	1	2	1		
	Don't know	48	46	53	44	41	48	100	50	33	47	47	45	47	48		
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100			
Primary Education	Satisfaction (%)	Bad/Very Bad	13	18	15	17	14	14	20	33	0	15	14	15	14	15	
		Fair	40	38	40	35	39	44	40	33	17	39	37	42	39	40	
		Good/Very Good	47	44	45	48	48	42	40	33	83	46	49	43	48	45	
		Total	100	100	100	100	100	100	100	100	100	100	100	100	100		
	Problems Facing (%)	Overcrowded	39	38	29	32	51	59	100	0	-	42	37	38	40	42	
		Far distance	15	6	6	22	1	0	0	100	-	8	12	6	10	7	
		Bad access	1	4	6	4	3	4	0	0	-	4	7	2	3	5	
		Bad school facilities	3	10	12	4	6	4	0	0	-	6	8	6	7	4	
		High school fee and costs	32	35	28	20	16	10	0	0	-	24	26	36	21	25	
No problem	2	0	0	0	4	3	0	0	-	2	0	1	2	2			
Others	8	8	18	18	19	20	0	0	-	15	11	11	17	15			
Total	100	100	100	100	100	100	100	100	0	100	100	100	100	100			

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

Table 7.2.2 Assessment Living Environment (Safety / Security Environment) by Housing Type and Income Class (%)

		Ger	Detached			Apartment		Town house	Others		Total	Income Classification					Total	
			Wood	Wood mortar	Brick	> 5F	< 6F		Hut	Non housing		1	2	3	4	5		
Access to Government Institution Services	Bad/Very Bad	26	29	25	24	25	26	20	33	14	26	24	27	24	25	28	26	
	Fair	55	53	54	51	52	55	60	33	57	54	56	54	56	53	50	54	
	Good/Very Good	19	18	20	24	24	19	20	33	29	21	20	19	20	22	22	21	
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Relationship with Neighbors	Helping each other	22	21	17	19	11	10	20	0	29	16	19	18	17	15	12	16	
	Visiting each other often	32	27	36	24	15	14	0	33	14	24	29	25	26	24	18	24	
	Discussing community problem	6	4	5	4	3	3	0	0	0	4	5	4	4	4	4	4	
	Greeting	31	37	34	41	51	52	20	67	29	41	36	40	42	41	47	41	
	Don't know who lives in neighborhood	5	4	4	6	13	12	60	0	0	8	6	8	6	8	11	8	
	Bad relation	5	6	4	6	8	9	0	0	29	6	6	6	5	7	8	6	
	Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	Participation to Community Activities	Not at all	32	24	26	29	36	40	20	0	0	32	31	29	32	31	35	32
		Cleaning neighborhood	46	53	48	46	33	31	60	67	86	42	44	45	42	43	35	42
		Supporting children activities	4	2	4	3	4	5	0	0	0	4	3	4	3	4	5	4
		Improving natural environment	6	4	9	7	5	5	20	0	0	6	6	5	6	5	7	6
		Improving neighbor security	2	3	1	2	3	2	0	0	14	2	2	2	2	3	2	2
		Attending neighborhood meetings	6	6	6	9	11	10	0	0	0	8	8	8	8	8	8	8
		Cultural act/festival	3	4	4	3	6	4	0	33	0	4	3	4	4	4	5	4
Others		2	2	3	1	3	3	0	0	0	2	3	2	2	2	2	2	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Feeling of Safety in Neighborhood	Safety/security against crimes	46	54	37	46	36	40	80	33	29	42	39	44	42	44	41	42	
	Traffic safety	44	50	40	45	39	45	100	33	29	43	41	45	41	45	44	43	
	Safety against flood	22	23	16	17	13	15	40	0	14	17	17	20	17	16	16	17	
	Safety against land slides	12	10	11	11	9	10	0	0	0	10	11	11	11	10	9	10	
	Safety against earthquakes	11	10	11	11	10	11	0	0	14	11	11	11	11	10	9	11	
Consultation on Safety in Neighborhood	Nobody	11	6	14	9	13	14	20	33	0	12	12	11	11	10	13	12	
	Khoroo officer	34	43	32	36	38	40	0	0	57	37	38	38	38	34	34	37	
	Heseg leader	31	28	29	30	27	26	20	33	29	28	26	28	31	31	25	28	
	Neighbor	11	7	10	13	8	5	0	33	14	9	12	9	8	9	7	9	
	Others	14	16	15	13	14	15	60	0	0	14	12	13	12	15	21	15	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Assessment of Safety in CBD	Safety/security against crimes	36	40	36	40	38	41	60	33	14	38	33	36	39	44	40	38	
	Traffic safety	50	50	50	47	44	50	60	33	43	48	48	49	48	48	49	48	
	Safety against fire	26	27	23	24	24	26	20	33	14	25	23	25	24	28	25	25	
	Safety against flood	21	21	18	20	22	22	0	33	14	21	17	21	21	23	22	21	
	Safety against land slides	24	21	21	27	26	35	0	100	33	25	24	26	24	26	28	26	
	Safety against earthquakes	25	23	19	27	26	30	0	100	33	25	25	24	23	27	26	25	
Consultation on Safety in City Center	Not to discuss with anyone	7	3	8	4	9	7	0	0	0	7	8	6	6	7	8	7	
	City government officer	2	4	2	6	3	3	0	0	29	3	2	3	4	4	3	3	
	District officer	3	2	2	4	2	1	0	0	0	2	2	2	3	2	2	2	
	Khoroo officer	11	16	12	12	14	13	0	33	29	13	14	13	14	13	11	13	
	Heseg leader	7	5	7	8	5	8	0	0	0	7	7	6	8	8	5	7	
	Family members	14	14	15	10	15	15	60	0	0	14	13	14	12	16	17	14	
	Neighbor	9	3	8	7	3	3	0	33	14	6	10	6	5	5	3	6	
	Police	47	50	44	48	47	47	40	33	29	47	44	49	48	44	49	47	
	Friends	1	1	1	1	1	1	0	0	0	1	1	1	1	1	2	1	
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

¹⁾ Detached house is a self-built wooden house which is not connected to central infrastructure.

8 OVERALL ASSESSMENT OF URBAN ENVIRONMENT

This chapter contains the overall assessment of urban environment.

Table 8.1 Assessment of Safety in the City Center

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
											No.	%
Safety/ security against crimes	Very Bad	45	61	67	60	49	24	3	0	1	310	7
	Bad	152	172	313	336	267	113	24	0	28	1,405	31
	Fair	281	222	437	447	336	180	67	16	61	2,047	46
	Good	108	94	125	139	90	92	39	0	41	728	16
	Very Good	0	0	0	0	0	0	0	0	0	0	0
	Total	586	549	942	982	742	409	133	16	131	4,490	100
Traffic safety	Very Bad	69	53	91	69	57	35	4	0	2	380	8
	Bad	195	221	373	411	349	139	47	10	59	1,804	40
	Fair	216	177	346	334	259	153	49	6	29	1,569	35
	Good	105	96	129	169	79	80	36	0	40	734	16
	Very Good	12	3	5	11	0	9	0	2	1	43	1
	Total	597	550	944	994	744	416	136	18	131	4,530	100
Safety against fire	Very Bad	20	44	64	50	32	13	2	0	2	227	5
	Bad	117	102	200	216	187	52	17	0	9	900	20
	Fair	331	278	489	507	423	250	84	15	89	2,466	54
	Good	118	121	185	206	99	88	32	1	28	878	19
	Very Good	11	5	6	15	3	13	1	2	3	59	1
	Total	597	550	944	994	744	416	136	18	131	4,530	100
Safety against flood	Very Bad	18	34	49	36	35	12	1	0	1	186	4
	Bad	72	86	177	186	161	47	20	0	10	759	17
	Fair	371	299	493	545	440	249	87	15	85	2,584	57
	Good	119	121	206	204	98	88	27	1	32	896	20
	Very Good	17	10	19	23	10	20	1	2	3	105	2
	Total	597	550	944	994	744	416	136	18	131	4,530	100
Safety against land slides	Very Bad	7	11	27	23	17	2	1	0	0	88	4
	Bad	47	59	101	120	98	25	16	0	3	469	21
	Fair	150	114	180	192	102	113	36	0	28	915	42
	Good	85	97	136	139	41	69	22	1	25	615	28
	Very Good	24	10	18	20	7	17	1	1	2	100	5
	Total	313	291	462	494	265	226	76	2	58	2,187	100
Safety against earthquakes	Very Bad	9	9	24	26	26	7	3	0	0	104	5
	Bad	42	53	106	118	80	18	15	0	4	436	20
	Fair	161	111	182	202	91	109	36	0	28	920	42
	Good	68	91	132	137	45	67	18	1	22	581	27
	Very Good	29	23	20	20	10	22	3	1	2	130	6
	Total	309	287	464	503	252	223	75	2	56	2,171	100

Table 8.2 Level of Satisfaction on Living Environment (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Serious Problems in Neighborhood	Poor greenary	24	23	20	24	24	24	25	20	26	23
	Much dumps	19	19	23	23	20	18	19	12	18	21
	Flood vulnerable	1	2	3	2	2	1	1	0	3	2
	No street lights	14	12	16	14	12	13	13	24	14	14
	Pavement condition	14	14	11	12	11	13	17	12	13	12
	Narrow streets	4	3	3	2	3	5	2	2	3	3
	Improper address	1	1	1	2	2	1	0	2	1	2
	No telecommunication	0	1	1	1	1	1	0	0	1	1
	No play ground	14	13	12	13	13	14	12	6	12	13
	No/inaccessible public bath house	4	3	4	3	1	4	4	8	3	3
	Noise	4	6	4	4	9	4	1	2	4	5
No problem	0	3	1	2	2	1	3	12	2	2	
Total	100	100	100	100	100	100	100	100	100	100	
Safety in general	Highly Unsatisfied	11	14	19	10	14	8	5	0	1	12
	Unsatisfied	38	42	43	43	37	42	38	6	31	41
	Fair	41	35	31	38	41	40	43	17	54	38
	Satisfied	9	9	6	9	8	10	14	78	15	9
	Highly Satisfied	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	
Security of good housing	Highly Unsatisfied	6	10	10	8	8	7	5	0	1	8
	Unsatisfied	36	39	41	36	30	37	27	6	27	36
	Fair	42	35	36	43	44	40	52	17	50	41
	Satisfied	16	16	13	13	17	16	15	78	21	15
	Highly Satisfied	0	1	0	0	1	0	0	0	1	0
Total	100	100	100	100	100	100	100	100	100	100	
Security of healthy life	Highly Unsatisfied	6	9	13	9	12	9	5	0	2	10
	Unsatisfied	35	40	41	37	41	33	23	6	24	37
	Fair	49	39	39	45	37	46	63	17	60	43
	Satisfied	10	11	7	9	9	12	9	78	15	10
	Highly Satisfied	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	
Convenience of daily activities	Highly Unsatisfied	4	9	11	8	8	6	5	0	2	8
	Unsatisfied	30	35	33	32	30	34	31	6	22	32
	Fair	54	43	47	48	47	45	53	17	55	48
	Satisfied	12	13	9	12	14	15	11	78	21	13
	Highly Satisfied	0	1	0	0	1	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	
Access to employment opportunity/income source	Highly Unsatisfied	9	12	16	10	10	9	8	0	2	11
	Unsatisfied	36	39	38	39	34	40	36	11	47	38
	Fair	43	36	38	42	42	39	49	11	37	40
	Satisfied	12	12	8	9	13	12	6	78	14	11
	Highly Satisfied	0	1	0	0	1	0	1	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	
Amenity for man-made environment	Highly Unsatisfied	14	23	24	18	23	14	9	0	11	19
	Unsatisfied	47	45	45	47	47	45	47	11	48	46
	Fair	33	27	25	30	25	35	38	11	31	29
	Satisfied	6	4	5	4	4	6	7	78	10	5
	Highly Satisfied	0	0	1	0	0	0	0	0	1	0
Total	100	100	100	100	100	100	100	100	100	100	
Amenity for natural environment	Highly Unsatisfied	20	28	30	23	33	17	13	6	11	25
	Unsatisfied	43	45	41	46	44	46	40	6	47	44
	Fair	32	23	23	27	18	30	40	11	31	26
	Satisfied	5	4	6	4	4	6	7	78	10	5
	Highly Satisfied	0	0	1	0	0	0	1	0	1	0
Total	100	100	100	100	100	100	100	100	100	100	

Table 8.3 Important Aspects for Good Living Environment (%)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Safety in general	24	24	23	25	23	23	25	33	28	24
Security of good housing	13	13	14	12	12	14	16	19	17	13
Security of healthy life	24	24	28	28	31	23	20	22	27	27
Convenience of daily activities	11	8	8	8	6	8	9	0	3	8
Access to employment opportunity/income source	13	15	13	12	9	13	14	8	5	12
Amenity for man-made environment	7	7	6	6	7	7	5	6	7	7
Amenity for natural environment	8	10	8	9	12	13	11	11	12	10
Total	100	100	100	100	100	100	100	100	100	100

Table 8.4 Assessment of Key Urban Issues (No. and %)

District	Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Economic development	Good Job	39	69	80	97	68	45	7	6	17	9
	More Attention	289	293	433	465	287	214	61	7	57	47
	So-so	267	188	423	428	382	156	68	5	55	44
	Total	595	550	936	990	737	415	136	18	129	100
Poverty alleviation	Good Job	16	21	44	46	42	15	5	3	10	4
	More Attention	433	415	667	681	459	315	87	13	88	70
	So-so	147	114	231	263	237	86	44	2	33	26
	Total	596	550	942	990	738	416	136	18	131	100
Transportation	Good Job	12	10	29	80	52	2	0	2	0	64
	More Attention	5	4	15	15	10	2	2	0	0	18
	So-so	6	5	18	9	9	4	1	0	0	18
	Total	23	19	62	104	71	8	3	2	0	100
Land and Housing	Good Job	83	91	164	153	111	58	8	3	17	15
	More Attention	185	143	305	291	206	126	46	9	29	30
	So-so	329	315	471	550	421	232	82	6	84	55
	Total	597	549	940	994	738	416	136	18	130	100
Urban services	Good Job	45	43	84	81	60	33	16	3	17	8
	More Attention	234	231	415	403	300	168	39	3	24	40
	So-so	317	275	442	509	380	214	81	12	90	51
	Total	596	549	941	993	740	415	136	18	131	100
Security and Safety	Good Job	62	76	134	126	86	40	29	4	24	13
	More Attention	202	185	340	342	228	137	32	3	26	33
	So-so	331	289	467	522	422	239	75	11	81	54
	Total	595	550	941	990	736	416	136	18	131	100
Environmental Protection	Good Job	31	25	52	55	56	25	8	2	15	6
	More Attention	323	329	526	535	378	227	65	4	76	55
	So-so	243	196	365	402	302	164	63	12	40	40
	Total	597	550	943	992	736	416	136	18	131	100
The most important aspects	Economic development	311	270	361	413	280	174	54	7	46	21
	Poverty alleviation	608	575	1,060	1,025	814	466	136	16	146	54
	Transportation	171	166	286	344	247	121	61	11	56	16
	Land and Housing	38	34	49	70	55	32	14	0	4	3
	Urban services	19	13	33	40	15	8	1	0	5	1
	Security and Safety	29	24	60	48	47	17	6	2	4	3
	Environmental Protection	16	18	32	44	20	12	0	0	0	2
	Total	1,192	1,100	1,881	1,984	1,478	830	272	36	261	100

Table 8.5 Assessment of Basic Urban Services (%)

District		Chingeltei	Sukhbaatar	Songinok hairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Water supply	Good Job	12	10	11	14	21	13	6	22	6	13
	More Attention	79	79	75	73	59	74	70	44	74	73
	So-so	9	12	14	13	21	13	25	33	20	14
	Total	100	100	100	100	100	100	100	100	100	100
Sewerage/ Drainage	Good Job	56	59	45	51	40	57	66	44	60	51
	More Attention	11	11	21	15	14	11	5	28	12	14
	So-so	33	30	35	34	45	32	29	28	27	35
	Total	100	100	100	100	100	100	100	100	100	100
Electricity	Good Job	25	35	17	26	25	31	38	33	44	26
	More Attention	47	33	50	40	29	41	33	44	15	39
	So-so	28	32	33	35	46	29	30	22	41	34
	Total	100	100	100	100	100	100	100	100	100	100
Health/ Welfare services	Good Job	49	48	36	47	38	47	49	33	53	44
	More Attention	15	14	23	19	14	13	10	6	5	17
	So-so	36	38	41	34	47	40	41	61	42	40
	Total	100	100	100	100	100	100	100	100	100	100
Education	Good Job	28	33	23	25	18	31	19	28	28	25
	More Attention	22	17	28	26	24	13	13	11	12	23
	So-so	49	50	48	50	58	55	68	61	60	52
	Total	100	100	100	100	100	100	100	100	100	100
Garbage collection	Good Job	33	40	30	33	25	34	29	22	34	32
	More Attention	18	13	19	17	20	13	7	6	10	17
	So-so	48	47	51	50	55	53	63	72	56	51
	Total	100	100	100	100	100	100	100	100	100	100
Road infrastructure and facilities	Good Job	26	33	20	22	25	24	36	17	29	25
	More Attention	38	22	51	39	28	32	35	6	21	36
	So-so	36	45	29	38	47	44	29	78	50	39
	Total	100	100	100	100	100	100	100	100	100	100
Public transport	Good Job	4	5	8	8	9	9	5	11	12	7
	More Attention	45	38	48	41	44	38	34	0	22	42
	So-so	51	57	44	51	47	53	61	89	67	51
	Total	100	100	100	100	100	100	100	100	100	100
Traffic management	Good Job	20	19	21	18	17	18	7	0	13	18
	More Attention	24	23	27	27	25	25	25	56	27	26
	So-so	56	59	52	55	58	57	68	44	60	56
	Total	100	100	100	100	100	100	100	100	100	100
Public information	Good Job	6	6	8	8	7	8	8	6	10	7
	More Attention	43	38	44	42	44	38	27	6	23	41
	So-so	52	56	48	51	49	54	65	89	67	52
	Total	100	100	100	100	100	100	100	100	100	100
Telecommunication	Good Job	11	17	18	16	14	15	7	0	12	15
	More Attention	37	32	34	33	30	33	40	0	28	33
	So-so	51	52	48	51	56	52	53	100	59	52
	Total	100	100	100	100	100	100	100	100	100	100
Land and Housing	Good Job	48	53	45	48	46	54	43	33	59	48
	More Attention	20	15	19	17	15	16	13	6	11	17
	So-so	32	32	35	35	39	30	43	61	30	35
	Total	100	100	100	100	100	100	100	100	100	100
Neighborhood Security	Good Job	11	12	13	14	10	16	13	6	25	13
	More Attention	38	37	41	36	36	38	27	22	24	37
	So-so	51	51	46	50	54	47	60	72	51	50
	Total	100	100	100	100	100	100	100	100	100	100
Urban Air Quality	Good Job	8	6	9	9	8	9	15	0	14	8
	More Attention	52	54	54	52	52	53	42	33	55	53
	So-so	40	40	37	39	40	37	43	67	31	39
	Total	100	100	100	100	100	100	100	100	100	100
Recreation and sports facilities	Good Job	3	3	3	3	5	4	13	0	8	4
	More Attention	77	84	80	77	72	79	64	83	76	78
	So-so	20	14	17	20	22	16	23	17	15	18
	Total	100	100	100	100	100	100	100	100	100	100
City administration and services	Good Job	4	2	4	3	6	4	7	0	5	4
	More Attention	66	61	71	65	61	69	59	11	64	65
	So-so	30	37	25	31	33	27	35	89	31	31
	Total	100	100	100	100	100	100	100	100	100	100
The most important aspects	Water supply	7	6	9	9	7	7	8	13	11	8
	Sewerage/ Drainage	16	16	18	16	15	17	13	4	14	16
	Electricity	15	15	16	16	17	14	16	28	15	16
	Health/Welfare services	12	10	10	10	11	10	11	10	9	10
	Education	9	8	8	8	10	8	11	3	8	8
	Garbage collection	6	4	8	7	4	5	6	3	4	6
	Road infrastructure and facilities	5	5	4	3	5	5	4	0	4	4
	Public transport	5	5	4	4	4	4	8	11	5	4
	Traffic management	3	3	2	2	3	2	2	0	2	2
	Public information	2	3	1	2	2	2	1	3	3	2
	Telecommunication	2	3	2	2	1	3	3	4	2	2
	Land and Housing	3	3	3	3	3	3	3	6	2	3
	Neighborhood Security	5	7	5	7	6	7	4	6	8	6
	Urban Air Quality	7	9	8	8	8	10	8	8	9	8
	Recreation and sports facilities	2	3	3	3	2	3	2	1	3	3
	City administration and services	1	1	1	1	1	1	1	1	1	1
Total	100	100	100	100	100	100	100	100	100	100	

Table 8.6 Beautification of the City (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Openness of Space	Negative	184	152	317	318	284	135	33	1	44	32
	Possitive	413	398	627	676	460	281	103	17	87	68
	Total	597	550	944	994	744	416	136	18	131	100
Building Design	Negative	174	124	253	281	276	127	31	0	24	28
	Possitive	423	426	691	713	468	289	105	18	107	72
	Total	597	550	944	994	744	416	136	18	131	100
Design of wall/fence	Negative	227	199	345	376	373	177	41	0	37	39
	Possitive	370	351	599	618	371	239	95	18	94	61
	Total	597	550	944	994	744	416	136	18	131	100
High-rise building	Negative	188	148	216	279	205	163	53	3	50	29
	Possitive	409	402	728	715	539	253	83	15	81	71
	Total	597	550	944	994	744	416	136	18	131	100
Encroachment of building	Negative	292	272	416	466	403	207	66	6	65	48
	Possitive	305	278	528	528	341	209	70	12	66	52
	Total	597	550	944	994	744	416	136	18	131	100
Advertisement	Negative	435	419	690	753	578	332	112	16	112	76
	Possitive	162	131	254	241	166	84	24	2	19	24
	Total	597	550	944	994	744	416	136	18	131	100
Electric wire	Negative	162	125	233	238	210	125	50	2	50	26
	Possitive	435	425	711	756	534	291	86	16	81	74
	Total	597	550	944	994	744	416	136	18	131	100
Parking on sidewalk	Negative	374	398	585	661	472	285	88	15	105	66
	Possitive	223	152	359	333	272	131	48	3	26	34
	Total	597	550	944	994	744	416	136	18	131	100
Greenery	Negative	341	306	486	542	392	232	88	7	87	55
	Possitive	256	244	458	452	352	184	48	11	44	45
	Total	597	550	944	994	744	416	136	18	131	100
Lots of vehicles on the street	Negative	309	239	408	427	376	204	85	8	62	47
	Possitive	288	311	536	567	368	212	51	10	69	53
	Total	597	550	944	994	744	416	136	18	131	100

Table 8.7 Environment Pollution Prevention (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Air Quality	Level of Satisfaction	Very Bad	250	368	446	461	421	191	37	13	33	49
		Bad	191	112	338	338	253	101	25	2	31	31
		Fair	107	39	83	123	50	49	20	1	24	11
		Good	45	29	62	63	19	58	41	2	43	8
		Very Good	3	1	14	7	0	16	11	0	0	1
	Total	596	549	943	992	743	415	134	18	131	100	
	Amount of contribution answer	Manpower contribution	41	46	99	88	86	38	3	0	3	11
		Financial contribution	24	13	26	32	40	15	2	0	1	4
		Don't want to do anything	7	18	20	12	21	3	0	0	0	2
		Don't know	369	403	639	667	527	236	57	15	60	82
Total		441	480	784	799	674	292	62	15	64	100	
Water quality	Level of Satisfaction	Very Bad	152	154	252	250	187	104	13	7	11	31
		Bad	39	46	81	75	66	25	6	1	6	10
		Fair	7	17	22	32	45	3	1	1	0	4
		Good	242	263	429	452	377	158	45	6	46	56
		Very Good	0	1	1	0	0	1	0	0	0	0
	Total	440	481	785	809	675	291	65	15	63	100	
	Amount of contribution answer	Manpower contribution	31	63	83	39	44	41	3	0	0	21
		Financial contribution	47	28	120	102	101	33	4	0	3	30
		Don't want to do anything	72	67	91	108	72	34	9	2	6	31
		Don't know	41	42	39	75	36	21	3	6	8	18
Total		191	200	333	324	253	129	19	8	17	100	
Noise	Level of Satisfaction	Very Bad	36	57	87	84	40	27	2	0	1	7
		Bad	52	64	171	134	156	52	14	2	16	15
		Fair	259	200	337	392	256	166	44	5	44	38
		Good	243	225	337	375	281	162	74	10	69	39
		Very Good	5	3	12	7	8	8	2	1	1	1
	Total	595	549	944	992	741	415	136	18	131	100	
	Amount of contribution answer	Manpower contribution	19	23	64	37	46	21	2	0	0	21
		Financial contribution	10	8	17	15	18	12	0	0	0	8
		Don't want to do anything	0	3	8	0	8	3	1	0	0	2
		Don't know	59	87	169	166	124	43	13	2	17	68
Total		88	121	258	218	196	79	16	2	17	100	
Odor/bad smell	Level of Satisfaction	Very Bad	24	26	63	41	53	25	1	0	1	24
		Bad	12	6	25	25	26	9	1	0	1	11
		Fair	4	6	10	1	18	4	0	0	1	5
		Good	48	80	150	125	111	41	13	2	15	60
		Very Good	0	0	0	0	0	0	0	0	0	0
	Total	88	118	248	192	208	79	15	2	18	100	
	Amount of contribution answer	Manpower contribution	187	262	325	334	276	147	40	0	30	35
		Financial contribution	250	136	361	314	286	124	47	4	48	35
		Don't want to do anything	125	116	191	255	142	109	30	8	22	22
		Don't know	35	36	67	91	40	36	19	6	31	8
Total		597	550	944	994	744	416	136	18	131	100	
Dust	Level of Satisfaction	Very Bad	92	140	163	135	141	66	7	0	2	16
		Bad	129	80	244	235	271	46	24	1	21	23
		Fair	233	202	309	377	223	159	45	9	42	35
		Good	141	126	218	244	108	136	56	8	65	24
		Very Good	2	2	10	3	1	9	4	0	1	1
	Total	597	550	944	994	744	416	136	18	131	100	
	Amount of contribution answer	Manpower contribution	61	69	134	97	112	38	4	0	3	29
		Financial contribution	26	12	28	34	37	16	1	0	1	9
		Don't want to do anything	2	11	7	6	8	2	0	0	0	2
		Don't know	132	128	238	233	255	56	26	1	19	61
Total		221	220	407	370	412	112	31	1	23	100	

Table 8.8 Assessment of Park / Greenery Space (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total	
Free time activities	Warm season	Stay at home	291	261	468	515	291	213	85	14	84	49
		Go around the city	56	61	98	96	119	41	11	1	5	11
		Go to individual enrichment lesson	6	12	19	13	8	5	0	0	0	1
		Go shopping	14	6	18	22	19	15	0	0	0	2
		Go camping	41	68	61	83	87	25	8	1	4	8
		Go to country side	161	129	237	227	159	105	28	2	37	24
		Visit historical places	2	0	4	4	8	3	0	0	0	0
		Play sports	0	1	6	7	8	0	1	0	0	1
		See friends	13	4	10	11	21	5	0	0	0	1
		See relatives	11	2	13	6	6	3	1	0	0	1
	Go movie	2	0	6	5	2	1	1	0	0	0	
	Others	0	6	4	5	16	0	1	0	1	1	
	Total	597	550	944	994	744	416	136	18	131	100	
	Cold season	Stay at home	483	474	809	837	590	358	117	17	122	84
		Go around the city	25	18	25	32	36	13	7	1	0	3
		Go to individual enrichment lesson	11	22	22	6	10	5	0	0	0	2
		Go shopping	17	3	19	19	16	13	3	0	0	2
		Go camping	12	10	8	10	20	5	1	0	1	1
		Go to country side	30	13	30	51	20	14	5	0	6	4
		Visit historical places	0	1	2	0	0	0	0	0	0	0
Play sports		0	4	7	7	12	2	0	0	0	1	
See friends		5	2	5	18	18	0	1	0	1	1	
See relatives		12	3	11	11	10	6	0	0	0	1	
Go movie	2	0	3	1	5	0	1	0	0	0		
Others	0	0	3	2	7	0	1	0	1	0		
Total	597	550	944	994	744	416	136	18	131	100		
Access to park and green space	Yes very much	330	365	530	557	484	234	60	11	80	59	
	Yes	253	181	368	408	224	177	74	7	50	38	
	No	1	1	23	6	16	2	1	0	1	1	
	Not at all	0	2	3	3	1	0	0	0	0	0	
	Don't know	13	1	20	20	19	3	1	0	0	2	
Total	597	550	944	994	744	416	136	18	131	100		
Activity in the park and green	To take a rest	158	116	230	322	237	117	34	0	43	29	
	To do exercise	22	22	31	40	33	8	4	0	4	4	
	To take a walk	32	25	42	41	31	16	11	0	8	5	
	To play with children	25	39	91	66	67	25	7	0	9	7	
	To gather with friends	27	27	56	26	45	23	3	0	1	5	
	To see performance	4	4	4	12	1	2	0	0	0	1	
	Others	2	5	6	2	3	3	2	0	0	1	
Not exist	313	308	438	456	291	217	73	18	65	50		
Total	583	546	898	965	708	411	134	18	130	100		
Assessment of Parks and Gardens in UB	Very Bad	105	124	118	174	103	72	5	0	3	16	
	Bad	252	189	377	389	377	130	58	0	32	41	
	Fair	189	192	338	321	193	171	61	4	71	35	
	Good	27	37	45	57	15	32	6	9	22	6	
	Very Good	1	0	2	3	3	1	1	2	0	0	
	Don't Know	9	4	18	21	17	5	3	3	2	2	
Total	583	546	898	965	708	411	134	18	130	100		
Type of Favorite Park/Garden	Big park	271	263	400	423	354	203	64	7	56	23	
	Small park	90	74	113	153	79	53	32	1	15	7	
	Square	350	360	574	624	425	241	73	15	90	31	
	Street trees	269	252	452	458	313	182	73	7	70	24	
	Greenery	170	137	249	255	234	141	25	6	29	14	
	Others	16	6	8	17	11	2	1	0	0	1	
Total	1,166	1,092	1,796	1,930	1,416	822	268	36	260	100		
Assessment of Greenery	Very Bad	118	125	126	172	123	81	4	1	3	17	
	Bad	234	197	356	392	348	127	51	3	31	40	
	Fair	190	183	345	339	205	169	71	2	80	36	
	Good	40	40	70	60	29	33	8	11	16	7	
	Very Good	1	1	1	2	3	1	0	1	0	0	
Total	583	546	898	965	708	411	134	18	130	100		
Contribution for Greenery	Manpower contribution	329	272	476	462	355	232	68	1	47	55	
	Financial contribution	67	66	131	135	102	64	13	1	21	15	
	Don't want to do anything	15	13	22	32	16	10	4	0	3	3	
	Don't know	131	154	198	274	203	71	41	4	43	27	
Total	542	505	827	903	676	377	126	6	114	100		
Access to Information of Government Services	Very Bad	35	27	40	40	42	12	2	0	3	4	
	Bad	133	86	214	215	195	75	22	0	24	21	
	Fair	312	305	494	547	387	230	75	10	71	54	
	Good	116	131	185	187	111	96	37	8	33	20	
	Very Good	1	1	11	5	9	3	0	0	0	1	
Total	597	550	944	994	744	416	136	18	131	100		

Table 8.9 Safety of Daily Life in Neighborhood (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Relationship with neighbors	Helping each other	129	87	124	166	84	72	38	7	27	16
	Visiting each other often	123	126	288	249	102	116	51	11	39	24
	Discussing community problem	28	18	39	39	27	24	4	0	11	4
	Greeting	231	239	349	409	379	173	38	0	43	41
	Don't know who lives in neighborhood	34	59	85	68	81	21	2	0	5	8
	Bad relation	52	21	59	63	71	10	3	0	6	6
	Total	597	550	944	994	744	416	136	18	131	100
Type of Activities attended	Not at all	177	184	279	336	262	126	43	4	27	32
	Cleaning neighborhood	267	190	456	440	249	167	63	8	61	42
	Supporting children activities	24	22	38	35	26	17	1	0	7	4
	Improving natural environment	42	43	46	56	33	34	7	1	6	6
	Improving neighbor security	12	14	25	24	18	8	1	1	5	2
	Attending neighborhood meetings	37	38	70	69	95	32	9	2	6	8
	Cultural act/festival	27	47	20	18	36	19	7	0	8	4
	Others	11	12	10	16	25	13	5	2	11	2
Total	597	550	944	994	744	416	136	18	131	100	
Consultation on Safety in Neighborhood	Not to discuss with anyone	53	70	101	122	108	51	10	7	1	12
	Khoroo officer	218	194	354	319	273	163	64	3	70	37
	Heseg leader	164	157	289	325	182	106	27	3	30	28
	Neighbor	55	47	96	103	49	33	9	5	12	9
	Others	107	82	104	125	132	63	26	0	18	15
Total	597	550	944	994	744	416	136	18	131	100	

Table 8.10 Assessment of Safety in Neighborhood (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Safety/ security against crimes	Very Bad	33	44	71	54	53	23	4	0	2	6
	Bad	166	204	415	368	284	132	24	2	27	36
	Fair	291	196	310	418	276	152	65	8	43	39
	Good	95	85	121	125	89	94	40	7	56	16
	Very Good	1	2	2	0	1	2	1	0	0	0
	Don't know	11	19	25	29	41	13	2	1	3	3
	Total	597	550	944	994	744	416	136	18	131	100
Traffic safety	Very bad	25	38	88	62	54	19	2	0	1	6
	Bad	206	188	371	365	334	138	30	7	23	37
	Fair	282	230	360	396	268	159	63	4	38	40
	Good	73	82	105	143	68	91	37	7	67	15
	Very good	1	2	1	3	0	3	2	0	0	0
	Don't know	10	10	19	25	20	6	2	0	2	2
	Total	597	550	944	994	744	416	136	18	131	100
Safety against fire	Very bad	11	30	51	41	37	15	0	0	0	4
	Bad	129	99	225	238	189	78	14	1	4	22
	Fair	306	242	407	434	264	179	68	6	51	43
	Good	113	132	181	209	127	116	48	7	60	22
	Very good	5	2	4	2	2	5	2	0	2	1
	Don't know	33	45	76	70	125	23	4	4	14	9
	Total	597	550	944	994	744	416	136	18	131	100
Safety against flood	Very bad	14	32	47	22	29	7	1	0	2	3
	Bad	73	72	152	154	118	46	11	0	3	14
	Fair	233	161	303	327	214	163	38	6	38	33
	Good	181	167	297	308	183	132	60	8	59	31
	Very good	10	8	22	26	19	12	2	0	3	2
	Don't know	86	110	123	157	181	56	24	4	26	17
	Total	597	550	944	994	744	416	136	18	131	100
Safety against land slides	Very bad	10	9	22	21	26	4	1	0	0	2
	Bad	45	37	82	99	54	42	8	1	3	8
	Fair	149	109	183	171	109	106	44	6	21	20
	Good	117	111	199	190	70	91	21	1	36	18
	Very good	21	12	12	19	12	14	4	0	0	2
	Don't know	255	272	446	494	473	159	58	10	71	49
	Total	597	550	944	994	744	416	136	18	131	100
Safety against earthquakes	Very bad	8	12	23	18	25	3	1	0	0	2
	Bad	46	39	90	96	59	39	14	1	3	9
	Fair	161	105	177	198	101	109	36	6	20	20
	Good	94	93	157	163	58	85	24	1	36	16
	Very good	22	18	16	22	11	17	4	0	0	2
	Don't know	266	283	481	497	490	163	57	10	72	51
	Total	597	550	944	994	744	416	136	18	131	100

Table 8.11 Assessment of Safety in the City Center (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Khan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Safety/ security against crimes	Very Bad	45	61	67	60	49	24	3	0	1	7
	Bad	152	172	313	336	267	113	24	0	28	31
	Fair	281	222	437	447	336	180	67	16	61	46
	Good	108	94	125	139	90	92	39	0	41	16
	Very Good	0	0	0	0	0	0	0	0	0	0
	Total	586	549	942	982	742	409	133	16	131	100
Traffic safety	Very Bad	69	53	91	69	57	35	4	0	2	8
	Bad	195	221	373	411	349	139	47	10	59	40
	Fair	216	177	346	334	259	153	49	6	29	35
	Good	105	96	129	169	79	80	36	0	40	16
	Very Good	12	3	5	11	0	9	0	2	1	1
	Total	597	550	944	994	744	416	136	18	131	100
Safety against fire	Very Bad	20	44	64	50	32	13	2	0	2	5
	Bad	117	102	200	216	187	52	17	0	9	20
	Fair	331	278	489	507	423	250	84	15	89	54
	Good	118	121	185	206	99	88	32	1	28	19
	Very Good	11	5	6	15	3	13	1	2	3	1
	Total	597	550	944	994	744	416	136	18	131	100
Safety against flood	Very Bad	18	34	49	36	35	12	1	0	1	4
	Bad	72	86	177	186	161	47	20	0	10	17
	Fair	371	299	493	545	440	249	87	15	85	57
	Good	119	121	206	204	98	88	27	1	32	20
	Very Good	17	10	19	23	10	20	1	2	3	2
	Total	597	550	944	994	744	416	136	18	131	100
Safety against land slides	Very Bad	7	11	27	23	17	2	1	0	0	4
	Bad	47	59	101	120	98	25	16	0	3	21
	Fair	150	114	180	192	102	113	36	0	28	42
	Good	85	97	136	139	41	69	22	1	25	28
	Very Good	24	10	18	20	7	17	1	1	2	5
	Total	313	291	462	494	265	226	76	2	58	100
Safety against earthquakes	Very Bad	9	9	24	26	26	7	3	0	0	5
	Bad	42	53	106	118	80	18	15	0	4	20
	Fair	161	111	182	202	91	109	36	0	28	42
	Good	68	91	132	137	45	67	18	1	22	27
	Very Good	29	23	20	20	10	22	3	1	2	6
	Total	309	287	464	503	252	223	75	2	56	100
Consultation on Safety in City Center	Not to discuss with anyone	29	43	77	66	55	34	4	7	2	7
	City government officer	20	15	25	37	24	19	1	0	5	3
	District officer	20	10	29	23	15	5	1	0	2	2
	Khoroo officer	69	84	149	102	102	43	18	0	24	13
	Heseg leader	39	36	68	65	52	15	9	0	13	7
	Family members	84	63	131	148	160	37	18	1	2	14
	Neighbor	33	36	49	61	20	31	17	4	5	6
	Police	297	258	407	480	300	229	67	6	77	47
	Friends	6	5	9	12	16	3	1	0	1	1
	Other	0	0	0	0	0	0	0	0	0	0
Total	597	550	944	994	744	416	136	18	131	100	

Table 8.12 Level of Satisfaction on Living Environment (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
Serious Problems in Neighborhood	Poor greenary	420	381	568	690	526	305	103	10	100	23
	Much dumps	337	316	661	677	438	227	78	6	68	21
	Flood vulnerable	22	32	71	48	49	14	6	0	11	2
	No street lights	253	195	460	404	267	159	54	12	53	14
	Pavement condition	245	235	301	344	247	159	69	6	51	12
	Narrow streets	74	44	97	73	69	58	8	1	13	3
	Improper address	25	19	41	66	47	15	2	1	5	2
	No telecommunication	3	9	33	15	14	12	2	0	3	1
	No play ground	252	204	326	372	293	173	50	3	48	13
	No/inaccessible public bath house	73	46	103	81	24	56	18	4	12	3
	Noise	78	97	122	117	210	50	3	1	15	5
No problem	5	44	32	45	36	18	11	6	6	2	
Total	1,787	1,622	2,815	2,932	2,220	1,246	404	50	385	100	
Safety in general	Satisfied	56	52	61	90	56	40	19	14	19	9
	Highly Satisfied	0	1	3	0	1	0	0	0	0	0
	Total	56	53	64	90	57	40	19	14	19	9
Security of good housing	Highly Unsatisfied	33	52	97	75	58	30	7	0	1	8
	Unsatisfied	213	211	387	352	226	155	37	1	35	36
	Fair	253	193	339	430	325	165	71	3	66	41
	Satisfied	95	88	119	133	130	66	21	14	28	15
	Highly Satisfied	2	3	2	1	4	0	0	0	1	0
	Total	596	547	944	991	743	416	136	18	131	100
Security of healthy life	Highly Unsatisfied	35	52	118	91	89	36	7	0	2	10
	Highly Satisfied	0	1	2	0	3	0	0	0	0	0
	Total	35	53	120	91	92	36	7	0	2	10
Convenience of daily activities	Highly Unsatisfied	24	47	103	84	57	24	7	0	2	8
	Unsatisfied	176	192	313	315	225	142	42	1	29	32
	Fair	324	234	440	478	347	188	72	3	72	48
	Satisfied	70	74	84	115	106	61	15	14	28	13
	Highly Satisfied	1	3	1	1	8	0	0	0	0	0
	Total	596	550	941	993	743	415	136	18	131	100
Access to employment opportunity/income source	Highly Unsatisfied	51	67	147	101	73	38	11	0	3	11
	Unsatisfied	217	216	354	384	252	168	49	2	62	38
	Fair	255	196	363	416	313	161	67	2	48	40
	Satisfied	72	67	76	91	100	48	8	14	18	11
	Highly Satisfied	1	4	4	1	6	1	1	0	0	0
	Total	596	550	944	993	744	416	136	18	131	100
Amenity for man-made environment	Highly Unsatisfied	86	129	230	175	169	58	12	0	14	19
	Unsatisfied	280	249	423	472	353	188	64	2	63	46
	Fair	196	149	235	301	189	144	51	2	40	29
	Satisfied	33	23	51	43	30	25	9	14	13	5
	Highly Satisfied	0	0	5	3	3	1	0	0	1	0
	Total	596	550	944	994	744	416	136	18	131	100
Amenity for natural environment	Highly Unsatisfied	118	155	280	229	246	72	17	1	14	25
	Unsatisfied	258	247	386	459	331	193	54	1	62	44
	Fair	191	124	219	264	137	125	54	2	41	26
	Satisfied	28	24	53	39	28	25	9	14	13	5
	Highly Satisfied	1	0	6	3	2	1	1	0	1	0
	Total	596	550	944	994	744	416	135	18	131	100
Important Aspects for Good Living Environment	Safety in general	290	260	435	491	346	192	68	12	74	24
	Security of good housing	157	144	263	243	174	114	43	7	44	13
	Security of healthy life	283	265	519	549	459	190	54	8	71	27
	Convenience of daily activities	132	83	153	167	90	66	25	0	9	8
	Access to employment opportunity/income source	157	161	247	236	130	105	38	3	13	12
	Amenity for man-made environment	79	78	117	121	101	58	14	2	19	7
	Amenity for natural environment	94	108	151	176	178	107	30	4	32	10
	Total	1,192	1,099	1,885	1,983	1,478	832	272	36	262	100

Table 8.13 Current and Future Vision of UB City (No. and %)

District		Chingeltei	Sukhbaatar	Songino khairkhan	Bayansurkh	Bayangol	Klan-uul	Nalaikh	Bagak hangai	Baganuur	Total
To Continue Living/Settle in UB	Yes	583	539	913	957	701	414	132	18	130	97
	No	10	11	28	34	41	1	4	0	1	3
	Total	593	550	941	991	742	415	136	18	131	100
Reason for Living UB City	No choice to stay other place	129	144	182	222	189	101	36	4	50	24
	Employment and education opportunity available	108	83	147	155	100	55	19	1	13	16
	Good future for potential	152	136	259	254	169	111	29	3	39	26
	Access to basic utility services	48	33	66	61	47	35	8	0	7	7
	Convenient to live	25	20	46	55	40	27	5	2	5	5
	Others	10	0	8	17	3	0	1	0	0	1
	Feel attachment	108	123	204	191	152	85	34	8	16	21
	Total	580	539	912	955	700	414	132	18	130	100
Future Image of UB City	Harmony	359	309	554	613	443	264	69	14	87	15
	Clean	370	359	587	578	483	224	79	7	91	15
	Safe	209	201	318	322	309	140	45	5	51	9
	Nature	278	245	392	439	342	198	58	8	78	11
	Culture/heritage	100	97	175	213	144	85	26	3	23	5
	Friendly	57	65	96	136	85	64	17	3	7	3
	Peaceful	298	311	426	456	330	216	78	10	62	12
	Internation/global	80	71	152	135	91	52	23	1	20	3
	Scientific/high-tech	79	46	136	125	79	39	13	0	7	3
	Modern	230	206	336	384	237	162	61	12	47	9
	Development	255	241	445	405	305	175	58	7	42	11
	Others	15	3	17	29	14	3	2	2	3	0
	Tourism	58	45	127	123	110	38	15	0	5	3
Total	2,388	2,199	3,761	3,958	2,972	1,660	544	72	523	100	

APPENDIX SURVEY FORM

**COMPREHENSIVE HOUSEHOLD INTERVIEW SURVEY ON SOCIAL ENVIRONMENT FOR THE STUDY ON
CITY MASTER PLAN AND URBAN DEVELOPMENT PROGRAM
OF ULAANBAATAR CITY (UBMPS)**

This is a household interview survey for revising the master plan of Ulaanbaatar city. The new city master plan will be developed targeting the year of 2030. As part of revising the plan, the household interview survey is conducted to understand current living conditions and opinions for future from residents. Three objectives of this survey are;

- 1) To identify daily movements of individuals and the their preference of transportation modes,
- 2) To understand living conditions of citizens, the level of satisfaction on services and living environment, and desired future living conditions, and
- 3) To find out people's opinions on the ideal future of the city.

Your answer of this survey will represent the voice of Ulaanbaatar citizens and be used for the basic data **only** to improve governmental services and living conditions of the residents. **Your answer will not be used for any other purposes.** Based on your information of current situations and opinions for the future life, the policy and development plan of the future Ulaanbaatar city will be discussed.

INSTRUCTION FOR ANSWERING QUESTIONNAIRE FORMS

Please answer all the questions one by one sequentially. Print the information in the space provided or put a check mark in the appropriate box.

Form 1: Household information

Only the head of the household should complete Form 1.

Form 2: Current Living Condition of Households

Only the head of the household should complete Form2.

Form 3: Household member information

It should be completed for every member of household who is more than 6 year-old.

Form 4: Daily Activity Information

It should be completed for every member of household who is more than 6 year-old.

Form 5: People's Assessment / Satisfaction on Living Environment

Only the selected members of household (the head of the household or other) should complete. (Please specify their member code)

FOR OFFICIAL USE ONLY

Q1 Name of person in charge of this survey sheet

Interviewer 1		Q1a			
Interviewer 2		Q1b			
Supervisor		Q1c			
Editor		Q1d			
Encoder		Q1e			
Area Coordinator		Q1f			

Q2 Survey Date

Date / Month		Q2				
--------------	--	----	--	--	--	--

Q3 Questionnaire Control Information

a. HIS Zone No.		Q3a			
b. Household No.		Q3b			
c. No. of Household member's sheets		Q3c			

Form1: Household Information

INSTRUCTION: To be completed by HEAD of HOUSEHOLD

Q4 Name

Q5 Address of household

(District) _____ (Khoroolol) _____
 (Khoroo) _____ (Apt./Street) _____
 (Flat/Number oh Hashaa) _____

Q5a

Q6 Tel. Number (optional) _____

Q7 Household composition

		6 year-old and above	Under 6 year-old
Number of Household Members	living currently together	Q7a	Q7c
	living outside	Q7b	Q7d

Name of Household Members living together (Q7)	01		06	
	02		07	
	03		08	
	04		09	
	05		10	

Q8 When did you move into Ulaanbaatar City?

1. Since birth	4 1-4 years ago
2. More than 10 years ago	5. Less than one year ago
3. 5-9 years ago	

Q8

Q9 What is your original place?

01. Arkhangai	07. Dornod	13. Selenge	19. Darkhan-Uul
02. Bayan-Ulgii	08. Dundgobi	14. Tuv	20. Ulaanbaatar
03. Bayankhongor	09. Zavkhan	15. Uvs	21. Orkhon
04. Bulgan	10. Uvurkhongai	16. Khovd	22. Gobisumber
05. Gobi-Altai	11. Umnugobi	17. Khuvsgul	
06. Dornogobi	12. Sukhbaatar	18. Khentii	

Q9

Q10 How long has your family been staying in the present address?

1. Since birth	4 1-4 years ago
2. More than 10 years ago	5. Less than one year ago
3. 5-9 years ago	

Q10

Q11 Where was your previous address?

 City / Province District/Sum Khoroo/Bag

Q11

Q12 What was the major reason for transfer?

01. For education	06. For purchase of own house
02. Job related reason	07. Better access to facilities & services
03. For urgent cash needed	08. Come back from abroad/another province
04. Reduce housing/living cost	09. Relatives/friends in neighborhood
05. For improvement of housing conditions	10. Other (please specify _____)

Q12

Form2: Current Living Condition of Household

INSTRUCTION: To be completed by HEAD of HOUSEHOLD

Ownership of House and Land

Q13 Housing

a. Type of house (filled by surveyors)		Q13a										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1. Traditional house (Ger)</td> <td style="width: 50%;">6. High-rise apartment (6F~)</td> </tr> <tr> <td>2. Detached house (wood)</td> <td>7. Town house</td> </tr> <tr> <td>3. Detached house (wood mortar)</td> <td>8. Hut</td> </tr> <tr> <td>4. Detached house (brick)</td> <td>9. Non housing / Carriage etc.</td> </tr> <tr> <td>5. Mid-rise Apartment (~5F)</td> <td></td> </tr> </table>	1. Traditional house (Ger)	6. High-rise apartment (6F~)	2. Detached house (wood)	7. Town house	3. Detached house (wood mortar)	8. Hut	4. Detached house (brick)	9. Non housing / Carriage etc.	5. Mid-rise Apartment (~5F)			<input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/>
1. Traditional house (Ger)	6. High-rise apartment (6F~)											
2. Detached house (wood)	7. Town house											
3. Detached house (wood mortar)	8. Hut											
4. Detached house (brick)	9. Non housing / Carriage etc.											
5. Mid-rise Apartment (~5F)												
b. Maintenance condition (filled by surveyors)		Q13b										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">1. Very bad</td> <td style="width: 20%;">2. Bad</td> <td style="width: 20%;">3. So-so</td> <td style="width: 20%;">4. Good</td> <td style="width: 20%;">5. Very Good</td> </tr> </table>		1. Very bad	2. Bad	3. So-so	4. Good	5. Very Good	<input style="width: 30px; height: 20px;" type="text"/>					
1. Very bad	2. Bad	3. So-so	4. Good	5. Very Good								

c. Ownership: What is the ownership of your dwelling? Q13c

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1. Self-owned</td> <td style="width: 50%;">4. Relative's house /no rent/</td> </tr> <tr> <td>2. State-owned house for rent</td> <td>5. Uncertain ownership</td> </tr> <tr> <td>3. Private-owned house for rent</td> <td></td> </tr> </table>	1. Self-owned	4. Relative's house /no rent/	2. State-owned house for rent	5. Uncertain ownership	3. Private-owned house for rent			<input style="width: 30px; height: 20px;" type="text"/>
1. Self-owned	4. Relative's house /no rent/							
2. State-owned house for rent	5. Uncertain ownership							
3. Private-owned house for rent								

d. If rented, how much do you pay monthly for housing rent? Q13d **tog**

e. Living area (m2) Q13e

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Apartment</td> <td style="width: 50%;">Ger</td> </tr> <tr> <td>01. Below 30 m²</td> <td>07. 4walls</td> </tr> <tr> <td>02. 30-50 m²</td> <td>08. 5 walls</td> </tr> <tr> <td>03. 50-75 m²</td> <td>09. 6 walls</td> </tr> <tr> <td>04. 76-100 m²</td> <td>10. 7 walls</td> </tr> <tr> <td>05. 101-150 m²</td> <td>11.more than 7 walls</td> </tr> <tr> <td>06. More than151 m²</td> <td></td> </tr> </table>	Apartment	Ger	01. Below 30 m ²	07. 4walls	02. 30-50 m ²	08. 5 walls	03. 50-75 m ²	09. 6 walls	04. 76-100 m ²	10. 7 walls	05. 101-150 m ²	11.more than 7 walls	06. More than151 m ²			<input style="width: 30px; height: 20px;" type="text"/>
Apartment	Ger															
01. Below 30 m ²	07. 4walls															
02. 30-50 m ²	08. 5 walls															
03. 50-75 m ²	09. 6 walls															
04. 76-100 m ²	10. 7 walls															
05. 101-150 m ²	11.more than 7 walls															
06. More than151 m ²																

f. Number of rooms Q13f

g. Age of house (Surveyor: Write 99 if do not know, write 98 if more than 100 years) Q13g

Q14 Ownership of other dwellings

a. Do you have a summer house around the city? Q14a

1. Yes	2. No
--------	-------

b. Do you have another dwellings beside the current dwelling and the summer house? Q14b

1. Yes	2. No
--------	-------

Q15 (For those who lives in Khashaa) Does this land belong to you? Q15

1. Yes	2. No (go to Q17)
--------	-------------------

Q16 (For those who answered 1 in Q15) How much do you pay for land fee per month? Q16 **tog**

Q17 Ownership of other lands

a. Do you have own land for summer house? Q17a

1. Yes	2. No
--------	-------

b. Do you have another lands beside the current land and the summer house land? Q17b

1. Yes	2. No
--------	-------

Q18 Do you share this Khashaa or apartment with some households which separate financially from you? If yes, how many households does this place have?

Khashaa 1. No (Go to Q20) 2. 1 household 3. 2 households 4. 3 households and above	Apartment 5. No (Go to Q20) 6. 1 household 7. 2 households 8. 3 households and above
---	---

Q18

Q19 What is the relation with you?

a. 1st household

1. Relative	2. Friend	2. No relationship
-------------	-----------	--------------------

Q19a

b. 2nd household

1. Relative	2. Friend	2. No relationship
-------------	-----------	--------------------

Q19b

c. 3rd household

1. Relative	2. Friend	2. No relationship
-------------	-----------	--------------------

Q19c

Q20 Do you have your business activities in this Khashaa or apartment? How many people do you hire for your company or business?

1. No (Go to Q21)	2. Owner(s), family members	3. 1~5 employees	4. 5~10 employees
5. >10 employees	6. For renting for business		

Q20

Water Service

Q21-1 What is a main water source in your home?

01. Central water supply system (Go to Q23)	05. Unprotected well/open well
02. Vendor/kiosk (from truck)	06. River/pond
03. Vendor/kiosk (from well)	07. Spring water
04. Protected well/tube well	08. Other sources (specify)

Q21-1

Q21-2 Type of ownership of water source?

1. Private well 2. USAG(water company) 3. Other (please specify)

Q21-2

Q22 (For those who get water from outside) Please answer questions below.

a. How many minutes does it take to get water from outside?

Q22a

b. Who usually go to the shop to get?

1. Father	5. Grand parents
2. Mother	6. Not decided
3. Son	7. Others (specify)
4. Daughter	

Q22b

c. How do you usually carry water?

1. By hand	4. By draught animal
2. By push cart	5. By delivery service with or without fee
3. By car	

Q22c

d. How many litters does your family usually use in a week?

Q22d L

e. How often do you buy?

1. Almost everyday	5. Once in every 10 day
2. Alternative days ¹	6. Once in every two weeks
3. 3-5 times a week ²	7. Others
4. Once a week	

Q22e

Q23 What is the average monthly payment for water in the last winter? In the last summer?

a. In cold season (from Oct to the end of Mar)

Q23a tog

b. In warm season (from Apr to the end of Sep)

Q23b tog

¹ Combined 2 and 3 in the analysis process

² Combined 2 and 3 in the analysis process

Latrine & Sewerage Condition

Q24 What kind of toilet facility do you have?

1. Flush toilet 2. Sulabh/portable toilet 3. Pit latrin
4. Composting toilet (wood tips/chemical) 5. No fixed place

Q24

Q25 How do you treat human waste?

1. Connect to urban sewerage system 4. No sanitation treatment and fill by soil
2. On-site sanitation facility (e.g. septic tank) 5. Covered by wood chips/chemical/salt
3. Waste collecting system

Q25

Heating system/Hot water supply

Q26 What is the heating system do you use? (choose 2)

1. Central heating connecting public system (Go to Q28) 4. Private central heating system by smoke/hot water heated by stove
2. Electricity stove (Go to Q28) 5. Gas
3. Stove

Q26

Q27 (For those who answer 3, 4, and 5 in Q26) Please answer questions below.

a. What kind of fuel do you mainly use?

1. Firewood 2. Coal 3. Garbage/plastic 4. Tire 5. Briquette 6. Other ()

Q27a

b. Where do you get fuel?

1. Roadside 2. Market 3. To get by themselves from somewhere 4. From mine 5. Other (specify)

Q27b

c. How far from your house by walk ?(min by walk)

Q27c

d. Who usually go to the shop to get?

1. Father 4 Daughter
2. Mother 5. Not decided
3. Son 6. Others (specify)

Q27d

e. How do you usually carry fuel?

1. By hand 4 By draught animal
2. By push cart 5. By delivery service with or without fee
3. By car/truck

Q27e

f. How many kg/t/bag/m3 do you usually buy at once?

1. Quantity 2. Measurement

- 1.kg 2. ton 3. bags 4.m3

Q27f1-1

Q27f1-2

g. How often do you buy fuel in winter time?

1. Almost everyday 6. Once in every two weeks
2. On fix days 7. Every month
3. 3-5 times a week 8. Once in season
4. Once a week 9. Whenever money is available
5. Once in every 10 day

Q27g

h. How often do you buy fuel in summer time?

01. Almost everyday 06. Once in every two weeks
02. On fix days 07. Every month
03. 3-5 times a week 08. Once in season
04. Once a week 09. Whenever money is available
05. Once in every 10 day 10. No purchase

Q27h

Q28 What is the average monthly payment for both heating system and hot water supply in the

Form 2-3

Q28a tog

Q28b tog

last winter? In the last summer if you use stove?

- a. In cold season
- b. In warm season

Solid Waste Collection

Q29 How do you dispose solid waste mainly?

1. Public collection by truck	4. Throw to nearby drainage or river (Go to Q31)
2. Dust chute/Dumping place	5. Throw to somewhere nearby (Go to Q31)
3. Treat in own land (Go to Q31)	6. Others (specify)

Q29

Q30 (For those who answer 1. or 2. n Q29) How often is collection service provided? How much do you pay montly in winter and summer?

a. Frequency

1. Daily	5. Once a month
2. 2-4 times days	6. Every month
3. Once a week	7. > one month
4. Once in 2 weeks	8. No idea

Q30a

b. Fee in cold season

Q30b tog

c. Fee in warm season

Q30c tog

Drainage System

Q31 How often is your neighborhood area flooded up?

1. All the time even without heavy rain	5. Rarely
2. Every time when it rains heavily	6. Never (Go to Q33)
3. Sometimes when it rains heavily	7. no idea
4. Spring when snow melts	

Q31

Q32-1 (For those answered 1~5 in Q31) When your area is flooded, how deep is the water level and how long does it lasts?

32-2 (For those answered 1~5 in Q31) How many minutes later flood starts after raining?

		Normal flooding	The most serious flooding in the past 3 years	The most serious flooding in the past
Q32-1 Water level	1. Up to ankles 2. Up to knees 3. More than Knees 4. No idea	Q32-1a <input type="text"/>	Q32-1b <input type="text"/>	Q32-1c <input type="text"/>
Duration of the flood	1. Less than half day 2. Half day – one day 3. one to three days 4. almost one week 5. more than one week 6. No idea	Q32-1d <input type="text"/>	Q32-1e <input type="text"/>	Q32-1f <input type="text"/>
Q32-2 Duration	1. 1-5 minutes 2. 6-10 minutes 3. 11-20 minutes 4. Later than 20 minutes 5. No idea	Q32-2a <input type="text"/>	Q32-2b <input type="text"/>	Q32-2c <input type="text"/>

Connection to Engineering (Basic Utility) Service

Q33 What is your level of satisfaction for following basic utilities?

	1. Connection with public service	2. Level of satisfaction		
a. Electricity	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33a-1	Q33a-2
b. Water supply	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33b-1	Q33b-2
c. Latrine/ Sewerage facility	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33c-1	Q33c-2

d. Heating/hot water supply system	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33d-1	Q33d-2
e. Solid waste collection	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33e-1	Q33e-2
f. Drainage system in neighborhood	1. Yes 2. No	1. Very bad 2. Bad 3. OK 4. Good 5. Very good	Q33f-1	Q33f-2

g. (Those who answered 1bad or 2 very bad in Q33b) What factor is important to improve the water supply condition? (Choose 2)

1. Distance to get water	4. Price	Q33g-1
2. Water pressure	5. Hours of supply/ distribution schedule	
3. Water quality	6. Others (Specified)	Q33g-2

h. (Those who answered 1 bad or 2 very bad in Q33b) Do you have a willingness to improve the water supply condition in the your area. If so, how can you contribute?

1. Manpower contribution	2. Financial contribution	3. Don't want to do anything	4. No idea	Q33h
--------------------------	---------------------------	------------------------------	------------	------

i. (Those who answered 1 or 2 in Q33d) What type of heating system do you want to use?

1. Central heating connecting public system (Go to Q33j)	4. Private central heating system by smoke/hot water heated by stove	Q33i
2. Electricity stove	5. Gas	
3. Stove		

j. (Those who answered 1 in Q33i) Do you have a willingness to change into public heating & hot water supply system in the your area. If so, how can you contribute?

1. Manpower contribution	2. Financial contribution	3. Don't want to do anything	4. No idea	Q33j
--------------------------	---------------------------	------------------------------	------------	------

k. (Those who answered 1 or 2 in Q33e) What factor is important to improve the soild waste condition?

1. Frequency of collection	2. Method of collection	3. Fee	4. Cleanness of dump site	Q33k
5. Distance to collection site	6. No idea			

l. (Those who answered 1 or 2 in Q33e) Do you have a willingness to improve the solid waste condition in the your area. If so, how can you contribute?

1. Manpower contribution	2. Financial contribution	3. Don't want to do anything	4. No idea	Q33l
--------------------------	---------------------------	------------------------------	------------	------

Household Economy & Assets owned by household

Q34 Number of vehicles owned by household

	Number of Units		Number of Units
a. Bicycle	Q34a	e. Bus	Q34e
b. Motorcycle	Q34b	f. Truck (<=4t)	Q34f
c. Car (<7 pax)	Q34c	g. Truck (>4t)	Q34g
d. Microbus (>8pax)	Q34d	h. Other (please specify)	Q34h

Q35 Number of live stocks owned by household

	Number of Units		Number of Units
a. Cow	Q35a	e. Camel	Q35e
b. Sheep	Q35b	f. Pig	Q35f
c. Goat	Q35c	g. Chicken	Q35g
d. Horse	Q35d	h. Other ()	Q35h

Q36-1 Average monthly expenditure (tog/month)

a. Warm season Q36-1a

--	--	--	--	--	--	--	--	--	--

 tog

b. Cold season Q36-1b

--	--	--	--	--	--	--	--	--	--

 tog

36-2 Average monthly household income (tog/month)

a. Warm season Q36-2a

--	--	--	--	--	--	--	--	--	--

 tog

b. Cold season Q36-2b

--	--	--	--	--	--	--	--	--	--

 tog

Q37 What do you think about the future life of your household to manage economically?

1. Very easy	2. Easy	3. OK	4. Difficult	5. Very difficult	Q37
--------------	---------	-------	--------------	-------------------	-----

Q38 Do you have a fear and threat to loose your land or dwelling in the future?

1. Yes	2. No (go to Q40)
--------	-------------------

Q38

Q39 (For those who answer 1. yes in Q38) What is the major reason you feel so?

1. Personal economic reason	4. Forced resettlement
2. Hazard of natural disaster, such as flood	5. Fire
3. No ownership or registration of house or land	6. Other (specify _____)

Q39

Q40 Do you have a loan more than 100.000 tog? If you have, where do you get it? What is the interest rate of your loan? (% per month) (choose up to 3 more big)

Loan type	Interest rate (per month)	Loan type	Interest rate (per month)
1.No loan	Q40a-1	5.From government	Q40a-5
2.From friends	Q40a-2	6.From project/NGO	Q40a-6
3.From relatives	Q40a-3	8.Others	Q40a-8
4.From bank and NBFO	Q40a-4		

Q41-1 (For those who answer 4, bank, 5. government, and 6. project/NGO in Q40) If you take a loan from government, bank, or agency/NGO What type of loan do you have?

a. Bank/NBFO loan	b. Government Loan	c. Project/NGO Loan
1. Housing	1. Housing	1. Housing
2. Business	2. Business	2. Business
3. Others	3. Others	3. Others

Q41-1a

Q41-1b

Q41-1c

41-2 How do you feel about repayment of your loan?

1. Very easy	2. Easy	3. Fair	4. Difficult	5. Very difficult
--------------	---------	---------	--------------	-------------------

Q41-2

Q42 If you need to spend large amount of money for big shopping, such as buying a house or vehicle, or large investment for business, where do you get money?

1. Borrow from friends	5. Borrow from project org./NGO
2. Borrow from relatives	6. From personal savings/ private fund
3. Borrow from a bank/NBFO	7. Others (specify _____)
4. Borrow from government	8. Not buy house and vehicles

Q42

S/N (Q3b)

Form3 Household Member Information

INSTRUCTION: To be completed by EVERY HOUSEHOLD MEMBER aged 6 years and above

Member Code
<input type="text"/>

Q43 Name

Q44 Personal Information

a. Age b. Sex

1. Male
2. Female

Q44a

Q44b

Q45 Occupation

- 01. Leaders of branches, administration levels and units
- 02. Professional
- 03. Technical professional
- 04. Clerical worker
- 05. Service workers and shop and market sales worker
- 06. Skilled agriculture, forestry, livestock breeder and fishery worker
- 07. Craft and related trades worker
- 08. Plant and machine operator and assembler
- 09. Elementary occupation
- 10. Small vendors
- 11. Military people, police
- 12. Pupils (grade 1-11)
- 13. Student (Univ. & collage)
- 14. Housewife
- 15. Disabled
- 16. Jobless
- 17. Retired
- 18. Others

Q47 Employment Sector

- 01. Agriculture, hunting and forestry
- 02. Fishing, fishery
- 03. Mining and quarrying
- 04. Manufacturing
- 05. Electricity, gas and water supply
- 06. Construction
- 07. Trade
- 08. Other Industrial Sector
- 09. Whole sale and retail trade
- 10. Knitting and fabric
- 11. Food Industry
- 12. Transport, storage and communication
- 13. Financial service
- 14. Science and technology
- 15. Real estate
- 16. Public administration, defense etc.
- 17. Hotel and Restaurant
- 18. Educational
- 19. Health care, social works etc.
- 20. Cultural and sport activities
- 21. Party and membership organization
- 22. Union and volunteer activities
- 23. Jobless
- 24. Other services (barbershop, beauty salon, etc.)

Q46 Type of Institution

- 1.State-own
- 2.Private
- 3.NGO

Q50 Obtained Education

- 1. Master / Doctor
- 2. University / Collage
- 3. Upper Grade (G8-11)
- 4. Lower Grade (G7 or below)

Q48 Average Personal Income (Tog/month)

a. Cold season

Q48a tog

b. Warm season

Q48b tog

Q49 Income source in winter & summer

a. cold season

- 1. Salary/wage
- 2. Pension/social allowance
- 3. Cash remittance
- 4. Rentals
- 5. Business and agricultural production
- 6. Other (please specify)

b. warm season

- 1. Salary/wage
- 2. Pension/social allowance
- 3. Cash remittance
- 4. Rentals
- 5. Business and agricultural production
- 6. Other (please specify)

Q45	<input type="text"/>	Q49a	<input type="text"/>
Q46	<input type="text"/>	Q49b	<input type="text"/>
Q47	<input type="text"/>	Q50	<input type="text"/>

Q51 Do you have a driver's license of car?

1. A	2. B	3. C	4. D	5. E	6. None
------	------	------	------	------	---------

Q51:

Q52a Do you have a vehicle for your own use?

a. Car	b. Motorcycle	c. Bicycle	b. Microbus	c. Truck
1. Yes, 2. No	1. Yes, 2. No	1. Yes, 2. No	1. Yes, 2. No	1. Yes, 2. No

Q52

Q52b Do you have discount card for public transport?

1. Yes 2.No

Q53 If no, how do you manage to travel ?

1. Use household vehicle	4. Walk
2. Sent off/pick-up by others	5. Seldom going out
3. Use of public transport	6. Others

Q53

Q54 Work or School Address

(District) _____ (Khoroolol) _____
 (Khoroo) _____ (Apt./Street) _____
 (Flat/Number of hashaa) _____

Q54

Form4: Daily Activity Information

INSTRUCTION: To be completed by EVERY HOUSEHOLD MEMBER aged 6 years and above.

INSTITUTION of ORIGIN AND DESTINATION		TRIP INFORMATION		Q55 TRIP No.1			
		<div style="border: 1px solid black; padding: 5px;"> <p>INSTITUTION of ORIGIN AND DESTINATION</p> <p>01. Residence 02. Office/ Bank 03. Public administrative offices 04. Factory/ Warehouse 05. School/ University 06. Medical/ Welfare 07. Religious/ Social 08. Wholesale/ Retail shop 09. Restaurant/ Entertainment 10. Park/ Green space 11. Field/garden/forest 12. Railway station/bus station 13. Others</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>TYPE</p> <p>1. Home (answer in Q5a) 2. Workplace/School (answer in Q54) 3. Others</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>TRIP PURPOSE</p> <p>01. To Home 02. To Work 03. To School (to study) 04. At work / Business 05. To send / To pick up other family member or friends 06. To go shopping/Market 07. To eat (not at home) 08. To have an exercise 09. Social/ Recreation/ Religious 10. Other private purposes 11. To get water 12. To get other living needs</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>MODE of TRAVEL</p> <p>01. Walking 02. Bicycle 03. Motorcycle - driver 04. Motorcycle – passenger 05. Car - driver 06. Car - passenger (NOT taxi) 07. Minibus (<=25 pax) 08. Standard Bus (>25 pax) 09. Trolley Bus 10. Taxi 11. Tourist Bus 12. Company Bus 13. School Bus 14. Truck 15. Rail Train 16. Air 17. Others</p> </div>		(1) ORIGIN Where did this trip begin? (Give address/ land mark, famous building, nearby)		District Khoroolol Khoroo Street	
(2) INSTITUTION of ORIGIN, and Type				b. Institution	c. Type		
(3) TIME STARTED (24- hour timing)				d. Hours Minutes			
(4) TIME of ARRIVAL (24- hour timing)				e. Hours Minutes			
(5) DESTINATION Where did this trip end? (Give address/ land mark, famous bldg, nearby)				District Khoroolol Khoroo Street		f.	
(6) INSTITUTION of DESTINATION, and Type				g. Institution	h. Type		
(7) TRIP PURPOSE				i.			
(8) MODE of TRAVEL				Original mode	Travel Time (min.)	TRANSFER POINT	
(9) TRAVEL TIME (min.)				Next mode	T. Time	1 st transfer	
(10) TRANSFER If you transferred to another vehicle/mode of travel during the trip, state the mode and place you changed to another place. (Give street intersection/famous bldg, or land mark)				Next mode	T. Time	2 nd transfer	
				Next mode	T. Time	3 rd transfer	
				Next mode	T. Time	4 th transfer	
				Last mode	T. Time		
(11) EXPENSE of TRAVEL				(Tg)			
(12) PARKING		1. Sidewalk 2. On-Road 3. Off-road 4. Inside house		Parking fee _____ (Tg)			
(13) Reason of mode choice		1. Travel time 4. Cost 2. Comfort 5. Safety 3. Convenience 6. No other choice					
(14) Assessment of Trip		Travel Time	1. Very bad 3. So-so 5. Very good 2. Bad 4. Good				
		Convenient	1. Very bad 3. So-so 5. Very good 2. Bad 4. Good				
		Safety	1. Very bad 3. So-so 5. Very good 2. Bad 4. Good				
		Overall Assessment	1. Very bad 3. So-so 5. Very good 2. Bad 4. Good				

Q56 TRIP No.2		
INFORMATION IS SAME AS IN DESTINATION OF TRIP No.1		
d. _____ Hours _____ Minutes		
e. _____ Hours _____ Minutes		
District _____ Khoroolol _____		
Khoroo _____ Street _____		
f. <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 5px;"></div>		
g. Institution _____		h. Type _____
i. _____		j. (Purpose of accompanied person, if any) _____
Original mode _____	Travel Time (min.) _____	TRANSFER POINT
		1 st transfer
Next mode _____	T. Time _____	2 nd transfer
Next mode _____	T. Time _____	3 rd transfer
Next mode _____	T. Time _____	4 th transfer
Next mode _____	T. Time _____	
Expense of Travel _____ (Tg)		
1. Sidewalk 2. On-Road 3. Parking Lot 4. Inside house		
Parking fee _____ (Tg)		
Reason of mode choice		
1. Travel time 4. Cost 2. Comfort 5. Safety 3. Convenience 6. No other choice		
Travel Time		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Convenience		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Safety		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Overall Assessment		
1. Very Bad 4. Good 2. Bad 5. Very Good 3. So-so		

Q57 TRIP No.3		
INFORMATION IS SAME AS IN DESTINATION OF TRIP No.2		
d. _____ Hours _____ Minutes		
e. _____ Hours _____ Minutes		
District _____ Khoroolol _____		
Khoroo _____ Street _____		
f. <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 5px;"></div>		
g. Institution _____		h. Type _____
i. _____		j. (Purpose of accompanied person, if any) _____
Original mode _____	Travel Time (min.) _____	TRANSFER POINT
		1 st transfer
Next mode _____	T. Time _____	2 nd transfer
Next mode _____	T. Time _____	3 rd transfer
Next mode _____	T. Time _____	4 th transfer
Next mode _____	T. Time _____	
Expense of Travel _____ (Tg)		
1. Sidewalk 2. On-Road 3. Parking Lot 4. Inside house		
Parking fee _____ (Tg)		
Reason of mode choice		
1. Travel time 4. Cost 2. Comfort 5. Safety 3. Convenience 6. No other choice		
Travel Time		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Convenience		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Safety		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Overall Assessment		
1. Very Bad 4. Good 2. Bad 5. Very Good 3. So-so		

Q58 TRIP No.4		
INFORMATION IS SAME AS IN DESTINATION OF TRIP No.3		
d. _____ Hours _____ Minutes		
e. _____ Hours _____ Minutes		
District _____ Khoroolol _____		
Khoroo _____ Street _____		
f. <div style="border: 1px solid black; width: 100%; height: 20px; margin-top: 5px;"></div>		
g. Institution _____		h. Type _____
i. _____		j. (Purpose of accompanied person, if any) _____
Original mode _____	Travel Time (min.) _____	TRANSFER POINT
		1 st transfer
Next mode _____	T. Time _____	2 nd transfer
Next mode _____	T. Time _____	3 rd transfer
Next mode _____	T. Time _____	4 th transfer
Next mode _____	T. Time _____	
Expense of Travel _____ (Tg)		
1. Sidewalk 2. On-Road 3. Parking Lot 4. Inside house		
Parking fee _____ (Tg)		
Reason of mode choice		
1. Travel time 4. Cost 2. Comfort 5. Safety 3. Convenience 6. No other choice		
Travel Time		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Convenience		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Safety		
1. Very Bad 3. So-so 5. Very Good 2. Bad 4. Good		
Overall Assessment		
1. Very Bad 4. Good 2. Bad 5. Very Good 3. So-so		

Q59 TRIP No.5	Q60 TRIP No.6	Q61 TRIP No.7
INFORMATION IS SAME AS IN DESTINATION OF TRIP No.4	INFORMATION IS SAME AS IN DESTINATION OF TRIP No.5	INFORMATION IS SAME AS IN DESTINATION OF TRIP No.6
d. _____ Hours _____ Minutes	d. _____ Hours _____ Minutes	d. _____ Hours _____ Minutes
e. _____ Hours _____ Minutes	e. _____ Hours _____ Minutes	e. _____ Hours _____ Minutes
District _____ Khoroolol _____ Khoroo _____ Street _____	District _____ Khoroolol _____ Khoroo _____ Street _____	District _____ Khoroolol _____ Khoroo _____ Street _____
f. _____	f. _____	f. _____
g. Institution _____ h. Type _____	g. Institution _____ h. Type _____	g. Institution _____ h. Type _____
i. _____ j. (Purpose of accompanied person, if any) _____	i. _____ j. (Purpose of accompanied person, if any) _____	i. _____ j. (Purpose of accompanied person, if any) _____
Original mode _____ Travel Time (min.) _____ TRANSFER POINT _____ Next mode _____ T. Time _____ 1 st transfer _____ Next mode _____ T. Time _____ 2 nd transfer _____ Next mode _____ T. Time _____ 3 rd transfer _____ Next mode _____ T. Time _____ 4 th transfer _____ Next mode _____ T. Time _____	Original mode _____ Travel Time (min.) _____ TRANSFER POINT _____ Next mode _____ T. Time _____ 1 st transfer _____ Next mode _____ T. Time _____ 2 nd transfer _____ Next mode _____ T. Time _____ 3 rd transfer _____ Next mode _____ T. Time _____ 4 th transfer _____ Next mode _____ T. Time _____	Original mode _____ Travel Time (min.) _____ TRANSFER POINT _____ Next mode _____ T. Time _____ 1 st transfer _____ Next mode _____ T. Time _____ 2 nd transfer _____ Next mode _____ T. Time _____ 3 rd transfer _____ Next mode _____ T. Time _____ 4 th transfer _____ Next mode _____ T. Time _____
Expense of Travel _____ (Tg)	Expense of Travel _____ (Tg)	Expense of Travel _____ (Tg)
1. Sidewalk _____ 2. On-Road _____ 3. Parking Lot _____ 4. Inside house _____	1. Sidewalk _____ 2. On-Road _____ 3. Parking Lot _____ 4. Inside house _____	1. Sidewalk _____ 2. On-Road _____ 3. Parking Lot _____ 4. Inside house _____
Parking fee _____ (Tg)	Parking fee _____ (Tg)	Parking fee _____ (Tg)
Reason of mode choice 1. Travel time _____ 4. Cost _____ 2. Comfort _____ 5. Safety _____ 3. Convenience _____ 6. No other choice _____	Reason of mode choice 1. Travel time _____ 4. Cost _____ 2. Comfort _____ 5. Safety _____ 3. Convenience _____ 6. No other choice _____	Reason of mode choice 1. Travel time _____ 4. Cost _____ 2. Comfort _____ 5. Safety _____ 3. Convenience _____ 6. No other choice _____
Travel Time 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Travel Time 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Travel Time 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____
Convenience 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Convenience 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Convenience 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____
Safety 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Safety 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____	Safety 1. Very Bad _____ 3. So-so _____ 5. Very Good _____ 2. Bad _____ 4. Good _____
Overall Assessment 1. Very Bad _____ 4. Good _____ 2. Bad _____ 5. Very Good _____ 3. So-so _____	Overall Assessment 1. Very Bad _____ 4. Good _____ 2. Bad _____ 5. Very Good _____ 3. So-so _____	Overall Assessment 1. Very Bad _____ 4. Good _____ 2. Bad _____ 5. Very Good _____ 3. So-so _____

Form 5. People's Assessment/Satisfaction on Living Environment

Member Code (Q7) <input style="width: 30px; height: 20px;" type="text"/>

INSTRUCTION: *to be completed by a representative of HOUSEHOLD*

Housing

Q62 What do you think about your present housing conditions?

- | | |
|--|---|
| 1. Want to move (Go to Q63a, b & c) | 3. Want to improve (Go to Q63a & d) |
| 2. Want to rebuilt (Go to Q63a, b & c) | 4. Do not need to do anything (Go to Q64) |

Q62

Q63

a. (For those who answered 1,2 and 3 in Q62) Please give reasons why? (Choose 3)

- | | |
|---|---|
| 01. Small living Space | 09. Insecure from natural disaster (flood, land slide...) |
| 02. Not suitable design | 10. No feel of attachment for the place |
| 03. Poor structure | 11. Inconvenience for daily life |
| 04. Bad air sealing/ventilation | 12. Difficult to earn income for living and find a job |
| 05. Poor sunlight | 13. Bad neighborhood's security |
| 06. Poor connection to basic utility services | 14. Bad relationship among neighboring |
| 07. High rent (if applicable) | 15. Bad environmental conditions (air, noise, odor...) |
| 08. Loss of traditional and cultural value | 16. Others (Specify _____) |

Q63a-1

Q63a-2

Q63a-3

b. (For those who answered 1 and 2 in Q62) If you have a chance to rebuilt/transfer the present house, what kind of dwelling do you want to live in the future?

- | | |
|--|---------------------------------------|
| 1. Traditional house (Ger) | 5. Mid-rise Apartment (~5F) |
| 2. Detached house by wooden structure | 6. High-rise apartment (5F~) |
| 3. Detached house by wood mortar structure | 7. Detached house with infrastructure |
| 4. Detached house by brick structure | 8. Other |

Q63b

c. (For those who answered 1 and 2 in Q62) Up to how much can you afford to pay per month for your own house?

Q63c tog

d. (For those who answered 3 to improve in Q62) Which part do you want to improve of your present house? (Choose 2)

- | | |
|------------------------------|----------------------------|
| 01. Living space (Go to Q60) | 07. Power connection |
| 02. Design | 08. Privacy |
| 03. Structure of house | 09. Accessibility of water |
| 04. Air sealing/ventilation | 10. Sunlight |
| 05. Warmth in winter | 11. Others (Specify _____) |
| 06. Sanitation/toilet | |

Q63d-1

Q63d-2

e. (If you choose 1 in Q63d) How many square meters do you need for living space to accommodate your family comfortably?

- | Apartment | Ger |
|---------------------------------|-----------|
| 1. Below 30 m ² | 1. 4 wall |
| 2. 30-50 m ² | 2. 5 wall |
| 3. 50-75 m ² | 3. 6 wall |
| 4. 75-100 m ² | 4. 7 wall |
| 5. 100-150 m ² | |
| 6. More than 151 m ² | |

Q63e

Q64 When you choose your house, what are the important factors? (Choose 3)

- | | |
|--|--|
| 01. Housing condition (space, size ...) | 08. Easy to earn income for living and find a job |
| 02. Connection to basic utility services | 09. Understand values of tradition and culture |
| 03. Rent (if applicable) | 10. Relationship among neighboring |
| 04. Neighborhood's security and safety | 11. Expectation for future development of the present location |
| 05. Environmental conditions (air, noise, odor...) | 12. Road condition (access, safety...) |
| 06. Attachment for the place | 13. Others (Specify _____) |
| 07. Convenience for daily life | |

Q64-1

Q64-2

Q64-3

Access to Facilities

Q65 What facility should be locate near by your house? (Choose 3)

- | | | |
|--|-----------------------------------|--------------------------------|
| 01. Health care service provider | 06. Neighborhood Park/ Playground | 11. Public transportation Stop |
| 02. Emergency Health Care | 07. City Park | 12. Kindergarten |
| 03. Emergency health care for children | 08. Market for daily grocery | 13. Elementary school |
| 04. Public Administrative Office | 09. Market for non-daily shopping | 14. Police Station |
| 05. Welfare service facility | 10. Entertainment facilities | 15. Library |
| | | 16. Gymnasium /Sport hall |

Q65-1

Q65-2

Q65-3

Health Care Service

Q66 What is the common sickness in your family in winter? In summer?

a. Summer:

1. Infectious diseases 2. Cough 3. Asthma 4. Diarrhea 5. Nothing 6. Allergy 7. Other

Q66a

b. Winter:

1. Infectious diseases 2. Cough 3. Asthma 4. Diarrhea 5. Nothing 6. Allergy 7. Other

Q66b

Q67 What do you think about the sanitary condition/cleaness in your neighborhood as well as house?

1. Very bad 2. Bad 3. Fair (Go to Q69) 4. Good (Go to Q69) 5. Very good (Go to Q69)

Q66c

Q67

Q68 (For those who answer 1.or2. in Q67) Do you have a willingness to improve the sanitary condition/cleaness in the your area. If so, how can you contribute?

1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know

Q68

Q69 What do you think about following the governmental health care service facilities?

a. Facility for people who has mental diseases	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69a
b. Facility for people with disability	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69b
c. Government hospital in the district and Khoroo level	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69c
d. Government clinic/family doctor in the district and Khoroo level	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69d
e. Family hospital	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69e
f. Emergency health care service facility	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Never used	Q69f

Primary Education

Q70 What do you think about elementary school facility?

1. Very bad 2. Bad 3. Fair (Go to Q72) 4. Good (Go to Q72) 5. Very good (Go to Q72) 6. Don't know

Q70

Q71 (For those who choose 1 and 2 in Q70) What are problems you think of your school facility?

1. Overcrowded 2. Far distance 3. Bad access 4. Bad school facilities 5. High school fee and costs 6. No problem 7. Others (Specify) 8. Don't know

Q71

Free time activities

Q72 If you have holiday, what do you want to do? In winter? In summer?

a. warm season:

01. Stay at home 02. Go around the city 03. Go to individual enrichment lesson 04. Go shopping 05. Go camping/picnic 06. Go to country side 07. Visit historical places 08. Play sports 09. See friends 10. See relatives 11. Go movie/theater 12. Others (specify)

Q72b

b. cold season:

01. Stay at home 02. Go around the city 03. Go to individual enrichment lesson 04. Go shopping 05. Go camping/picnic 06. Go to country side 07. Visit historical places 08. Play sports 09. See friends 10. See relatives 11. Go movie/theater 12. Others (specify)

Q72a

Park/Green Space

Q73 Is it important to have a good access to park and green space in your neighborhood?

1. Yes very important 2. important 3. No (Go to Q79) 4. Not at all (go to Q79)
5. don't know

Q73

Q74 (For those answered 1 or 2 in Q73) What do you do in the park and green space in neighborhood?

1. To take a rest 5. To gather with friends/enjoy a conversation
2. To do exercise/do sports 6. To see performance
3. To take a walk 7. Others (Specify)
4. To play with children 8. Park is not available.

Q74

Q75 What do you think about parks and gardens of UB in general?

1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know

Q75

Q76 What types of park/garden space do you want to have? (Choose 2)

1. Big park 3. Square 5. Greenery (trees, plans, flowers)
2. Small park 4. Street trees 6. Others

Q76-1

Q76-2

Q77 What do you think about greenery of the city?

1. Very bad 2. Bad 3. Fair 4. Good (Go to Q79) 5. Very good (Go to Q79)

Q77

Q78 (For those who answer 1. or 2. or 3. in Q77) Do you have a willingness to improve the greenery in the your area. If so, how can you contribute?

1. Don't want to do anything 2. Financial contribution 3. Manpower contribution 4. Don't know

Q78

Access to Information of Government Services

Q79 Are you satisfied with the information distribution from government?

1. Very bad 2. Bad 3. Fair 4. Good 5. Very good

Q79

Safety in Daily Life and Disaster Prevention

Q80 What is the relationship with you neighbors?

1. Helping each other 4. Greeting
2. Visiting each other often 5. Don't know who lives in neighborhood
3. Discussing community problem 6. Bad relation

Q80

Q81 Do you attend community activities? What types of activities do you attend?

1. Never 5. Improving nighbour security
2. Cleaning neighborhood 6. Attending neighborhood meetings
3. Supporting children activities 7. Cultural act/festival & other special event
4. Improving natural environment 8. Other (Specify)

Q81

Q82 What do you think about the safety in your neighborhood?

a Safety/security against crimes	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82a <input type="checkbox"/>
b Traffic safety	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82b <input type="checkbox"/>
c Safety against fire	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82c <input type="checkbox"/>
d Safety against flood	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82d <input type="checkbox"/>
e Safety against land slides	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82e <input type="checkbox"/>
f Safety against earthquakes	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good 6. Don't know	Q82f <input type="checkbox"/>

Q83 When you have a problem in above safety issues, whom do you meet to discuss and solve it?

1. Not to discuss with anyone 2. Khoroo officer 3. Heseg leader 4. Neighbor 5. Others

Q83

Q84 What do you think about the safety in the city center?

a Safety/security against crimes	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84a <input type="checkbox"/>
b Traffic safety	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84b <input type="checkbox"/>
c Safety against fire	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84c <input type="checkbox"/>
d Safety against flood	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84d <input type="checkbox"/>
e Safety against land slides	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84e <input type="checkbox"/>
f Safety against earthquakes	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	Q84f <input type="checkbox"/>

Q85 When you have safety issues, whom do you meet to discuss to solve it?

1. Not to discuss with any one 6. Family members
2. City government officer 7. Neighbor
3. District officer 8. Police
4. Khoroo officer 9. Friends
5. Heseg leader 10. Other

Q85

Beautification of the City

Q86 What do you think about following factors in terms of beautification of the city landscape?

- | | |
|-----------------------------|-----------------------------------|
| a. Openness of Space | f. Advertisement |
| b. Building Design | g. Electric wire |
| c. Design of wall/fence | h. Parking on sidewalk |
| d. High-rise building | i. Greenery |
| e. Encroachment of building | j. Lots of vehicles on the street |

(If negative write 1 and if positive write 2)

Q86a	Q86d	Q86g	Q86j
Q86b	Q86e	Q86h	
Q86c	Q86f	Q86i	

Environmental Pollution Prevention

Q87 What do you think about the pollution in UB? If you answer 4. bad or 5. very bad, do you have a willingness to improve the environmental situations. If so, how can you contribute?

	1. Level of Satisfaction	2. Amount of contribution answer (For those who answer 4 or 5)
a. Air Quality	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know
b. Water quality	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know
c. Noise	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know
d. Odor/bad smell	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know
e. Dust	1. Very bad 2. Bad 3. Fair 4. Good 5. Very good	1. Manpower contribution 2. Financial contribution 3. Don't want to do anything 4. Don't know

Q87a-1 Q87a-2

Q87b-1 Q87b-2

Q87c-1 Q87c-2

Q87d-1 Q87d-2

Q87e-1 Q87e-2

Traffic Conditions

Q88 How do you feel about traffic situation?

	Very Bad	Bad	Fair	Good	Very good
a. Congestion	1	2	3	4	5
b. Safety	1	2	3	4	5
c. Inconvenience of road condition	1	2	3	4	5
d. Exhaust gas	1	2	3	4	5
e. Walking Environment for pedestrians	1	2	3	4	5
f. Public Transportation	1	2	3	4	5
h. Car Parking	1	2	3	4	5

Q88a

Q88b

Q88c

Q88d

Q88e

Q88f

Q88h

Q89 If "bad" or "very bad" in Q88, what are causes?

a. (For those who answer 1.bad or 2.very bad in Q88a) Cause of traffic congestions (choose 2)

- | | |
|--------------------------------------|--|
| 01. Increase of car traffic | 06. Undisciplined people's driving manner |
| 02. Responsibility of traffic police | 07. Insufficiency of public transport |
| 03. Lack of traffic lights | 08. Lack of traffic management and enforcement |
| 04. Lack of roads | 09. Behaviour of pedestrians crossing road |
| 05. Bad road condition | 10. Others (Specify) |

Q89a-1

Q89a-2

b. (For those who answer 1.bad or 2.very bad in Q88b) Cause of traffic safety (choose 2)

Q89b-1

Q89b-2

- | | |
|-------------------------------------|--|
| 1. Increase of car traffic | 06. Undisciplined people's driving manner |
| 2. Responsibility of traffic police | 07. Insufficiency of public transport |
| 3. Lack of traffic lights | 08. Lack of traffic management and enforcement |
| 4. Lack of roads | 09. Behaviour of pedestrians crossing road |
| 5. Bad road condition | 10. Others (Specify) |

Q90 How do you feel about present traffic situation compared to 5 years ago ?

	Very much worse	Worse	Worse but not much	Same	better	Don't know	
a. Congestion	1	2	3	4	5		Q90a
b. Safety	1	2	3	4	5		Q90b
c. Convenience	1	2	3	4	5		Q90c
d. Exhaust gas	1	2	3	4	5		Q90d
e. Walking environment for pedestrians	1	2	3	4	5		Q90e
f. Public Transportation	1	2	3	4	5		Q90f

Public Transport

Q91 How often do you use public transport (including bus, trolley bus and mini bus)?

- | | | |
|----------------|-------------------|-----------|
| 1. Daily | 3. 3 times a week | 5. Rarely |
| 2. Once a week | 4. 5 times a week | 6. Never |

Q91

Q92 If you answer 4 or 5 in Q96, why don't you use public transport?

- | | | |
|---------------------------|---|-----------------------|
| 1. Far from bus stops | 4. Uncomfortable on-board | 7. Too high fare |
| 2. No available bus route | 5. Low frequency of bus operation | 8. Take too much time |
| 3. Not punctual schedule | 6. Using another transportation mode (walk/vehicle) | 9. Others |

Q92

Q93 Please assess bus service in Ulaanbaatar city on the following aspects.

	Very Bad	Bad	Fair	Good	Very Good	Don't know	
a. Route network	1	2	3	4	5	6	Q93a
b. Operating hours	1	2	3	4	5	6	Q93b
c. Frequency	1	2	3	4	5	6	Q93c
d. Bus speed	1	2	3	4	5	6	Q93d
e. Bus fare	1	2	3	4	5	6	Q93e
f. Accessibility to bus stop	1	2	3	4	5	6	Q93f
g. On-board comfort	1	2	3	4	5	6	Q93g
h. On-board security	1	2	3	4	5	6	Q93h
i. Driver/conductor's attitude	1	2	3	4	5	6	Q93i
j. Waiting condition (bus-stop)	1	2	3	4	5	6	Q93j
k. Convenience of travel in general	1	2	3	4	5	6	Q93k

Q94 Please assess mini bus service in Ulaanbaatar city on the following aspects.

	Very Bad	Bad	Fair	Good	Very Good	Don't know	
a. Route network	1	2	3	4	5	6	Q94a
b. Operating hours	1	2	3	4	5	6	Q94b
c. Frequency	1	2	3	4	5	6	Q94c
d. Bus speed	1	2	3	4	5	6	Q94d
e. Bus fare	1	2	3	4	5	6	Q94e
f. Accessibility to bus stop	1	2	3	4	5	6	Q94f
g. On-board comfort	1	2	3	4	5	6	Q94g
h. On-board security	1	2	3	4	5	6	Q94h
i. Driver/conductor's attitude	1	2	3	4	5	6	Q94i
j. Waiting condition (bus-stop)	1	2	3	4	5	6	Q94j
k. Convenience of travel in general	1	2	3	4	5	6	Q94k

Q95 Please assess trolley bus service in Ulaanbaatar city on the following aspects.

	Very Bad	Bad	Fair	Good	Very Good	Don't know	
a. Route network	1	2	3	4	5	6	Q95a
b. Operating hours	1	2	3	4	5	6	Q95b
c. Frequency	1	2	3	4	5	6	Q95c
d. Bus speed	1	2	3	4	5	6	Q95d
e. Bus fare	1	2	3	4	5	6	Q95e
f. Accessibility to bus stop	1	2	3	4	5	6	Q95f

g. On-board comfort	1	2	3	4	5	6	Q95g	
h. On-board security	1	2	3	4	5	6	Q95h	
i. Driver/conductor's attitude	1	2	3	4	5	6	Q95i	
j. Waiting condition (bus-stop)	1	2	3	4	5	6	Q95j	
k. Convenience of travel in general	1	2	3	4	5	6	Q95k	

Q96 Do you think public transport services must be improved and expanded in the future?

1. Yes	2. No	3. Not sure
--------	-------	-------------

Q96

Q97 If yes, what types of public transport services must be developed? (choose two)

1. Taxi	3. Microbus	5. Elevated railway	7. Underground railway
2. Bus	4. Rapid bus	6. Trolleybus	

Q97-1

Transport Measures

Q98 Do you support following transport measures which are currently implemented?

	Strongly support	Support	Not sure	Not support
a. Construction / improvement of arterial roads	1	2	3	4
b. Construction / improvement of district roads	1	2	3	4
c. Strict control of traffic	1	2	3	4
d. Increasing car registrations tax	1	2	3	4
e. Installation of traffic signals	1	2	3	4
f. Strict control of car parking	1	2	3	4
g. Improvement of bus and taxi stops (locations for loading/unloading and bus stop facility)	1	2	3	4
h. Improvement of conditions for pedestrians (sidewalk...)	1	2	3	4
i. Bus information board at bus stops	1	2	3	4
j. Expansion of bus routes	1	2	3	4
k. Expansion of bus capacity	1	2	3	4
l. Restriction of mini-bus (to the city center and major roads)	1	2	3	4
m. Restriction of truck traffic entering to city center	1	2	3	4
n. Introduce the bus for people with disability				

Q98a

Q98b

Q98c

Q98d

Q98e

Q98f

Q98g

Q98h

Q98i

Q98j

Q98k

Q98l

Q98m

Q98n

Level of Satisfaction on Living Environment

Q99 What are serious problems in your neighborhood? (Choose 3)

01. Poor greenary	05. Pavement condition	09. No play ground
02. Much dumps	06. Narrow streets	10. No/inaccessible public bath house
03. Flood vulnerable	07. Improper address	11. Noise
04. No street lights	08. No telecommunication	12. No problem

Q99-1

Q99-2

Q99-3

Q100 What do you think about living environment and services with regard to the following aspects?

	Highly unsatisfied	Unsatisfied	Fair	Satisfied	Highly satisfied
a. Safety in general	1	2	3	4	5
b. Security of good housing	1	2	3	4	5
c. Security of healthy life	1	2	3	4	5
d. Convenience of daily activities	1	2	3	4	5
e. Access to employment opportunity/income source	1	2	3	4	5
f. Amenity for man-made environment	1	2	3	4	5
g. Amenity for natural environment	1	2	3	4	5

Q100a

Q100b

Q100c

Q100d

Q100e

Q100f

Q100G

Q101 What are the most important aspects for the good living environment? Please select 2 most important points from above aspects.

1. Safety in general	5. Access to employment opportunity/income source	Q101-1	<input type="checkbox"/>
2. Security of good housing	6. Amenity for man-made environment	Q101-2	<input type="checkbox"/>
3. Security of healthy life	7. Amenity for natural environment		
4. Convenience of daily activities			

Overall Assessment

Q102a Indicate your assessment of key urban issues: If you feel the government is doing good job, select "1", needs for more attention by the government, select "2", if so-so select "3".

1	Economic development	Q102a-1	<input type="checkbox"/>
2	Poverty alleviation	Q102a-2	<input type="checkbox"/>
3	Transportation	Q102a-3	<input type="checkbox"/>
4	Land and Housing	Q102a-4	<input type="checkbox"/>
5	Urban services	Q102a-5	<input type="checkbox"/>
6	Security and Safety	Q102a-6	<input type="checkbox"/>
7	Environmental Protection	Q102a-7	<input type="checkbox"/>

Q102b Select the most important 2 aspects for you from the above.

Q102b-1 Q102b-2

Q103a Indicate your assessment of basic urban services: If you feel the government is doing good job, select "1", needs for more attention by the government, select "2", if so-so select "3".

01	Water supply	Q103a-1	<input type="checkbox"/>
02	Sewerage /Drainage	Q103a-2	<input type="checkbox"/>
03	Electricity	Q103a-3	<input type="checkbox"/>
04	Health/welfare services	Q103a-4	<input type="checkbox"/>
05	Education	Q103a-5	<input type="checkbox"/>
06	Garbage collection	Q103a-6	<input type="checkbox"/>
07	Road infrastructure and facilities	Q103a-7	<input type="checkbox"/>
08	Public transport	Q103a-8	<input type="checkbox"/>
09	Traffic management	Q103a-9	<input type="checkbox"/>
10	Public information	Q103a-10	<input type="checkbox"/>
11	Telecommunication	Q103a-11	<input type="checkbox"/>
12	Land and Housing	Q103a-12	<input type="checkbox"/>
13	Neighborhood Security	Q103a-13	<input type="checkbox"/>
14	Urban Air Quality	Q103a-14	<input type="checkbox"/>
15	Recreation and sports facilities	Q103-15	<input type="checkbox"/>
16	City administration and services	Q103a-16	<input type="checkbox"/>

Q103b Select the most important 4 aspects for you from the above.

Q103b-1 Q102b-2
 Q103b-3 Q103b-4

Current and Future Vision of UB City

Q104 Do you want to continue to live/settle in UB?

1. Yes 2. No (Go to Q 104)

Q104

Q105 (For those who answer 1. yes in Q102) Why do you want to continue to live in UB city?

1. No choice to stay other place	3. Good future potential for children	6. Other
2. Employment and education opportunity available	4. Access to basic utility services	(specify)
	5. Convenient to live	7. Feel attachment

Q105

Q106 Please select the most suitable and desired images for future UB City. (choose 4 at most)

01. Harmony	04. Nature	07. Peaceful	10. Modern	13. Tourism center
02. Clean	05. Culture/heritage	08. International/global	11. Highly developed	
03. Safe	06. Friendly	09. Scientific/ high-tech center	12. Others	

Q106-1 Q106-2 Q106-3 Q106-4

For the Households living in Bagakhangai and Baganuur Only

Q107 How often do you visit to UB City?

1. Most Everyday	3. 1-2 times in a week	5. Once a quarter	7. Once a year
2. Few times in a week	4. 3-5 times in a month	6. Once a half year	8. Never

Q107

Q108 What is the major purpose to visit UB City?

1. Business	3. See friends/relatives	5. Meeting/Gathering	7. Others
2. Shopping	4. Amusement & entertainment	6. School	

Q108

Q109

Q109 Do you feel that your town is a part of UB City?

1. Yes	2. No
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Q110 (For those who answer 2. no in Q107) If no, what is the reason?

1. Too far to the city	2. Separation of boundary	3. No interaction with UB City	4. Others ()
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Q110

Thank you very much for your cooperation!