

**TIKA**

## **COUNTRY REPORT OF MONGOLIA**

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Mongolia locating in the centre of the Asian continent and occupies an area of 1.564.118 km<sup>2</sup>. The total length of its borders is 7.678 km. to the north, country borders on the Federal Republic of Russia and to the south on the People's Republic of China.

Administratively Mongolia is divided into 21 Aimags, which may be called as provinces. Subdivisions of Aimags are called as Sums and Sums are also divided into Bags. These administrative units are governed by both Hurals and Governors. This administrative structure will be explained on further sections.

The world watershed which crosses Mongolia's northern regions divides the country into two unequal parts with dissimilar climates, the northern section continues the east Siberian natural scenery whilst the southern section, taking up two thirds of the country's area, belongs to the arid desert and semi-desert Central Asian regions. However, deserts constitute a comparatively small part of the area as the country lies rather high above sea level. Add to this a number of physical and geographical features peculiar to Mongolia, the country has the world's highest atmospheric pressure in winter.

The climatic conditions in Mongolia are determined by geographical locations, relief structure and altitude above sea level. Similarly, five zones exist in terms of degree of humidity. All have different thermal features and regimes of humidification.

A progressive decrease in cloud formation from north to south increases the annual hours of sunshine from 2600 hours in the north over 3200 hours in the south. As a result, Mongolia has between 200 and 500 hours more sunshine per annum than any other place in the northern hemisphere located in the same latitudes.

The country's longest rivers are Selenge, Orhon, Tuul, Hovd, Herlen and Halhin gol. There are quite a few lakes in the Gobi, most of them small closed fresh and salt water bodies. The only navigable lake is Huvsgul.

The average altitude above sea level is 1580 m. The highest point is Huiten peak (4563 m) in the Tavan Bogd mountain range where the borders of Mongolia, the Russia and China converge. The lowest point is the Huh nuur lake depression in the east lying at an altitude of 532 meters.

Aggregated plains are few and lowlands practically non-existent. The significant variations in height from 532 m to 4563 m are evidence of the strong dislocation in the relief. The mountainous regions are located in the northern and western parts of the country. Hillocks, which are equally distributed over the entire territory, are highly developed in the desert region south of the continental watershed. The denudation plains are located in the south-east. Human settlements, although sparsely distributed, are situated along the valleys and foot-hills.



## LAND USE

Classification	Thousand ha	Percentage
Pasture, arable and permanent cropland	118580.5	75.8
Settlements	540.1	0.4
Protection areas	11630.3	7.4
Forests	15177.0	9.7
Water basins	1631.4	1.0
Reserves	8852.5	5.7
<b>TOTAL</b>	<b>156411.8</b>	<b>100.0</b>

As it seen from the land use table, 75.8% of the total land is pasture, arable and permanent cropland. Those areas are mostly used for extensive husbandry facilities.

One of the most important problems of the Mongolia, which is coming from its geomorphological conditions, is the risk of the earthquake. The earthquake risk is getting higher in Eastern regions, where the continental break lines situated, some earthquakes recorded in this area magnitude from 6.0 to 9.0. Current situation on this area is not so risky because of the common usage of traditional gers. The construction of the traditional gers is very flexible and available to decrease earthquake risk. A plan which covers the entire nation, using the earthquake break lines as the road for development, will increase the risk for destruction of the buildings and big lost of human life for the future.

# 1. DEMOGRAPHIC INDICATORS

If we compare with its territory Mongolia has a very scare population which is 1.5 inhabitants per km<sup>2</sup> in 1994.

## POPULATION BY SEX AND DENSITY

Year	Population (thousand)			Percentage		Inhabitant (per km <sup>2</sup> )
	Total	Male	Female	Male	Female	
1925	684.8	345.4	338.6	50.5	49.5	0.4
1940	743.8	363.0	380.8	48.8	51.2	0.5
1950	772.4	383.1	389.3	49.6	50.4	0.5
1960	968.1	483.6	484.5	50.0	50.0	0.6
1970	1265.4	631.2	634.2	49.9	50.1	0.8
1980	1682.0	842.7	839.3	50.1	49.9	1.1
1990	2149.3	1072.3	1077.0	49.9	50.1	1.4
1994	2280.0	1135.4	1144.6	49.8	50.2	1.5

In 1940, a notable decrease had been seen on the male population from 50.5% to 48.8% in a decade. This decrease may be explained by the annihilation policy of the Buddhist lamas, who were all male under the great influence of Stalinism period's approach to the religious.

Due to the concerns that population density of Mongolia was much lower than the land could sustain and fearing domination from its neighbours. The Government of Mongolia for many years pursued a policy of population extension. Under this national policy, strict limitations were imposed on family planning services. In 1976, the Government allowed the use of inter-uterine devices but only for women over 35 years old or, with more than four children, or, with severe medical conditions. The Government funded Mongolian Women's Organisation, which encourages large families through cash intensivities and other benefits such as early retirement along with the restrictions on contraception, promoted a high birth rate of 3.7% from 1985 to 1987. The annual rate of natural increase is 2.9% per year for last years.

During the accelerating process of political reform in Mongolia towards the end of 1980's, a number of adjustments were made in the Government's policy towards family planning, including the open availability of contraceptive services and the legislation of abortion on demand in the first trimester of pregnancy. Unfortunately, a severe shortage of contraceptive devices has resulted in abortion being used as a principle means of limiting family size.

1592 abortions held per 1000 live births in 1990 by the records of the Ministry of Health. Thus, in early 1991, the Ministry of Health and National Development Board proposed a new family planning policy. This is approved by the Parliament in 1992. The policy recommends that in terms of optimum health of mothers and children, the best ages for childbirth are between 20 and 34, that children should be spaces at least three years apart, and more than four children increases health risks. Under the new policy individual families are given the choice of whether or not to use family planning.

### POPULATION BY AGE GROUP (at the beginning of the year)

Age group	1969		1979		1989		1995*	
	Pop.	%	Pop.	%	Pop.	%	Pop.	%
0-1	73287	6.1	108729	6.9	135051	6.6	94758	4.2
1-4	125725	10.6	154805	9.8	189805	9.3	189414	8.3
5-9	194303	16.2	234986	14.7	275179	13.5	323777	14.2
10-14	139050	11.6	207713	13.1	255646	12.5	275103	12.1
15-19	91157	7.6	184416	11.7	221580	10.8	248816	10.9
20-24	70079	5.9	130104	8.3	196052	9.6	229754	10.1
25-29	77960	6.6	92611	5.3	179543	8.8	199459	8.8
30-34	64971	5.4	77046	4.8	135284	6.6	184874	8.1
35-39	64200	5.4	76594	4.8	92615	4.5	134529	5.9
40-44	50297	4.2	64798	4.1	70390	3.5	88982	3.9
45-49	50791	4.2	58652	3.7	68296	3.3	63459	2.8
50-54	43264	3.6	45547	2.8	55430	2.7	63984	2.8
55-59	43259	3.6	43264	2.7	50220	2.5	48268	2.1
60-64	37310	3.1	36659	2.3	36235	1.8	46274	2.0
65-69	32442	2.7	32793	2.1	31488	1.5	28794	1.4
70+	39500	3.2	46289	2.9	51140	2.5	54755	2.4
<b>TOTAL</b>	<b>1197595</b>	<b>100.0</b>	<b>1595006</b>	<b>100.0</b>	<b>2043954</b>	<b>100.0</b>	<b>2275000</b>	<b>100.0</b>

\* Mongolian citizens and permanent foreign residents Source: State Statistical office

Mongolia has one of the youngest population in the world, with 38.8% of the total population is below 14 years of age in 1995. This percentage shows a decline in compare with the ratio of 41.8% in 1989, because of the changes of the family planning policies of the Government. For the first time, 0-4 age group have been declined from number of 324856 to 284172 which means 87.5%.

### POPULATION BY AIMAGS (thousand)

AIMAG	1985	1990	1993
Arhangai	81.5	89.2	103.4
Bayan-Ulgii	84.4	99.3	75.7
Bayanhongor	71.4	78.7	85.9
Bulgan	48.9	56.7	61.7
Gobi-Altai	61.9	65.1	72.4
Darhan-Uul	73.1	88.6	93.0
Dornogobi	47.2	53.7	44.6
Dornod	67.6	82.6	85.0
Dundgobi	45.9	51.9	51.9
Zavhan	77.6	84.1	91.7
Orhon	52.1	58.2	64.5
Uvurhangai	92.7	100.4	110.4
Umnugobi	38.6	43.5	46.0
Suhbaatar	48.3	53.5	57.0
Selenge	79.4	92.0	92.4
Tuv	93.8	105.9	109.9
Uvs	80.3	91.8	99.0
Hovd	70.2	81.1	88.1
Huvsqul	92.5	101.5	113.2
Hentii	62.2	76.7	73.9
Tosontsengel	8.9	9.5	10.8
Hatgal	4.9	5.4	4.4
Zuunbavan	3.6	4.9	4.6
Nalaih	19.8	25.0	23.2
Baganuur	6.8	15.0	12.2
Ulaanbaatar	476.7	535.0	563.2
<b>TOTAL</b>	<b>1900.6</b>	<b>2149.3</b>	<b>2250.0</b>

Source: State Statistical Office

The statistics, which are signed urban and rural population shows almost 46.4% of the population live in rural areas. The formal statistical discrimination which is made as urban and rural is pretty far away from determining the existing social structure. The discrimination of settled and nomad population may be more realistic within the socio-cultural conditions of Mongolia. As it is seen from the statistical data, there is almost four settlement where may be called as 'urban' or 'city'. A careful study on the concept of the urban may cause to find only one city .which is Ulaanbaatar, worth to call as city because of its hinterland to control rural activities and the types and variety of the non-agricultural activities that the city hold as itself.

Except Ulaanbaatar, Darhan, Erdenet and Gobisumber are specialised on unique activities such as mining or specific industrial activities which are under the control of Ulaanbaatar. Also, those cities don't show the variety of non-agricultural activities except their dominant economic activities. Thus, using the above statistics as a indicator of settled and nomadic population. With the general assumption of the four settlements are urban centres, will be more realistic for further studies.

By using the assumption, it is possible to say that 34% of the population is living in urban areas, except this urban areas 19.6% of the population is settled, and total settled population ratio is 53.6%,the rest, which is shown as rural population in statistical data's, 46.4% of the population is already nomad in 1995. Determining the population with their real social positions may help to enlarge visions to understand Mongolia.

#### **POPULATION BY AIMAG CENTERS (at the end of the year, thousand)**

<b>AIMAG CENTERS</b>	<b>1985</b>	<b>1990</b>	<b>1994</b>
Erdenebulgan	17.6	22.2	23.2
Olgii	22.9	29.4	21.6
Bayanhogor	18.0	21.9	23.0
Bulgan	11.3	13.8	13.3
Esonbulag	14.5	19.2	19.9
Sainshand	8.5	10.4	18.7
Choibalsan	29.1	38.6	45.5
Mandalgobi	12.2	16.9	12.2
Uliastai	18.1	20.9	24.4
Arvaiheer	13.6	16.5	19.1
Dalanzadgad	11.1	14.4	12.4
Baruun-Urt	13.4	17.2	17.3
Suhbaatar	16.0	20.8	21.0
Zuunmod	12.0	18.2	18.9
Ulaangom	19.7	25.5	27.9
Jargalant	22.0	24.2	28.3
Moron	18.7	22.4	27.2
Ondorhaan	11.8	16.8	14.4

Source: State Statistical Office



## **2. SOCIAL STRUCTURE**

Being under the influence of Soviet political regime for 60 years, enlarge the social structure of Mongolia. After the II World War, with the financial subsidies of USSR, education, health and cultural events expenditures of the Central Budget had been grown rapidly and reach to the level of almost 60% of the total expenditures in 1980's.

Liberation movement effected whole Mongolia, CMEA countries subsidies cut suddenly, trade activities within those countries declined and Mongolia as a country, which had a pillow role historically in between USSR and China, have been showed a dramatic decline all of its functions. Transition period became very painful because of big losses of general revenues and very high inflation rates.

First measures had been taken in to account to decline public expenditures was on the field of social and cultural expenditures which caused some notable impacts on social life, at the beginning of 1992, by remaining the social impacts Government changed its policies and paid more attention to this field, blunder a heavy pressure of the inflation, there was almost nothing to be done. The general policy became to create self-sufficient units on every field, thus, separate and semi-autonomous budgets of Aimags put in force. Every unit, which may be a school or hospital or an administrative units, forced to create new incomes to increase their budget revenues. Thus, those units don't accept more subsidies from general budget but, they become business units which are making so different jobs besides their main missions that decrease their quality of their services. As an example, some schools rented their some classes or rooms which are a need for education to some private entities for earning money to support their education activities, or some of education, health, culture and administrative units send their personnel to abroad to buy some market goods and sell in Mongolia to make extra incomes for their main missions.

The number of personnel sharply declined to limit public expenditures. Together with the semi-autonomous budget policy this creates an extra force to decline public services qualities.

**MONGOLIAN BUDGET EXPENDITURES**  
(at current prices mln.tug)

<b>TOTAL EXPENDITURE</b>	<b>8929.3</b>	<b>(%) 100.0</b>	<b>12360.9</b>	<b>(%) 100.0</b>	<b>61661.9</b>	<b>(%) 100.0</b>	<b>101326.1</b>	<b>(%) 100.0</b>
Gen. Pub. Serv.	910.1	10.2	888.3	0.7	3615.1	5.8	8392.5	8.3
Defence	738.0	8.3	945.4	0.8	4238.5	6.9	7016.6	6.9
Public order & safety	253.0	2.8	849.4	6.8	2186.4	3.5	4233.3	4.2
Education	2049.0	22.9	3273.2	26.5	9595.6	15.6	16439.0	16.2
Health	1109.7	12.4	1944.4	15.7	6329.7	10.2	11609.9	11.5
Social security & welfare	1050.2	11.7	1577.5	12.8	5717.8	9.3	13459.2	13.3
Housing and community amenities	238.3	2.6	199.5	1.6	1023.2	1.6	1493.2	1.4
Recreation, culture & sports	393.0	4.4	698.8	5.6	2347.6	3.8	3844.0	3.8
- sports	67.4	0.7	124.6	1.0	518.0	0.8	510.1	0.5
- resorts	-	-	-	-	-	-	316.3	0.3
- culture & art	160.9	1.8	259.9	2.1	770.4	1.2	1248.7	1.2
- TV, information	164.7	1.8	314.3	2.5	1059.2	1.7	1768.9	1.7
Fuel & energy	422.3	4.7	131.3	1.0	3348.0	5.4	7522.2	7.4
Agriculture & Forestry	282.0	3.2	639.2	5.2	1539.3	2.5	2182.7	2.1
Ind., Mineral resources & mining	544.2	6.1	389.1	3.1	1139.1	1.8	9829.1	9.7
Transport & communication	414.6	4.6	324.3	2.6	1276.3	2.1	4576.2	4.5
Other econ. affairs & services	197.0	2.2	208.3	1.7	5029.3	8.1	2666.6	2.6
Other expenditure	327.9	3.6	292.2	2.3	14276.0	23.2	8061.6	7.9

Source: State Statistical Office

As at is seen from the table, the share of the social services expenditure are dramatically decreasing and also a high decline in the quality of services is continuing, which is mentioned above, that can not be counted in statistical surveys.

## 2.1 EDUCATION AND TRAINING

Historically large capital allocations to Mongolian education yielded some impressive indicator of achievement by the end of the 1980's. An adult literacy rate of 96% and a gross enrolment ratio of 98% in primary schools, 85% in secondary schools and 5% in tartar education in 1990. In 1991 education accounted for 22.9% of the total Governmental expenditures. In between 1990 and 1993 public expenditures on education fell sharply by 70.7%.

The formal explanation of reducing public spending on education is based on the fiscal crisis of the Government. Together with fiscal crisis, the government's policies on education had been changed for several times during the transition period. For diminishing the role of the Government on this sector some policies implemented such as, cancelling the obligations on children's to study on primary schools, reducing the number of teachers and some schools and boarding houses for children had been closed. Those policies, fortunately, hardly criticised by the people and forced to Government to change their policies in 1992.

The Government is committed to implement a new reform agenda which covers actions by focusing on institutional restricting, training and upgrading of educational infrastructure. The education policy of the Government is guided by the Education Master Plan prepared in 1994 with ADB assistance. The plan targets are: preservation and enhancement of basic and general secondary education for both rural and urban areas; reforming higher education; rationalisation of systems of providing vocational skills, providing appropriate learning opportunities for out of school; meeting the needs for improved educational management; increasing the efficiency of the related Ministry.

Because of nomadic social structure of Mongolia, all education's serves by boarding schools which demand more public expenditures. The reform agenda, which is hold in 1992, driven the need to reduce expenditures on education. To facilitate that transition the Government has sharply cutback capital investment, introduced partial cost recovery of education services with the setting of charges for food in kindergartens and boarding schools and tuition fees in post secondary and higher education. Schools have also been encouraged to generate their own funds through selling marketable services and renting premises.

By the Government's reform agenda, it is said that, the resources are being concentrated on improving primary education and investing more in books in the schools which is published after 1989. The basic criticism of the Government on the former educational policy is: "inefficient education system that produces graduates poorly equipped for the challenges generated by the collapse of central planning." But, in almost every level of education, the books and educating material, which are published in Russia before their transition, are already in use with a very scare numbers, which are not satisfied the existing demand. Thus the basic criticism of the Government is already valid after new policies which held as reforms.

The number of education personnel has been reduced. An increase in the student teacher ratio is enlarging by combining classes in urban areas wherever possible and by using multigrade teaching in rural areas. Stipends for domestic and overseas students are being phased out. A big strike had been hold by teachers to increase salaries in 1995 for six months. After long negotiations, teachers salaries increased to Tug 20.000 which means approximately 40\$ per month.

All of those indicators are showing wide alerts for future overall developments of Mongolia. Education and training, which is basic propelling force for overall development, has been in a big dilemma, because of the faults on policy allocation in the sector.

	Number of schools			Number of pupils & students			Number of teachers			Public payments (mil.tug)		
	1980	1990	1993	1980	1990	1993	1980	1990	1993	1980	1990	1993
Primary school	113	96	77	145.5	166.3	142.1	13.9	20.6	19.2			
Secondary school	458	538	586	226.6	274.6	228.2						
Vocational institutions	62	75	55	40.8	47.6	14.1	3.5	4.6	3.5			
Higher institutions	7	9	34	23.2	17.3	24.2	1.1	1.5				
General ed. inst for workers	314	210	10	22.3	10.4	0.8						
<b>Total</b>	<b>954</b>	<b>928</b>	<b>762</b>	<b>458.4</b>	<b>516.2</b>	<b>409.4</b>				<b>753.0</b>	<b>1202.7</b>	<b>12361.3</b>

Source: State Statistical Office

## 2.2 HEALTH

Before the transition period, Mongolian health care was financed from general government revenues and delivered through a large network of public facilities and programs. Rapid growth and high levels of investment resulted in a system with good access to health care and high rates of contact for both curative and preventive services. However, after 1990, by the Government's health care reforms, the public health expenditures are deployed only where they generate best returns. The key thrust being introduced by the governmental reform lies in imparting the sense and habit of responsibility of each person for the protection and enhancement of personal and family health.

The ending of assistance from the former CMEA countries affected health care severely, the immediate result was a drastic reduction in resources necessary to sustain prior levels of service coverage. Current health facilities have shed staff, patients are expected to provide their own meals and pay for their own drugs and vehicles.

The Government put in force its reform agenda for sector's transformation starting in 1991. That transformation is guided by two general principles. First, that health related services such as information and control of contagious diseases are public goods. Thus, expenditures to control infectious diseases, such as tuberculosis should still be financed by the public sector. Second, charging fees for health services should exclude the poorest groups of society, since the provision of cost effective health service to the poor is an effective and socially acceptable approach to poverty reduction.

The Government introduced in 1993 a National Health Insurance (NHI) system. This system is financed by employee and employer contributions amounting to 3% of the employee's salary. Nevertheless, large segments of society may still need to depend on some form of free public health services.

The decentralisation of financial and budgeting system, initiated in 1992, has given local health agencies the authority to negotiate their share of local public financing directly with the local government. However, this transfer of responsibilities was made very quickly without detailed preparation or guidelines which caused many problems because of the lack of information on management.

For reducing public expenditures on health sector, Government reduced the number of work force also.

As a result of the reform agenda, an increase in maternal mortality and the infant death rates has been observed by the Ministry of Health. The increase of the mortality rates are explained by formally, with a direct relation to increase home deliveries with the closing of maternity homes in rural areas and also lack of knowledge of the modern methods of family planning.

Together with a superior need of population increase for future developments, Government's reform agendas describe the population increase as the increase of the demand for health care, education and other social services which will continue to increase with a limited support base for some years to come and the cost of social security will also rise. Thus, family planning seems as the best solution to the Government. The Government cancelled the prohibitions on abortions in 1990. Since then there is a sharp decline in the birth rates. The Government is currently promoting more awareness of family planning practices with assistance

from UNFPA and made some little changes on its policy which is mentioned before.

The Government's medium term goals for health care are: strengthen preventive and curative health care, enhance the capacity of health institutions, strengthen maternal and child health activities, encourage greater involvement of communities and households in promoting healthier behaviour on their own part, increase cost-effectiveness, efficiency and productivity. To realise these goals, the first objective of the Government is 'reallocate resources to their highest returns'.

As it is seen from the current situation, the only goal, which is encouraging greater involvement's of households in promoting healthier behaviour on their own part, partially realised as help-your-self curing techniques, which are mostly based on insufficient and unreliable traditional ways' of curing or buying some drugs freely from pharmacies without a doctor advice and without knowing it's possible contradictions.

The last goal and the first objective of the Government is highly connected with each other. For no country, free from its general political thought, there is no cost-efficiency on health, education and other social services because of the nature of the social services. These social services, which are critical importance for the survival of a country, are the main keys for the future developments and keep and enlarge the consolidation of consciousness for the citizenship. The returns of the resources, which are spend for the health, are just social benefits, never financial, that there is no measure or accounting techniques to find out the highest return of such a social benefit as it is mentioned at the first objective of the Government.

	1980	1985	1990	1993
Number of Doctors, per 10000 population	23	25	29	26
Number of beds, per 1000 population	11.1	11.5	12.1	10.4
Maternal mortality rate (10000)	*	106	89	*
Infant mortality rate (10000)	*	6406	4713	*

\* - there is no information  
Source: State Statistical Office

## 2.3 CULTURE

As it is mentioned before, within the section of Demographic Indicator, cultural environment of Mongolia is already hardly depend on nomadic way of life.

Cultural heritage of Mongolia is coming from late 3<sup>rd</sup> century BC. when Central Asian nomadic tribes united under the Huns to form a strong nomadic empire. The development of the present ethnic composition has gone through several historical stages. The formation and disintegration of numerous military tribal alliances of ancient nomads and their mass migration over vast expanses of the Euro-Asian steppes, spreading from Liao He to the Danube, resulted in the emergence of the Mongolian nationality which absorbed the Turkic, Tunguz-Manchurian and other ethnic groups.

The core of the Mongolian nationality consists of Khalkha-Mongol tribes who used to inhabit the basins of the rivers Onon, Kherlen and Tuul. Today, the Khalkhas make up nearly 80% of the country's population. Kazakhs, Derbets, Buriads and other national minorities are concentrated in those regions where they have always lived.

It is possible to say that no other country in the world has had such a variety of alphabets as Mongolia. The Hunnu who founded the first state in Mongolian territory used a script which probably gave rise to the runic alphabet. The oldest relic of Mongolian script proper is the so-called Chinggis stone, preserved at the Hermitage Museum in St-Petersburg (Leningrad), written in Mongolian letters which were probably borrowed from Uigurs.

The Mongol-Uigur, or old Mongolian alphabet was a landmark in the development of the written language. In 1260 Khubilai Khan asked the Tibetan Lama to compile a new alphabet for the Mongolian Empire. The new alphabet was described a 'square' for its characters that they were borrowed from Tibetan alphabet.

In 1599, the Mongolian scholars Erdeni and Gagai invented a Manchurian alphabet based on Old Mongolian, which later, in 1648 was adopted to Oirat's West Mongolian dialect and called as 'Clear script'<sup>1</sup>.

In the 17th century, Zanabazar, who was the high priest of Buddhism and great artist, attempted to create his own alphabet which is known as 'Soyombo'.

In 1941 a new alphabet with Cyrillic characters was introduced countrywide with a view to wiping out illiteracy as quick as possible. Its introduction also had political overtones but, then, it really proved very convenient.

In 1992, when the new Constitution agreed, it is written both in Cyrillic and Old Mongolian alphabet and nowadays there are some discussions about the change the alphabet form to Old Mongolian.

The religious structure of Mongolia had been reported as 72% of the population is Atheist, 21 % of the population is Buddhist and 5% of the population is Muslim and 2% unknown. Together with the liberation process, the religious composition get more clarify. The majority of the believers are Buddhist, Khazaks, as an ethnic group, all Muslim but there is no reliable statistical data about this subject.

Because of high rate of literacy, the level of reading newspapers is very high in Mongolia. In 1994, 7.6 newspaper pages per capita indicate the cultural level of population.

### **CULTURAL INDICATORS**

	<b>1980</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
Number of newspapers (mln.pages)	108	149	50	25	173	173
<b>Public libraries</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1992</b>	<b>1994</b>	
Number of public libraries	381	401	421	301	439	
Library book stock (mln.peices)	6.6	9.1	10.5	6.6	4.2	
Per 10.000 populations (thous.)	4.1	4.9	5.0	3.0	1.8	
Number of readers (thous.)	681.0	660.0	669.6	381.0	315.1	

**Source: State Statistical Office**



### 3. ECONOMIC STRUCTURE

Economic structure of Mongolia is heavily depending on husbandry and mining activities. Since the transition period, which began in late 1989, Mongolian economy had been sharply impressed on changing its economic environment during the adaptation process to market conditions. The first signals had been taken at the beginning of 1989, and economic crises had showed its effects on daily life in 1990.

The year of 1994 was worked by first positive shifts in the economy of the country in its though and irreversible movement towards market oriented system. Although socio-economic hardship still remained in 1994, State Statistical office estimated 2.1% GDP growth, the first ever during the last five years.

#### GROSS DOMESTIC AND NATIONAL PRODUCT (at current prices mln. tug)

	1980	1985	1990	1993	1994
Industry	2084.2	3182.2	3909.7	61920.0	95442.9
Agriculture	1043.1	1501.5	2008.2	59977.8	105050.7
Construction	399.7	452.3	561.1	2488.5	6225.5
Transport	779.1	1115.7	1124.6	4313.8	13547.1
Communication	76.4	144.2	190.8	1771.1	3749.1
Trade & tech.supp.	2066.8	2574.2	2363.4	28755.4	40895.5
Service	987.7	1249.5	1521.6	15873.6	30111.2
Others	113.7	127.2	143.4	4320.8	6964.3
Subsidies & others	-795.6	-1216.6	-1169.7	-11579.0	-11029.9
<b>GROSS DOMESTIC PRODUCT</b>	<b>6755.1</b>	<b>9371.9</b>	<b>104695.0</b>	<b>166219.1</b>	<b>283263.0</b>
Net factor income from abroad	-1037.4	-1216.6	-1169.7	-11579.0	-11029.9
<b>GROSS NATIONAL PRODUCT</b>	<b>5717.7</b>	<b>8155.3</b>	<b>9295.3</b>	<b>154640.1</b>	<b>272233.1</b>

Source: State Statistical Office of Mongolia

At current prices GDP and GNP seems to be increasing in formal statistical sources, but the rate of inflation which is hardly trying to be control by the Government is already very high. The cumulative rate on inflation in between 1990 to 1993 was 330%, inflation rate was 183% at the end of 1993. In 1994 went down to 66% depend on the information of the Ministry of Treasure. This high inflation rate is naturally causing a sharp decrease on gross fixed capital formation, which means sharp decrease on the capacity of investment both in public and private sector.

#### GDP, EXPENDITURE CONSUMPTION

	1980	1985	1990	1991	1992	1993	1994
Consumption	84.3	80.8	92.0	90.9	76.1	87.6	88.7
Gross fixed capital formation	48.5	56.4	34.2	35.6	29.3	27.2	24.8
Net export	-27.1	-30.8	-21.0	-22.9	-4.2	-5.1	-10.1
Statistical discrepancy	-5.7	-6.4	-5.2	-3.6	-1.2	-10.2	-3.3
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: State Statistical Office

The year of 1994 had comparatively positive results in the monetary sector due to the strict monetary policy persuaded by the Bank of Mongolia.

Thus targets to be fulfilled within the framework of the ESAF programme were roughly met. Credit lending by commercial banks remained almost unchanged at 52.8 million tugrugs. The total foreign trade turnover in 1994 was 546.0 million US\$ down 28.3% or 215.7 million US\$ compared to 1993. The imports declined by 41.5% compared to 1993. Exports in 1994 fell by 15.3% to 324.3 million US\$ in the same period. Exports exceeded imports by 102.6 million US\$.

The Government issued a temporary ban on the export of raw cashmere in March 1994 in the interests of domestic processing factories. This action has led a sharp fall in the exports of this item, and greatly influenced export earnings. While the total exports of raw and processed cashmere fell by approximately 62% in 1994, and export of cashmere goods increased by around 23% in comparison with the previous year.

The Government of Mongolia took further steps to encourage foreign investments through adopting more favourable procedures of establishment and registration entities with foreign capital participation. In 1994 investments increased 4 times against 1993. 200 applications for joint ventures were submitted to the Ministry of Trade and Industry. Approvals had given to 153 entities from 22 countries. Foreign direct investment is worth 44.1 million US\$.

### **LABOUR FORCE** (Annual average, thousand of person)

	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
Labour force, total	696.2	778.7	946.7	1003.6	1059.9	1080.9	1089.3
Able bodied person at working age	678.2	749.8	927.9	976.4	1027.7	1049.7	1055.6
Working children	4.3	2.8	2.5	5.2	7.4	6.0	6.1
Working pensioners	13.7	12.6	16.3	20.0	24.8	25.2	27.6
Total employment	5116.0	589.5	783.6	795.7	806.0	772.8	786.5
Industry	85.4	108.7	131.6	132.2	133.9	124.1	100.9
Agriculture	203.0	201.0	258.8	274.9	394.2	302.2	336.6
Construction	32.7	34.2	66.0	49.4	41.4	33.0	27.3
Trans. & comm.	37.4	48.9	57.7	52.2	50.2	46.0	31.5
Trade & tech. provision	34.5	43.8	54.6	51.9	53.8	50.5	67.4
Economically active population	*	*	*	851.1	860.0	844.7	861.4
Employed	*	*	*	795.7	806.0	772.8	786.5
Unemployed	*	*	*	55.4	54.0	71.9	74.9
Unemployment rate (%)	*	*	*	6.5	6.3	8.5	8.7

\* - There is no information  
Source: State Statistical Office

As it is seen from statistical information's, unemployment ratio's increasing rapidly because of the privatisation process of the transitional period. The sharpest decrease of the labour force

had been observed in industry within 5 years as 76.7% in 1994 in comparison with 1990. Also in construction sector the loss of labour force become 41.4% and in transportation sector it was 54.5% for the some period.

Because of the decrease of the real income levels the number of the working child increased 244% and the number of working pensioners increased 169.3% for the same period who are cheaper for the private entities. The formal information about the unemployment doesn't reflect the real unemployment ratios, the number of the workers seems increased 130% in the agriculture from 1990 to 1995, but the total output of the agriculture is not reflecting a notable change, thus, because of the lack of jobs, there is an over employment problem in agriculture.

The newest information which is given by the State Statistical Office of Mongolia shows that unemployment rates are declining. Almost 19.000 unemployed find some new jobs within 21 months. Those new employment possibilities created by both state enterprises which are 25.2% of the new employment and 74.8 unemployed find jobs in private companies or hold their own jobs by using their private enterprisementships.

### Unemployment

	<b>1994.1.1</b>		<b>1995.1.1</b>		<b>1995.9.1</b>	
<b>Total</b>	<b>71912</b>	<b>100.0</b>	<b>74881</b>	<b>100.0</b>	<b>47704</b>	<b>100.0</b>
Women	38425	53.4	40239	53.7	25199	52.8
High school graduated	1207	1.7	1460	1.9	1274	2.7
College	-	-	915	1.2	1243	2.6
Specialised school	5606	7.8	6088	8.1	6158	12.9
General educ.	-	-	11202	15.0	14732	30.9
Vocational school	16140	22.4	18535	24.8	10560	22.1
Unskilled	48959	68.1	36681	49.0	13737	28.8

Source: State Statistical Office

### 3.1 AGRICULTURE

The major sector activities in Mongolia are livestock, crop farming and agro processing as well as forestry and fisheries. Despite the aggressive industrialisation policies persuade under central planning, agriculture, especially animal husbandry is central to the Mongolian economy and way of life. Agriculture accounts for about one-thirds of GDP, employs about 90% of the population in rural areas, 30% of the total labour force and is the primary source of food and fibre. It accounts for almost 44% of exports, mainly livestock products, such as meat, hides and cashmere that rank second only to minerals in terms of export value. About 70% of agricultural value added comes from animal husbandry, which account for 94% of land use.

Because of the traditional production methods, farming and livestock production is a high risk undertaking in Mongolia. There is no regular feeding for livestock except natural flora. The climatic regime's main features include a short growing period, low and erratic precipitation, extreme winter temperatures and thin layer of topsoil that is vulnerable to wind erosion which makes crop production difficult by using traditional crop production techniques. It is also, limits the type of crops that is suitable for planting and contributes to fluctuations in agriculture's annual share of GDP with a high dependence of the weather conditions which cause losses in crop production and increase the livestock mortality rates.

Under the command economy, Mongolia achieved full self sufficiency in wheat and annual flour consumption levels exceeded 100 kg per capita. This achievement was supported by the provision of subsidised investments (machinery and equipment) and seasonal inputs. Under central planning, agriculture was based on very large production units. In 1989 all agricultural output comes from 277 enterprises comprising 225 co-operatives and 52 state farms. However, as the country transformed to a market economy in 1990, the Government implemented the cornerstone of its reform strategy with the introduction of privatisation of the sector.

Privatisation provided for members of co-operatives and workers on state farms to form themselves into enterprises that could buy the assets that formed these farming units. The enterprises could be public or private companies or sole traders. By September 1992, 52 state farms and 255 agricultural co-operatives had been divided into total of 768 new business units. The Great Hural adopted the new Law about Land, but during the discussions they decided not to privatise the land because of nomadic cultural patterns of the country. Without subsidies of agriculture, production has declined dramatically and import of the flour assisted in maintaining the consumption.

#### GROSS AGRICULTURAL OUTPUT (at 1993 prices mln. tug)

	1980	1985	1990	1991	1992	1993	1994
Gross agricultural	74773.2	105537.3	109275.7	101182.2	95165.6	91119.4	98137.5
Livestock	61089.7	66805.1	79334.2	78922.1	77084.1	69859.5	84202.0
Crops	13683.5	38732.2	29941.5	22260.1	18081.5	21259.9	13935.5

Source: State Statistical office

However some 450.000 ha of wheat ploughed in 1994, but due to inclement harvest weather, less than 400.000 tons (all qualities) was harvested. The estimations of best and

worst case scenarios suggest that future wheat areas and production ranges might be 225.000-344.300 ha and 370.000-537.700 tons, respectively, and require 30.000-90.000 tons of flour imports to meet domestic consumption needs.

The livestock sub-sector is broadly divided into two systems. The extensive pastoral livestock production which is the traditional form of agriculture occupies about 85% of land area and accounts for more than 70% of gross agricultural output. This livestock provides more than 75% of the raw material and other inputs for leather and shoe factories, wool processing mills for cashmere, milk and bakery plants. The intensive livestock production is smaller and confined entirely to the former state farms where it plays a diminishing role in sector production.

#### **NUMBER OF LIVESTOCK (thousand head)**

	<b>1985</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
<b>Total</b>	<b>22485.5</b>	<b>25856.9</b>	<b>25527.9</b>	<b>25694.1</b>	<b>25174.7</b>	<b>26808.1</b>
Camel	559.0	537.5	476.0	415.2	367.2	366.1
Horse	1971.0	2262.0	2259.3	2200.2	2190.3	2408.9
Cattle	2408.1	2848.7	2822.0	2819.2	2730.5	3005.2
Sheep	13248.8	15083.0	14721.0	14657.0	13779.2	13786.6
Goat	4298.6	5125.7	5249.6	5602.5	6107.0	7241.3

Source: State Statistical Office

Under privatisation which introduced in 1991, the national herd was auctioned off. By 1994 some 94% of the national herd was in private hands. Following the privatisation, the species composition of herds is shifted dramatically to substitution of goats for other animals because of the cashmere demand of the market. The share of goats in the national herd increased from 19% in 1989 to 24% in 1993 to a shift in relative prices that favoured cashmere production. In spite of the increasing number of goats, cashmere export ban has reduced foreign exchange earnings, distorted cashmere markets, encouraged informal parallel cross border trade and weakened Mongolia's terms of trade.

Due to the pastoral concentration of production under central planning, about one-thirds of national output was attributed to agro processing sector. Nowadays agro processing sector privatised and production units have monopoly power and there is no achievement on creating well functioning market environment. The potential of sub-sector is held back by the variable quality of raw material and its irregular supply linked in part to the seasonal production.

Due to the privatisation of dairy farms and whole sale food a dramatic reduction has been seen on the production. The milk factory in Ulaanbaatar is effectively bankrupt and processing no milk. Most of the milk for sale in the markets of Ulaanbaatar, in the capital, is coming from extensive production and is sold untreated. Meats for sale also have no veterinary control which may cause many hygienic problems on human health.

The Government's medium-term role in agriculture is determined as to facilitate the transition of the sector to market based agriculture. For the years of 1995-1998 an investment programme had been prepared with the assistance of ADB, total amount of the programme 94.40 mil \$ and total foreign fund in this amount is 85.45 mil \$. For technical assistance which are totally foreign grants the budget is estimated as 8.93 mil \$. However, the Government is also noticed that

this agricultural capital and technical assistance projects do not fully reflect Mongolia's transitional needs or strategic sector objectives. But because of the signed contracts, the Government's obligation is to proceed with implementation of projects that reflect past priorities.

On the basis of an analysis of the sector as a whole, a special agricultural policy must be determined for restricting and strengthening of the Government institutional framework in the fields of: improvements on intensive crop and livestock production, reconstruction of sub-sectors and enlargements of production and quality.

As it is seen from sectors' strategies of the Government, there is already a lack of policy in the agricultural sector. The role of the Government, which is determined as facilitating the transition of sector to market based agriculture has almost no chance for implementation because of the agricultural structure which is already 90% or more extensive and based on nomadic culture. The first priority of the sector must be changing the mode of production. Otherwise, the sector will not have no chance for the development within the market economy.

Agriculture sector, which is a basic sector for Mongolia's economy, shows some critical signals that the Government must be account them in its policies. There are some strategies held by the Government such as: to facilitate price setting by flexible markets for agricultural products and there will be no barriers to live animal export. Those policies may cause dramatic reduces on meat and crop production for domestic needs. There is already a need of flour import which is estimated 30.000-90.000 tons. If wheat prices will define within the flexible market, the need of the imported flour demand will sharply rise which means crop production will reduce then current weak conditions to a purer position. Also, the policy not to have a barrier to live animal export may cause multiple effects on Mongolian economy. First, domestic needs for meat may not be satisfy for the following years because of extensive mode of production. Second, by selling the live animals, the inputs of the sub-sectors, which are already in difficulties because of the lack of inputs and seasonal inputs will reduce and may cause destructive effects on these sectors. Promoting of sub-sectors will not only create new sectors and employment development, but also create economic value added for the development of the country as a whole.

## 3.2 INDUSTRY AND TRADE

In 1991, with the collapse of tied trading arrangements between Mongolia and CMEA countries, Mongolian traditional industries had suffered massive shocks. The adoption of a market oriented economic activities needed in a completely different trading and business environment. In between 1990-1993, industrial output shrank by 30% and GDP decline 10%, many traditional enterprises have been locked and others continued to struggle for life. On the positive side, new business and services emerged. They are generally in the light industries and services such as tourism.

The Government's mid-term strategies in the sector is restricting industry and trade radically, which means dawn sizing and break-up of non competitive industries. To liberalise factor and product markets and reform on financing sector with fiscal and monetary policy will force the old production units to the restructuring themselves in to competitive export oriented entities.

Establishing a consistent enabling environment, the focus of industrial policy will cover:

- i. Reform of banking and finance,
- ii. Accelerated completion of structural and institutional reform and privatisation programme,
- iii. Harmonising industry with assistance including some promotions for foreign investments,
- iv. Ensuring public investment priorities for the growth in trade and expansion of competitive industry.

The priorities of the Governments are to provide a stable macro economic environment and complete the transition policy reform agenda, so that private industry can flourish.

The impact of the policy has been largely negative and has held back the pace of reform in banking and finance sector and fuelled inflation which ultimately stunted the transformation process now underway in the industrial base and trade patterns. Critical investments in economic infrastructure and revitalising education and health services have been foregone. While many improvements have been made in the legal and regulatory environment and the trade and industrial assistance regime, significant constraints remain to emerge of a dynamic private sector, for example access to finance and credit from an efficient and professionally managed banking system, which is independent of short term political pressures.

### Output of key industries (1990-1994)

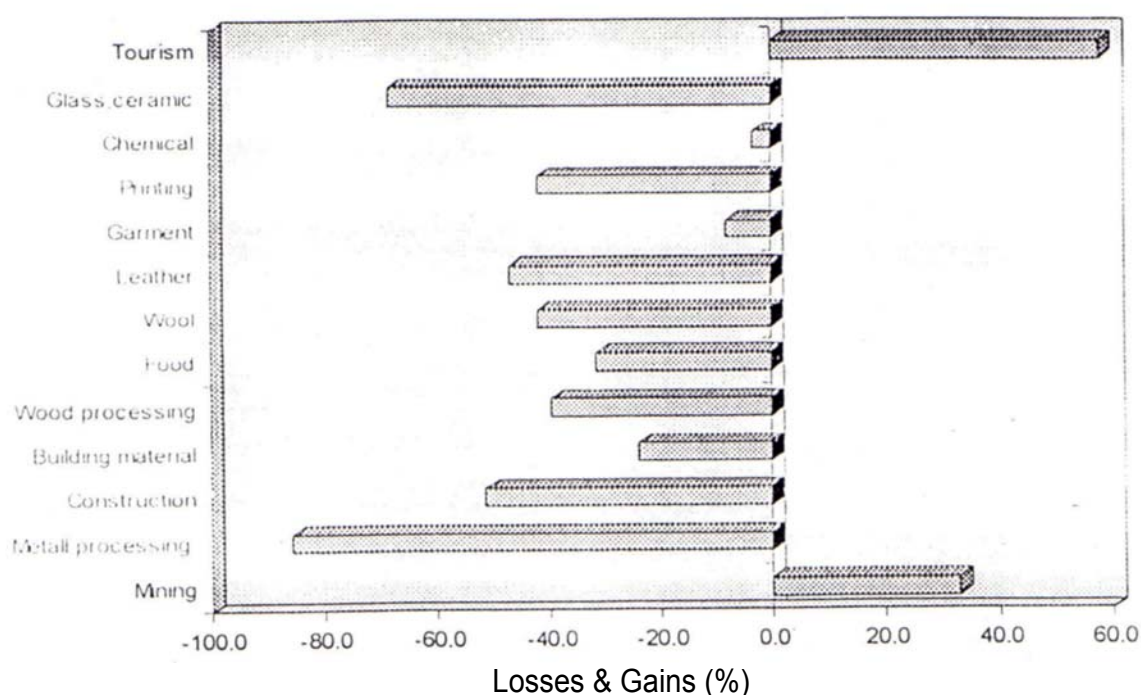
Industry	Value of Output : Constant 1990 Prices				
	1990	1991	1992	1993	1994
Non ferrous Metal	884.3	158.5	522.8	880.6	1003.0
Metal Processing	191.1	47.0	28.6	6.9	13.9
Chemical	325.6	84.8	62.6	94.3	81.1
Construction Material	532.4	83.3	71.7	29.0	39.7
Wood processing	407.0	99.3	70.6	31.1	23.1
Porcelain, Glass production	39.2	7.3	8.3	1.1	0.6
Textiles	1053.9	349.6	374.4	136.1	168.4
Garments	345.2	119.3	48.4	22.8	16.8
Leather, hides	995.2	432.8	449.0	105.6	69.1
Printing	75.8	19.1	15.5	5.0	5.3
Food	1983.9	695.0	839.1	334.7	361.9

Source: NDB

As it seen from the table above, after the sharp decline almost an every industries, in 1994 some notable increases on the value of output had been occurred instead of the employment losses in all branches of traditional industries. Metal processing, construction, glass and ceramics suffering losses of between 50% and 80% of the work force. Mining and tourism were two industries where growth in employment occurred.

### Employment patterns in key industries 1990-1994

#### Employment Pattern





In spite of a sharp employment loss in key industries, statistical information about unemployment rates are: 6.5% in 1991, 6.3% in 1992 and 8.5% in 1993. According to the Mongolian Statistical office, the number of unemployed decreased to 47707 in 01.09.1995 then 74881 in 01.01.1995. The explanation of this phenomenon is: almost 19.000 unemployed find some jobs within 8 months, 25.2% of the new employment held by state enterprises and 74.8% of them find some jobs in private companies and some of them use their enterprise shipment to create new jobs for themselves in private sector.

### **THE NUMBER OF EMPLOYEES IN INDUSTRY**

Years	Total number of employees	Employees in industry	The rate of employment %
1970	428.7	60.6	14.1
1980	516.0	85.4	16.5
1985	589.5	108.7	18.4
1990	783.6	131.6	16.8
1991	795.7	132.2	16.6
1992	806.0	133.9	16.6
1993	772.8	124.1	16.1

**Source: Statistical yearbook. 1994**

While official statistics understate the growth in the area, new light industries and services continues to sustain employment. The World Bank and Mongolian Employers Association have estimated that private services trade and small food processing has increased from virtually none in 1990 to over 7000 co-operatives and private business in 1992. The trend has continued with the rate of increase in new services and small scale businesses averaged 30% per annum increase in 1992, 1993 and 1994.

The number of registered business ties in Mongolia is 29.125 in Dec.1 1994 belongs to State General Taxation Office. 1345 of them co-operatives with full liability, 3402 of them companies with limited liability, 3928 of them state owned companies with limited liability, 563 of them total stock companies, 1340 is enterprises, 29125 of them co-operatives enterprises and 39703 is private business.

One of the key issues in industry policy of the Government is subsidies through access to direct budget allocations, guaranteed credit and reference for loans from the Government budget to selected enterprises. Since 1990 direct budget allocations have heavily favoured mining and food processing industry was a major beneficiary of budget loans as well as benefiting from over \$ 50 mil in an external loan for the mini metal factory.

Mongolian industry doesn't have chance to grow rapidly on the base of domestic demands. Because of a small population, Government's priority in industry is on export oriented business culture. The objective of industrial policy is to provide a consistent support package of policy and public investment measures to facilitate the transition to a competitive and export oriented industrial sector under private sector ownership.

Through its privatisation scheme, the Mongolian Government has sold 434 small and large companies to approximately 947.000 share holders. Out of the total 70 companies privatised in 1994, 38.6% were in area of agriculture, 17.1% light industries, 15.7% commerce, 14.3% construction, 8.6% heavy industry, 2.85% transportation and 2.85% service companies.

While the economic base is diversified export composition is narrow with copper accounting for about 40% of export values in 1994.

**COMPOSITION OF EXPORTS BY VALUE**  
(percent of total merchandise exports)

	1985	1990	1993
CMEA	95.5	94.4	54.2
Former Soviet Union	77.0	78.3	53.0
Eastern Europe	17.7	14.9	1.0
Other	0.8	1.2	0.2
Non CMEA	4.5	5.6	45.8
China	0.4	1.7	30.9
East Asia	1.1	1.1	5.2
Western Europe	2.6	2.1	6.5
Other	0.4	0.7	3.2

Source: World Bank

**MAIN EXPORT COMMODITIES**

	1985	1990	1991	1992	1993	1994
Copper concentrate, thous.t	342.5	347.5	243.6	346.0	394.5	448.6
Molybdenum concentrate, t	3017.0	3990.4	3167.2	2975.1	2908.7	5809.4
Fluorspar concentrate, thous. t	120.2	97.2	777.2	91.2	77.1	88.0
Fluorspar, thous. t	787.3	493.4	114.3	166.4	92.8	16.2
Waste copper, t	-	5339.4	-	1810.7	561.7	288.8
Coal, thous.t	225.0	490.2	120.8	78.1	-	5380.0
Cement, thous.t	-	95.4	-	-	13.6	2.3
Timber, thous. m3	58.7	19.9	-	-	12.0	36.1
Sawn wood, thous.mS	136.1	42.5	90.2	71.9	79.9	52.6
Scoured wool, thous.t	5.7	2.8	2.2	7.3	2.6	0.8
Wool, thous.t	2.0	0.5	-	-	-	-
Camel wool, thous.t	2.6	1.9	0.1	1.7	3.1	2.6
Goat down, thous.t	0.6	0.4	0.6	1.7	1.4	0.6
Horse skin, thous.pcs	58.0	105.2	78.3	13.5	153.5	45.4
Sheep skin, thous.pcs	280.2	130.0	131.0	1633.5	4151.2	2567.4
Goat skin, thous.pcs	526.2	113.2	101.2	265.0	681.9	588.2
Carpets, mln m <sup>2</sup>	1.5	1.7	0.1	0.4	0.5	0.1
Woolen blankets, thous.pcs	313.9	336.4	46.2	38.1	7.0	7.7
Goat down goods, thous.pcs	236.5	275.7	26.1	132.7	106.3	99.4
Camel woolen goods, thous.pcs	16.1	23.2	18.3	7.6	6.6	3.9
Marmot skins, thous.pcs	578.8	73.0	81.0	41.8	90.6	25.7
Wheat, thous.t	6.2	27.1	-	1.4	5.4	18.8
Vodka, thous.l	350.0	186.4	-	5.9	30.5	22.8
Meat, thous.t	36.8	24.3	21.8	11.0	7.1	5.4
Livestock, thous. head	24.7	20.8	20.1	0.3	42	-
Horse, thous.head	63.1	42.3	23.2	-	-	-
Intestine, thous. rolls	2858.6	2163.8	495.6	3523.8	1361.8	1103.6

Source: State Statistical Office

The State Statistical Office estimated 2.7% growth in industrial production in 1994 in comparison with 1993. Production of electricity and thermal power copper concentrate and gold production etc. have grown. The production of the main industrial items as cement, bricks, flour, woollen knitwear, leather and sheepskin goods and footwear has dropped.

The problems of the energy sector and the lack of transportation links are chaletion for industrial development of Mongolia. The problems in the energy sector plus debt chain between the energy systems, has tremendously hindered regular economic activities of the country.

### **PRODUCTION OUTPUT OF MAJOR ENTERPRISES**

<b>Name of Product</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
1. Power (mln kw/h)	2103.8	1917.4	1954.4
2. Thermal power (thous. Hcal)	4298.7	4033.6	4153.1
3. Coal (thous. tons)	5116.1	5026.0	4526.0
4. Carpet (thous. m <sup>2</sup> )	1004.6	943.7	676.3
5. Knitwear (thous. pcs)	1403.1	981.1	476.8
6. Wheat flour (thous. tons)	130.0	93.1	75.4
7. Sawn wood (thous. m <sup>3</sup> )	67.8	59.0	32.3
8. Bread (tons)	25790.4	21379.7	14623.6
9. Scoured wool (tons)	7057.3	3466.4	2059.0

**Source: Mongolian Chamber of Commerce & Industry (Jan.1995)**

Due to extensive international assistance, thermal energy production went up 7.7%.

Despite worsened geological conditions and diminishing grade and proved reserves of the mineral deposits, copper and molybdenum concentrates production has gone up and gold output has increased by more than 77% over the 1993 figure in 1995, almost 40 state and private units are conducting geological exploration nearly 80 projects under state order and contract are being implemented.

Mongolia made a contract with the Nesco Energy (USA) to conduct joint oil prospecting & exploration works at Zuunbayan and Tsagaan Els deposits. At the first stage of the of the project, 27 old drill holes in Zuunbayan, Tsagaan Els and Sukhain bulag have been reopened, cleaned up and prepared for geophysical exploration and the total reserves of these deposits have been estimated at 21.54 mln tones (155.92 mln bar).

Mongolia has been paying great attention to create a favourable legal environment for domestic and foreign businesses. Economy related laws have been enforced in 1994. The related regulation held on the Statistical Law, The Currency Regulation Law, Civil Law, and The Law on Treasury Fund. Mongolia also planning by joining The New York Convention on Recognition and Enforcement of Foreign Arbitrate Award 1958 to be a full member of international trade relatives.

Amendments and supplements to the Banking Law, Economic Entity and Organisations Income Tax Law, Population Income Tax Law etc., have all been aimed at bringing them with time challenges. For instance, due to amendments to Excise Tax Law efficiency level of activities of gold and silver mining economic entities has drastically grown up. Due to the new legislation's, since 1992, 216 entities with foreign investment registered by State General Taxation Office.

### 3.3 MINING

The non coal mining sector has a great improvement chance for the country and will play an increasingly important part in nation's development.

Mongolia's rich and diversified mineral resources accounts for about 15-20% of GDP and over 50% of total exports largely due to importance of copper from Erdenet. The Ministry of Energy, Geology and Mining (MEGM) estimates that over 600 deposits and more than 80 minerals exist including copper, fluorspar, molybdenum, gold, uranium, tin, tungsten, zinc, lead, phosphates, wolfram, platinum group, iron, precious and semi-precious stones and others. The mining sector employs about 20.000 people from 22 mines. A further 90 mines have been identified for further development. In addition about 170 unexplored deposits of construction materials including marble and granite provide an important potential source of raw materials for the further development of the construction industry.

Copper and molybdenum are the most important metals in the sector as they currently account with 80% of total mineral exports mainly to Russia followed by fluorspar 15%, gold 4%, and tin and tungsten concentrate 1%.

The Government is committed to increase the contribution to economic growth from the mining industry by expanding the role of private national and international investors on exploration and mining activities. One of the top priorities of the Government is making incentives for internationally competitive.

Copper reserves are estimated at 9.4 million tons, representing about 1.6% of world reserves. The major deposit is in Erdenet, posses about 50% of the reserves with ore grades slightly over the world average with an economic life of 50 to 60 years. But, Erdenet has great need of modernisation which is accounted around \$350 Million.

Mongolia is the third largest producer of fluorspar in world after China and Mexico. The main problem of the fluorspar is the purification. The standard of purification is only available for only iron and steel industries demand. But, fluorspar with better purification has a great chance in the western markets. The Government doesn't have a modernisation project for better purification of the fluorspar.

The mining market and also two big companies, Erdenet and Mongolroostsvetmet are heavily based on Russia. The biggest two companies are dominate the market with near 85-95% of total mining output and both are Mongolian-Russian state joint ventures, with 51% and 49% of shares respectively.

## **4. PHYSICAL STRUCTURE**

As it seen the urban development patterns, Mongolia's one of the largest problem is the lack of infrastructure historically which has notable impacts on socio-economic development.

Since 1991 Governments policies about construction of the infrastructure are highly depend on the foreign loans and grants. Too many projects, together with the management projects held by the foreign technical assistance and foreign loans basically from Asian Development Bank, World Bank and Japan International Co-operation Agency. Most of the management projects, which are contracted by Mongolian Government as loan, become useless during their preparation process, because of changes on the Governmental policies. During the years of 1991-1993, Government contracted some partial projects without having some overall policies. After 1993, Government revised its policies and made some differences on the policies, priorities, goals and targets which make most of the projects unnecessary, but because of the contracts obligations there is no possibility to stop the projects.

## 4.1 TRANSPORTATION

There is a close interaction in between transport expansion and economic development in Mongolia. Mongolia's economy is hardly depending on trade and coal based energy production that is demanded well-developed transportation links, because of being large, landlocked country with a small and widely dispersed population.

Current situation of transport in Mongolia is one of the most important and critical problem. There are no paved road in between Aimag's and other settlements except Ulaanbaatar, Darhan and Erdenet. In the 1980's demand for transport services grown fairly rapidly averaging 5 per cent annually. With the expectation of privatisation on transportation facilities and severe economic recession and also lack of financial resources has meant that practically no renewal of transport infrastructure has been made since 1991.

The only railway of the country, which is from Russia to China, is a joint venture initially launched with Soviet Union and managed by Ministry of Infrastructure Development had a sharp decline in operational performance. But the railroad's systems still account for 70 per cent of freight and 30 per cent of passenger movements as well as all coal movements. The operating cost per converted ton/kilometre increased from 5.40\$ to 8.50\$ among 1992 and 1993, while operating revenues declined from 10.10\$ to 8.60\$ per converted ton km. This coincided with a sharp fall in transport volumes from 5.1 billion ton/km in 1990 to 3.0 billion ton/km in 1993 by the World Bank calculations.

Both for road and railways' problems are situated from severe economic recessions. Spare parts that are needed for maintenance have been in short supply leading to low utilisation of equipment and dramatic deterioration of quality of service. The road network is classified in three categories as shown below;

### ROAD CLASSIFICATION AND SURFACE CONDITION (km)

	Length	Paved	Gravel	Natural
State roads	11.248	1.191	1.547	8.510
Local roads	38.042	112	1.529	36.401
Other rods	150.000			150.000

Source: ADB Road Master Plan 1994

Air transport is essential in Mongolia because of the lack of surface transport systems. Surface transport system, which is almost totally based on natural roads, is rendered impossible for a major percentage of the year because of the long and heavy conditions of the winter time.

The aviation system suffers from a number of operational and policy constraints. These include inadequate air traffic control procedures, absolute Russian equipment's, weak licensing standards, poor aviation safety awareness and regulation, insufficient aerodrome facilities, unreliable communications, inconsistent search and rescue alerting, ad-hoc meteorological and aeronautical information services and below par staff skills as reported by National Development Board.

The organisational structure of transportation sector is mainly held by The Road Department of Ministry of Infrastructure Development. Urban transport facility that is situated only in Ulaanbaatar is belonged to the Department of Urban Transport (DUT) of Ulaanbaatar

Municipality. Management of the railways is under the weak control of Ministry of Infrastructure Development. In 1992, the Government had set-up a separate Civil Aviation Authority (CAA). The CAA is responsible for operating MIAT's twenty domestic airports and one international airport.

Privatisation of state road haulage companies had completed in the third quarter to 1993. As a result, almost 80 % of the road haulage fleet is with companies that are fully privatised or where the private sector owns more than 50% of the equity.

The main goal in transportation sector is reduction of the role of Government in allocating traffic use. The Government's strategy for the sector is geared towards the establishment of competitive markets for transportation services. The overall goal is to establish an efficient low cost road, rail and air network in order to facilitate expansion of economic activity with roads as priority in the medium term.

As it is seen on Complex Assessment Plans of the country the main transportation axes is planned to improve for balanced development in between main geographical regions which cuts the country from east to west. The main criticism on the road way bases on the mode of transportation. It is argued that, there is a great need of transportation in between regions and east to west of the country, but the mode of transport had to be a railway.

The main reason of recommending the railways is based on several social, financial and operational benefits of the railways. First, the capital investment costs of the railways are almost equal to the investment cost of a highway which will be a need for Mongolia in a near future. Second, unit cost of freight and passengers are much lower in railways if it is compared with the roads. The operating and maintenance costs also have given great advantages in railway transportation.

Unification Agenda of European Community which is argued in 1992 is forcing the member countries on choosing the mode of transportation within priorities of first, marine transport (if it is possible), second, railway transport, third, airways and the last, if no one is available, road transport. And also it is argued that, especially for freight transport, the member countries will improve common constraints and policies to decrease their road transport by new kind of taxation and permissions.

Mongolia, as a country which has a great perspective to develop its industry on the base of export, may include its future improvements on the basis of global developments in the very near future.

As a last statement of the mode of transportation, giving the first priority to the road transport will increase the country's dependency to the import basis economic activities such as petroleum, cars, trucks, and their spare part etc. Thus, in between export revenues and import expenses, which is expected at least to be in balanced, will give negative values which are also means negative economic development and increase of the national debts.

As it is seen from the figure that is given above road network is almost totally classified as natural roads, which means there is no road in reality. But at the same time, there is a traffic flow which is based on the needs of transportation. Thus, almost every car is creating its own road, which means destruction of the environment.

One of the main goals of the Government is establishing an efficient, low cost road network. As a first step of the establishing low cost road network, instead of natural roads, which

are a real destruction effect on nature, should be the construction of more stable and more reliable roads by using natural construction materials. As it is known, the river basins of Mongolia are very rich recourses of agregas which is used in construction of the roads as a first stage as basement. Those materials, without using asphalt or cement may be used to make natural ways more stable, thus, both by controlling and limiting the destruction of environment and by being ready for future paved roads may create an overall benefice for the country.



## 4.2 ENERGY

The main source of energy production in Mongolia is coal. Mongolian coal reserves are estimated at about 50 billion tons, with proven reserves at over 20 billion tons. Current production of coal decreased to 4.9 million tons per year, against 7.2 million tons in 1990.

Coal production has declined by 30% with capacity utilisation of two main mines Sharyn gol and Baganuur. Parallel to the coal production quality has also declined. Current coal quality is variable and causes deterioration in coal pulverisation systems in the power plants. The problems in the coal mining are caused by the familiar circle of poor conditions of coal mining equipment, absolute rail haulage system and lack of spare parts and also inadequate treatment facilities. The last few years an emergency program holds by the Government to improve the conditions of coal mining production in the main coal mines. By improving production conditions, the capacity utilisation improved 49% at Baganuur and Sharyn gol mines.

Recent oil explorations have showed there are 30 years of future oil consumption where is exploited in southern and eastern regions of the country. The Government has facilitated exploration by private sector by modifying the Mongolian Petroleum Law which provides attractive promotions for foreign investors.

The energy power sector is unable to provide efficient and reliable services. Power need of the country is based on thermal power system which is currently around 1000 MW capacity with a poor plant condition. Central Energy System (CES) provides 50% of the population in central region, and 30% of the country. CES has a one coal fired power station at Choibalsan and 19 oil fired plants provides electricity of communities. The remaining power generation is supplied by 300 diesel power stations and 1800 small generators.

District heating is provided by coal fired boilers. Electricity supplies in 12 provinces outside the CES consist of isolated diesel generation plants. Most of the plants have been constructed 10-15 years ago and use spare parts and equipment from Russia and Czechoslovakia. Energy production over the past four years fell by 12.6%, heating by 18%, and coal production by 30% while imports of energy from Russia increased by 159%. Also, power is used inefficiently in Mongolia, at least 10% (291 million KWH) of electricity were lost in transmission and distribution.

### ENERGY PRODUCTION AND IMPORTS

PRODUCTION	1991	1992	1993	1994	CHANGE 1991-1994
Energy (mln KW)	2545	2355	2124	21128	-12.4
Heat (000 KK)	7869	7153	6189	6447	-18.0
Coal (000 tons)	7033	4842	5573	4899	-30.0
Overburden removed (mln.mS)	18.6	15.2	20.0	16.5	-11.5
IMPORTS Energy imports (mln KW)	80	86	185	207	+159
Energy imports(mln	10	8.8	12.5	13.7	+37

Source: National Development Board. 1995

The energy system in Mongolia is still in crisis and this has significant economic and social implications because of the dependence on the inefficient and unreliable generation facilities. There is a significant performance to improve coal mining capacity by improving production conditions. Also, there are notable promotions to for exploration and exploitation of the petroleum reserves.

However, Mongolian Governments medium-term sector strategies based on mainly the expectations of foreign resources as grant and loans, which are heavily depends on the political and global conjuncture.

Hydro generating power stations may be more reliable and efficient solutions, which needs small investment capital, to decline energy import expenditures. Hydro generating power stations should be discussed as a alternative energy power for managing especially Orhon and Selenge rivers natural capacity.

Since 1980's all over the world, new and renewable energy resources are under a deep discussion. Many significant research and implementations have been held by some countries. As an example: Netherlands has a significant career with the wind power plants. Also the sun power plants are common and reliable heating and energy solutions in most of the Mediterranean countries.

Mongolia has an unbelievable resource as wind and sun shine. Windy conditions are suitable almost every season and also 250 days per year, there is a sun shine. Those natural resources should be taken in to account by the Government in the near future at least as a research of the options besides hydro-energy power.

## 4.3 WATER RESOURCES

Mongolia is broadly divided into three major regions in topographical terms: mountains, hummocks and denudation plains. The climatic conditions are determined by geological locations, relief structure and altitude above sea level. Within those situations, Mongolia has unexpectedly rich natural water resources. At the north part of the country, there are several lakes and rivers which may be used as water supply of the inhabitants, such as Huvsgul, Selenge, Orhon, Tuul etc. At Gobi there are some small pools which are mostly salty.

In urban areas, that are Ulaanbaatar, Erdenet and Darhan, there are water networks serving for planned parts of the cities, for other areas water is available by using main reservoirs in form of enclosed tanks each with 5 tons capacity. The raw water quality is such that no treatment is required. Water pressure reduces in spring due to seasonal aquifer depletion. System losses are estimated at 12.5% to 15%. These are said to be due to careless usage and leakages in pipes and fittings.

### Water consumption and waste water (1993)

	amount	percentage
1. Water consumption (km <sup>3</sup> )	0.442	100.0
For: residential	0.085	19.2
Industry	0.116	26.2
agriculture & husbandry	0.115	26.0
irrigation	0.068	15.4
green areas	0.036	8.1
others	0.022	4.9
2. Waste water	0.118	100.0
For: residential	0.051	43.2
Industry	0.061	51.7
public place (office etc.)	0.001	0.8
agriculture	0.005	4.3
3. Treated water	0.068	100.0
by: mechanical method	0.026	38.1
chemical method	0.0002	0.3
biological method	0.042	61.6
4. Not treated water	0.050	

The water consumption of the residential areas is almost 20% of the total consumption. The main consumers of the water are industry, agriculture and husbandry due to the consumption rate of 52.2%.

Waste water network, which are available only for urban areas, are carrying only 27% of the total water which is used by different purposes. Waste water network of the residential areas are available for 60% of the total residential areas and 52% of the industrial areas have such public services. Treatment is available only for the 57.6% of the total waste water which are collected by the public network system and also 61% of the treatment is made by biological methods.

As it seen above, the urban clean water and waste water network systems need some improvements but no construction facilities held by the city governors because of the lack of financial resources.

## 4.4 COMMUNICATION

A telecommunication Network Master Plan was developed in 1993 with the technical assistance of ADB to enlarge the telecommunication network of Mongolia.

### KEY INDICATORS OF NETWORK MASTER PLAN

	1993	1995	2000	2005	2010
Population	2.200.000	2.450.000	3.030.000	3.760.000	4.480.000
Capacity in use	69.000	80.600	113.400	147.000	174.000
Waiting list	56.1	40.000	20.000	17.000	2.000
Number of staff	5.232	4.900	4.200	4.000	4.000
Lines/employee	11.8	16.4	27.0	36.8	43.5
Public telephone	445	600	1.500	1.780	2.000

Source: Telecommunication Network Master Plan

In 1992 the Mongolian Telecommunication Company (MTC) established. In 1994 the Postal division was separated from MTC and set up as state owned Mongol Post. Both are under the control of the Ministry of Infrastructure Development.

State policy is that MTC shall initially remain a predominantly state-owned company, but will see a certain portion of its equity to its employees and Mongolian citizens and some of the equity to foreign investors through an open international bidding process. Telecommunication services will remain a monopoly of MTC. Nevertheless, the Government will be the owner of MTC owning up to 51 % of MTC shares after privatisation.

### MAIN INDICATORS OF COMMUNICATION

	1980	1990	1991	1992	1993	1994
Number of post offices	403	428	428	413	413	413
Number of telephones (thous.)	97.4	236.9	335.4	583.0	2963.4	4860.5
Number of wired-radio outlets (thous.)	298.7	443.2	399.5	1741.0	156.0	152.4
Number of TV sets (thous.)	52.9	137.4	145.0	148.4	135.7	138.6
Number of transition and retranslating TV stations	37	502	616	491	599	700
Mail traffic	13.2	8.9	8.9	2.5	1.5	1.1
Number of newspapers (mln)	108	149	50	25	173	173
Number of telegrams (mln)	1.7	1.6	1.6	0.8	0.4	0.2
Number of trunk calls (mln. times)	3.6	19.6	19.6	17.2	11.1	8.5

Source: State Statistical Office

In Mongolia there is one radio channel, which is owned by state, is working 17 hours per day and suitable to listen all over the country. Two private radio channel is working 9 hours per day in Ulaanbaatar and 18 local channels, which are situated in aimag centres are using state channels non using hours to give local news.

There is only one TV channel which is owned by the state and not available for watching all over the country. Also in capital city, during the working hour of state TV, it is possible to watch CNN, CFI, NHK, STAR TV but the working hour is limited by 6 hours per day. Two Russian TV channel with using their own technology sending their signals based on their own working program.

Three private TV channel take an approval to relay in Ulaanbaatar but not began to work yet.

## **5. ENVIRONMENT AND NATURAL RESOURCES**

Mongolia's environment has deteriorated not only by industrialisation and urbanisation but also with the cumulative effects of underdevelopment.

The rapid urbanisation problems are concentrating on the urban centres, especially in the capital city, Ulaanbaatar. Air pollution is a cause of concern in urban areas and mining locations. The main reason of air pollution in Ulaanbaatar is power plants. Admissible air standards are exceeded, especially for individual pollutants such as sulphur, carbon monoxide, airborne lead and dust. Especially in winter times, in Ulaanbaatar, CO levels are recorded 3 times, NO<sub>2</sub> levels recorded 1.3 times, and SO levels 1.3-3.6 times, particular pollutants 10.6-18 times more than the admissible air standards. Also, it is estimated that, the existing pattern of the vehicles are causing 86.8 kg per person exhaust gas pollution in the Capital.

The major causes of such high pollution's are unregulated air emissions from coal fired power stations and the poor maintenance standards of urban transport fleets and private vehicles combined with a rapid growth in automobile ownership in recent years.

A rapid rise in demand for water combined with increased economic activity has caused a reduction in lake, river flow and water table levels. Availability of potable water has become a problem in several cities and aimags. Water quality is an additional problem.

Waste water management has been neglected with poorly maintained treatment facilities unable to cope with the growth in industrial activities and in number of households. As a result, not all industrial effluents are being effectively treated before their emission in to the environment. Untreated and primary treated domestic and industrial waste water has caused significant levels of surface water contamination.

In some parts of the Tuul river, which is passing to the south of the Capital, where there are discharges from the treatment systems, it is measured that the river water qualities are decreasing to 3rd and 5th qualifications with the influence of industrial waste water, solid waste disposals and other polluters.

In urban areas over 18% of the population consume drinking water below international sanitary norms. This provides a breeding ground for the spread of water borne disease which will increase pressures on limited public health resources.

Desertification of Mongolian territory is increasing by the wind erosion on steppe areas, and by over grazing especially south-west part of Ulaanbaatar and Chinese border because of being heaped up animals seasonally for marketing and also is increasing with the northward expansion of the Gobi desert.

Inadequate transport infrastructure also contributes land erosion as drivers have to improve vehicle access to most destinations because of the severe lack of paved formal roads.

Crop cultivation has also contributed to soil erosion as Mongolian climatic conditions make high levels of soil loss associated soil tilling almost inevitable.

Forest account for 8.1% of Mongolian territory and are considered critical for watershed protection. Forest resources have decreased sharply in past decades due to

increasing utilisation and parallel lack of reforestation. Forest fires also contribute to the loss with three million hectares being consumed in recent years.

Since last 20 years, it is measured that annually there is forest cut almost 1.2-2.0 mln. m<sup>3</sup> as wood, which is equal to destroy of the 15-18 thousand hectare forest areas.

Biodiversity level of Mongolia is varying among three main different geographic conditions of the territory. Mongolia is host to a rich tapestry of rare flora and fauna and wildlife.

Mongolian Red Book, which covers strictly protected flora and fauna values, determined 23 species of mammalians, 19 species of bird, 2 species of amphibian, 4 species of reptile, 2 species of fish and 861 species of flora that are recorded as endangered flora and fauna resources of Mongolia.

Endangered wildlife includes the Przewalski horse and Mongolian saiga. Some of the threatened species include the snow leopard, reindeer and gazelle.

Parliament adopted a package of laws on environmental protection at its spring 1995 session. This legislation comprises a general law on protection of the environment, which defines the aims of environmental protection and natural resource use as well the structure of its administration. Subsidiary laws based on the principles of the general law provide for the following: Water Law, Soil Protection Law, Plant Protection Law, Forestry Law, and Toxic Substances Law.

The environmental Management Plan of Mongolia (BMP) which was completed in 1994 aims to integrate environmental concerns into all public investment and ensure the future maintenance of the absorptive and regenerative prevention of environmental problems rather than one more expensive belated attempts and environmental rehabilitation. The most urgent concerns addressed by BMP include:

- Enhanced management and effective protection of supply and quality of water resources, land resources, atmospheric quality and biological diversity.
- Environmental sound management of wastes and toxic chemicals, including introduction of a price policy based on polluter pays principle and marketable pollution rights.
- More consideration of the environmental impact of public investments especially in mining and energy by integrating environmental concerns into all stages of Government project cycle.

BMP prepared by ADB, which is one of the main determinants of the environmental policy of Mongolia. Nowadays the Ministry of Nature and Environment is working on the 'Project 21' which will cover holistic policies of the country for the 21<sup>st</sup> century. This project is also focusing on public awareness and public participation by the technical assistance of WWF and UN's related bodies. But there is already no effort to improve some mechanisms to provoke the public participation and public awareness on the subject of environmental protection by re-regulating existing legislative patterns.

In Mongolia with the influence of tourism sector improvements there is a high awareness to protect some natural beauties which are unique values of the country. The list of natural protected areas is given below:

Names	Establishment year	Territory (thousand ha)
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#### A. Strict protected areas

1.	Bogd khaan mountain	1979	39.8
2.a	Great Gobi (A part)	1975	4193.8
2.b	Great Gobi (B part)	1975	888.2
3.	Nagalkhaan mountain	1957	3.0
4.	Bulgan river	1955	45.2
5.	Hasagt hairhan mountain	1965	45.2
6.	Horgo	1965	3.2
7.	Batkhaan	1957	8.0
8.	Yolin am	1965	6.2
9.	Bulgan mountain	1965	2.6
10.	Hoh serhiin mountain	1977	23.7
11.	Tulga mountain	1965	0.2
12.	Uran mountain	1965	0.4
13.	Lhachinvandad mountain	1965	32.7
14.	Man Hentii mountain	1992	1227.0
15.	Eeej hairhan mountain	1992	22.5
16.	Nomrog	1992	311.2
17.	Dornod steppe	1992	570.4
18.	Daur	1992	103.0
19.	Otgon tenger mointain	1992	95.5
20.	Uvs lake basin	1994	771.6
20a.	Uvs lake	1994	427.0
20b.	Tsagaan shuvuut mountain	1994	22.0
20c.	Turgen mountain	1994	145.1
20d.	Altan els	1994	177.5
<b>Sub-total</b>			<b>8393.4</b>

#### B. Natural Parks

21.	Hovsgol lake	1992	838.0
22.	Gobi gurvan saihaan mountain	1994	410.0
23.	Gorhi-Terelj	1994	286.4
<b>Sub-total</b>			<b>1534.4</b>

#### C. Natural reserves

24.	Ugtam mountain	1994	30.0
25.	Hustai mountain	1994	90.0
26.	Sharga-Manhan	1994	316.8
26a.	Sharga	1994	286.8
26b.	Manhan	1994	30.0
<b>Sub-total</b>			<b>436.8</b>

#### D. Natural monuments

27.	Huisiin naiman nuur lake	1992	11.5
28.	Ganga lake	1994	28.8
<b>Sub-total</b>			<b>40.3</b>

#### TOTAL

**10404.9**

## **6. ADMINISTRATIVE STRUCTURE**

The administrative structure of Mongolia had changed after the democratic revolution. Before the democratic movements, Mongolia was governing by People's Great Hural (National Assembly) with 430 elected members. After the democratic revolution, People's Great Hural adopted the new Constitution and the Law of Election and the first election held in 1991 to establish State Small Hural with 50 elected members. The results of the election forced a coalition government in between 4 big political parties. The coalition government established in between Mongolian People's Revolutionist Party, Mongolian National Democratic Party, Mongolian Social Democratic Party and Mongolian National Progressive Party.

The coalition Government prepared and approved a new election law and new administrative structural change legislation by eliminating State Small Hural. They established State Great Hural with 76 elected members.

The result of the general elections was suitable to found a majority government. 70 members of the State Great Hural were belonged to Mongolian People's Revolutionist Party and as the second party Mongolian Democratic Party had only 6 representatives at the national assembly.

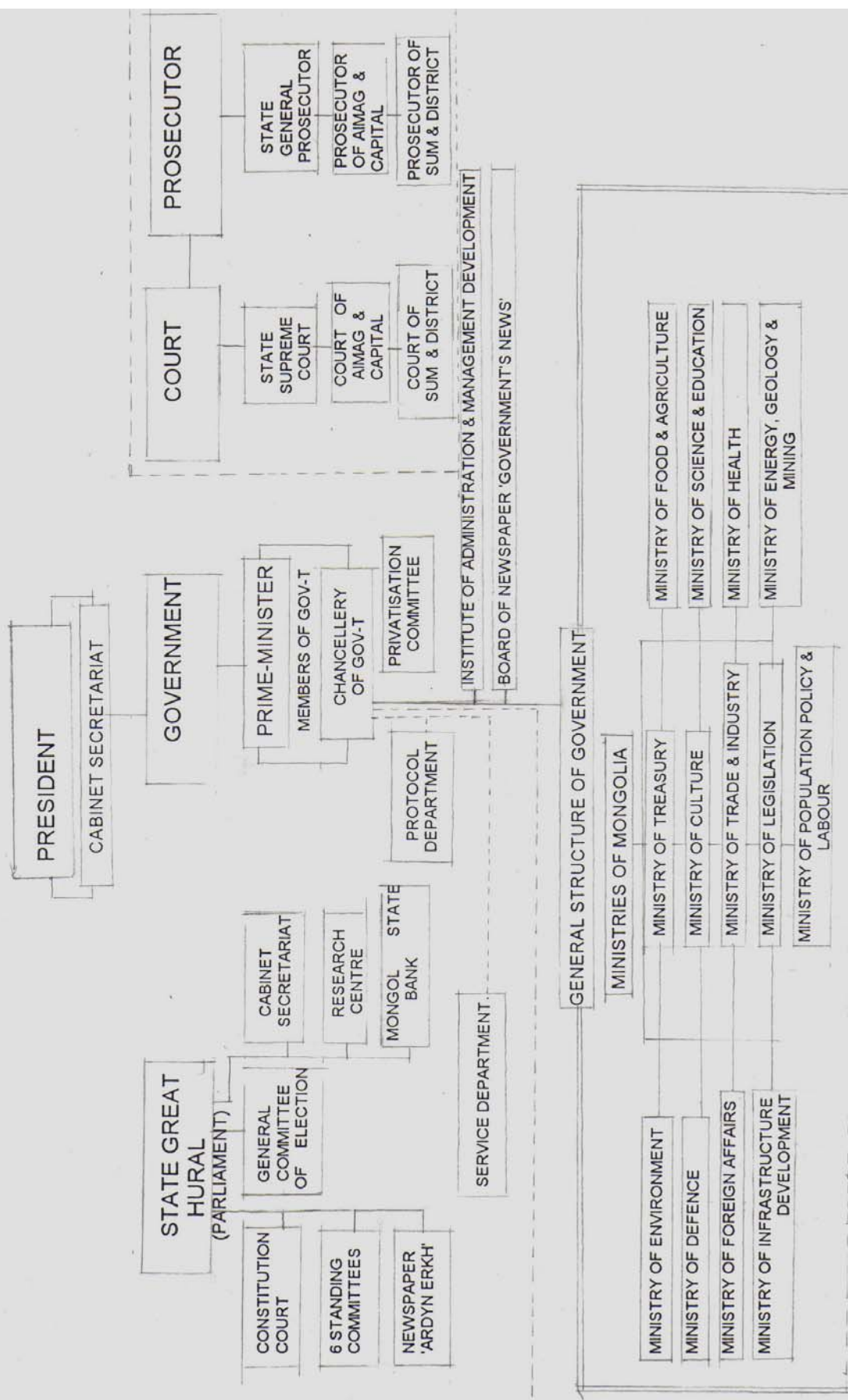
The administrative system of Mongolia has been traditionally based on local government system that is based on a structure which allocates considerable operational and financial authority to 21 aimags and capital city.

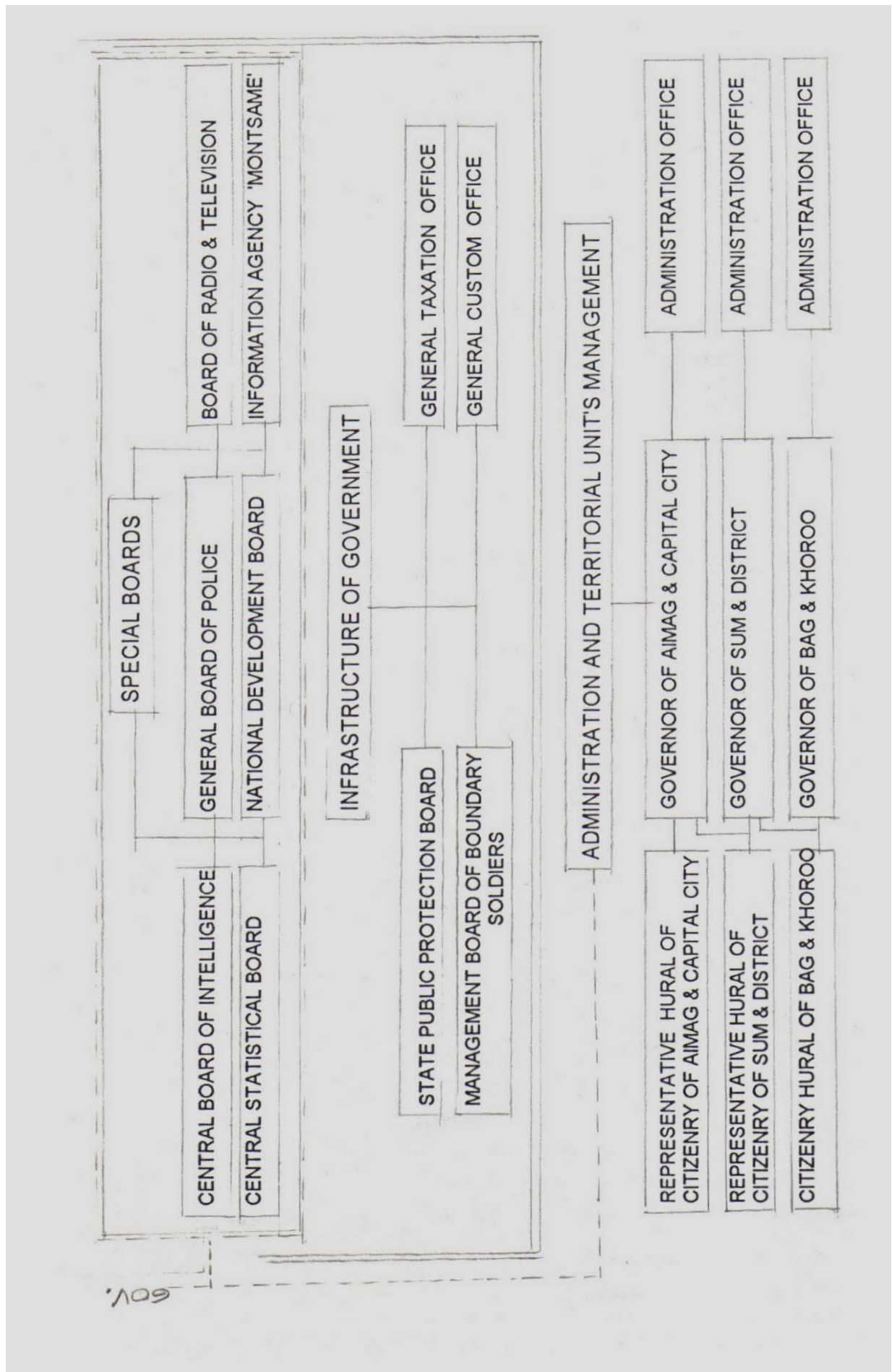
Aimags are divided into the sums, and sums are the headquarters for bag which is a very little administrative unit similar to the villages. Aimag and sums has central settlement which has a controlling power against smaller units. The capital, Ulaanbaatar has a different administrative classification than aimags such as district and khoroo with parallel units to the sum and bag. The election system for administrative units is coming from the smallest units to the upper units. On every bag, there are Citizen's Hural, which combines every citizen who is over 18 age. The citizen's Hural decides freely and selects 5 member as Representative of Sum. Within these representatives, every sum is electing 3 members to work as Representative Hural of Aimag's Citizens. This election repeats every 4 years.

Hurals, as an administrative units, have an administrative and controlling force on the decision making process. Executive decisions on every administrative units are hold by the governors who are signed by the Government with the co-ordination of local administration offices, at bag or khoroo level there is departments which are basically working as their administration office, the number of professional staffs are based on the needs of those units. The relations within the administrative units are shown at the attached chart.



# STATE INSTITUTIONAL STRUCTURE OF MONGOLIA





## 7. URBAN DEVELOPMENT

In Mongolia, there are only three major settlements that we call as urban centres. Ulaanbaatar, Darhan and Erdenet may describe as urban centres. Ulaanbaatar, not only as a capital but also with its variety of the social, industrial and trade activities and more developed urban services, is more close to the description of the urban settlements.

Until the early 1989's, migration from rural areas to urban centres was under the strict control of the Government. After the new Constitution which has been in force in 12 January 1992, people had the rights of free circulation and settlement. The new situation caused a sudden and great migration flow to Ulaanbaatar where has more opportunities to find a job for new comers. Also the privatisation policies of state owned entities caused a big unemployment problem. Ulaanbaatar's average annual growth in between 1979-1989 was recorded as 2.75%. In between 1991 and 1995 growth rate of Ulaanbaatar reached 10.5%. At the first half of the 1995, the number of newcomers reported as 4490 persons, which means 0.2% of the total population of Mongolia.

Total city territory of Ulaanbaatar is 1.360 km<sup>2</sup> 1200 km<sup>2</sup> of the total is city proper and contiguous rural areas including the National Park. 160 km<sup>2</sup> of the total is belonged satellite towns and outlying districts. Only 140 km<sup>2</sup> of the city territory is covered by proper build-up areas. Territorial density of Ulaanbaatar was 456 person / km<sup>2</sup> and city proper build-up density was 3588 person / km<sup>2</sup> in 1989.

The number of formal state and co-operatives unit was recorded 620.000 in 1989. 14% of them were without central heating, 17% of them were without hot water, 8% of them were without severed waste, 9% of them were without individual kitchen and 19% of them reported as without individual bathroom. For the year of 1991 plots in ger areas was recorded as 40.000 units.

In 1993 the number of households who are living at planned areas recorded as 54.6% of the total households, 0.2% household is living in private housing areas and 45.2% of the households are at urban ger areas of Ulaanbaatar.

Development is concentrated in a roughly east-west linear band approximately 24 km. In length alongside the parallel alignments of the railroad and Tuul River, with lower density at northern part, with the development on lower slopes and within shallow re-entrant valleys. Development on the southern bank of the river is restricted by the National Park within which any construction and land use changes are rigorously controlled.

The first plan of the Ulaanbaatar prepared in 1950's and four times renewed. In 1987 the last plan prepared by the city government with the Russian technical assistance and the predictions was for the year 2010. Till 1990, this plan was implemented by Capital's governors with Central planning budget. After 1990 city government decided to implement short term planning concept, because of the high migration rate and influence of the market conditions. Since 1990 no new plan prepared and also there are not enough financial resources to prepare a new plan. As a result City government is giving approvals and permissions building by building without having general planning criteria.

The same financial and planning conditions are sharing by Darhan and Erdenet. But these two settlements are not under the heavy influence of the migration, besides,

those cities are losing population because of the lack of economic activities.

Darhan's average annual growth rate was over 5.5% till 1990. Within the last five years Darhan lost its population growth rate and in 1995 the population became 88,400 which means a loss in comparison with 88,600 in 1990.

Darhan founded in 1961 as a diversified new industrial city, approximately 220 km to the north of Ulaanbaatar, in a carefully selected location which takes account of a hinterland rich in natural resources and with favourable conditions for agricultural production. The Darhan enterprises had contributed just over 10% of the national industrial output. Abundant high quality deposits of clay, sand, limestone, marble and coal support a manufacturing complex concentrating on building materials and construction component fabrication plants. In Darhan, there is also a consumer goods and foodstuff sector, including a fur-garment factory, poultry farm, flour mill and meat packing plant.

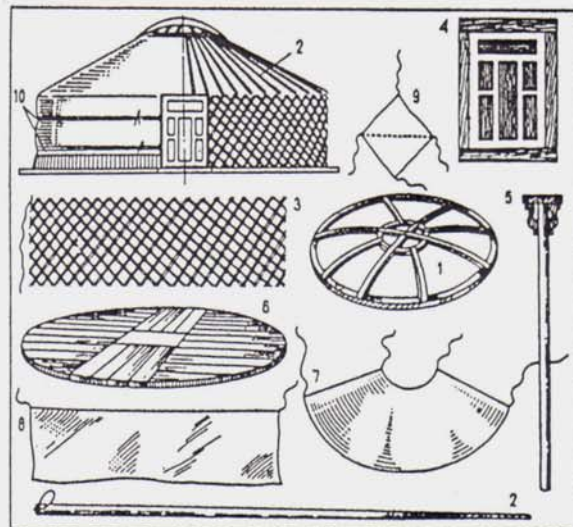
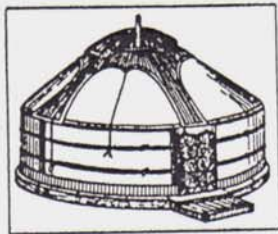
Since 1990 Darhan has been affected very heavily from the economic crisis conditions. Construction facilities are almost stopped all over the country and after the privatisation of the state farms, the raw material flows to the foodstuff and garment factory decreased and economic life of the city declined.

Despite of the high degree of planned urban development for what was 'showcase' industrial city, a high proportion of the population live in the informal ger areas.

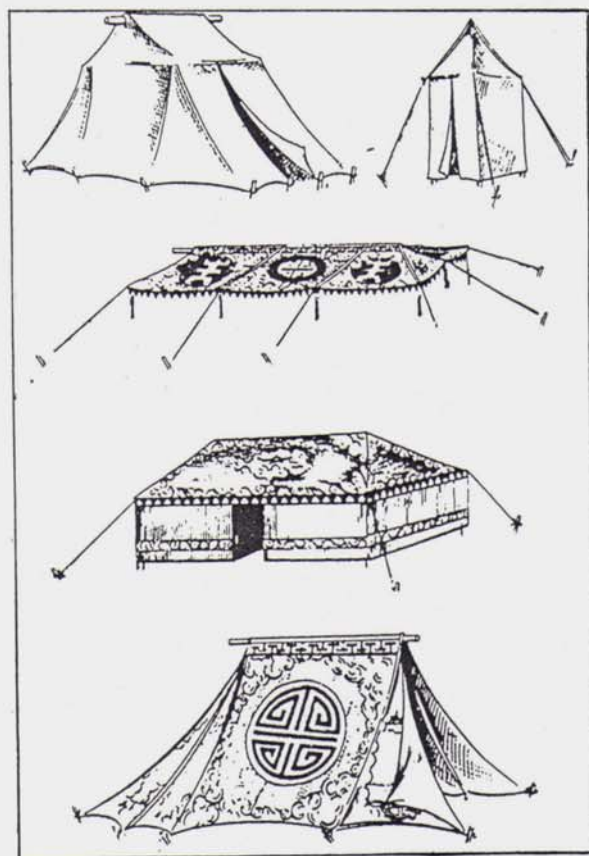
Erdenet, as a third city of Mongolia, was established as the support settlement for what is Asia's largest copper-molybdenum ore-dressing plant, with an annual capacity of 16 million tons. It accounts for around 90% of country's mining industry output. Other main industrial activities include woodworking plant, carpet factory and food processing enterprises.

Erdenet, which is called newly as Orhon, is already continuing to grow and in 1995, its population reached to 64,800 with the 1.0% yearly growth rate in one year.

Before the transition period, Mongolian proper housing was almost all state owned and financed from Government revenues. Nowadays the Government tries to develop some policy reforms on housing and land ownership. Thus Government is willing to promote and encourage the private sector as the main provider of housing and to place more responsibility on individuals to solve their housing problems.



*Ger or yurt, showing construction components*



The range of tented structures

Figure 7. Traditional Dwelling types



# VIEW OF A GER UNIT

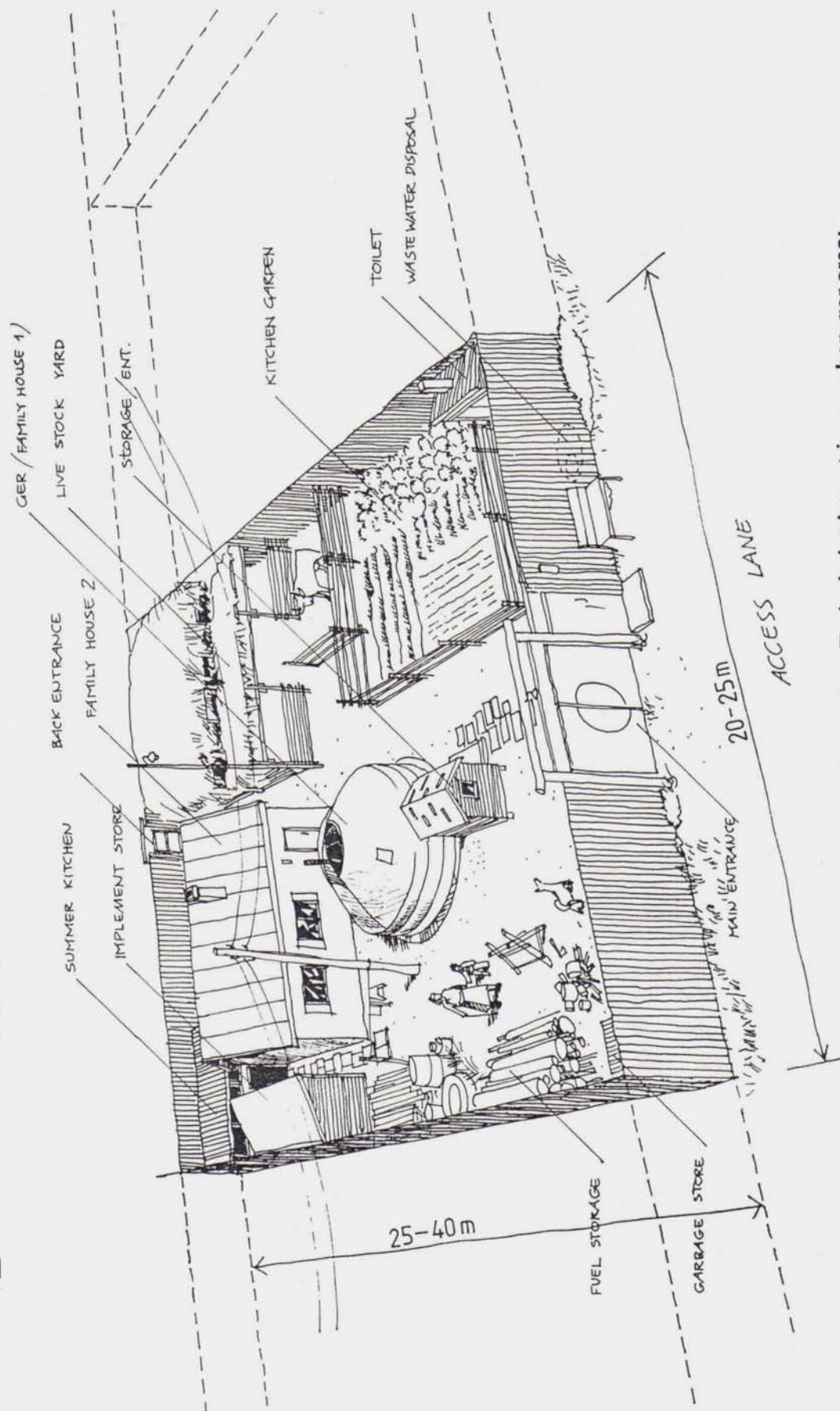


Figure 8. Typical plot layout in an urban ger area: surveyed sample in Ulaanbaatar

There are mainly five types of housing or sheltering in Mongolia. Privately owned gers or yurts are nomadic type of rural housing. Gers have circular conical structure consist of wooden lattice, portable walls usually around 1.2 m in height and providing 6 m diameter undivided internal space. The roof is supported centrally by double posts connecting to a circular centre frame at the apex. Gers are the most common sheltering type in rural areas. The type of gers may more or less change in between ethnic groups but the traditional design adapted to the needs of nomadic population.

The type of ger housing, which is again privately owned, changes in urban areas. As a permanent housing solution, urban ger areas are combination of the rural gers with some permanent shelters. For this kinds of housing the settlement assignments are given by the governors of the aimags, sums or bags to use land 20 x 20 m or 20 x 30 m belongs to the need of the family without asking any land rent. If the household's demand is more, they have to pay some fees. There is no official control on the size of the structure and choice of the form of gers, but in time being replaced or supplemented by rectangular pitched roof structures containing one or two rooms.

State rented units are situated on the planned part of the cities. This housing type occurred pre-second World War conventionally build low rise structures to 12 stores apartment blocks employing industrialised consecution systems. Accommodation is classified by number of rooms and habitable floor area excluding circulation spaces, storage, kitchen and bathroom. A two-room modern apartment typically has a habitable area around 30 m<sup>2</sup>. Two-room apartment's monthly rent is approximately 3000 tug. including heating, but electricity separately measured and water charged by number of occupants. The same apartment was costing 400 tug. in 1990 which shows the sharp increase of household expenditure.

Private formal housing system is also available by using the same standards of land use which is maintained for urban ger housing. The Government prepared some type projects as a free of charge services for the demanders. For promoting the construction of private houses also a loan and bank credits are available to use.

The problems are being experienced with respect to access to sites, delays in servicing and construction material cost increases. The densities of private ownership sites are up to 300 dwellings or about 1800 persons per hectare. The designs for private houses are criticised by HABITAT experts as: insufficient design solutions which economise on materials, on site layouts and site services, which conserve energy, are simple to construct and based on a set of methodically, identified generic alternatives.

Summer houses, which are both privately and state owned homes, are second houses and used during the summer school holidays for the children and non-working household members such as grandparents. Parents usually stay on these houses only at weekends and during the work holidays. The structure levels of servicing space standards and heating arrangements are considered unsuitable for permanent year-round occupation. Designs vary, but most consist of single-room chalet-type accommodation with rudimentary communal water supply and sanitation facilities.

State owned buildings have been constructed by heavy prefabricated as high rise buildings because of high migration from rural areas to urban centres. Government is unable to satisfy housing demand. Thus, there is a sharp growth in a significant informal housing stock consisting of the traditional ger, which the authorities considered as a

temporary accommodation. Today gers comprise about 50% of the housing stock in Ulaanbaatar and even higher percentages in other urban centres.

During the transformation period, Government developed two general rules for urban development policy. First, the Government recognises that it does not have the resources to construct major accommodation units or to replace gers with formal housing. At the same time, the Government wants to encourage and promote the emergence of the private sector as the main provider of new and affordable housing. Second, the public provision of water supply and sanitation based on willingness to pay is an effective and socially acceptable approach to poverty reduction.

For the promotion of private housing the Government decided to design a housing policy and conversation plan by preparing the necessary regulatory and control mechanisms for the development of private sector housing. These will include land planning guidelines, minimum standards for infrastructure, including provision for incremental improvement, a land registration system and land evaluation system.

Nowadays, the procedures for privatisation of state owned accommodation units and common areas had not been formulated yet. The Government was prepared a land privatisation law in 1994 which is not accepted by Great Hural because of nomadic population and animal husbandry as a main economic activity. Under those factors, people in Mongolia are not ready to accept land privatisation and there is a great need for a new kind of formulation of land ownership to promote foreign and local investments for industrial and housing developments.

The problems of the ger housing areas are mainly coming from the lack of infrastructure. The construction of gers, which are traditional housing for Mongolia, is tested for thousands of years, thus, ger housing is suitable for the climatic conditions and cheapest way of housing for Mongolia and also eliminating earthquake risks at the highest magnitudes. But the problem is coming from modern needs. The gers are suitable for nomad population who are ready to move every season or more, but not satisfactory for the settled population. A traditional solution may erase by Mongolian architects by using traditional housing type and construction materials and adopt it to the modern human needs by adding one or two more rooms, toilets and bathroom and kitchen places to advise lower income groups as an accommodation solution.

Government's policy on ger housing is to take steps to establish a minimum level of urban services for ger settlements and to provide community based water supply and sanitation services to ger areas around Ulaanbaatar. But solving some of the problems of ger housing in Ulaanbaatar may cause some unexpected results by making Ulaanbaatar more attractive for migratory very soon. Ulaanbaatar is already the most and the only attractive centre for rural immigrants and has 30% of total population. That means some very urgent developments should to be hold by Government to create different attractive centres for immigrants and put in force some criteria for balanced development of Aimags and implement them very quickly. Otherwise, Mongolia may face a big problem of erosion of population from rural areas to tree main cities, which may break down all agricultural activities that mean a wholly break down of Mongolian economy.

The Government's mid-term strategy of urban development is basically based on the conditions of Ulaanbaatar. There is a hardly interest of aesthetic quality and improvement of quality of life by improving water supply and sanitation services for peri-urban areas of Ulaanbaatar with the excuse of the fiscal limits. However the Government



also interested nation wide data collection of water supply and sanitation services for preparation of management plans for the future implementations.

A research, which is held by National Development Board shows that the willingness to pay for water by lower income groups in peri-urban areas of Ulaanbaatar is well established. These groups currently pay up to fifty times more than those in residential apartments of Ulaanbaatar. In a day about 1.500 m<sup>3</sup> water is supplied to 300.000 people in the ger areas of the city by tanker from centrally located water tanks where water sold out. 0.25 tug/l or 400 tug per m<sup>3</sup> but in planned residential area total supply is approximately 160.000 m<sup>3</sup> per day with the domestic rate of tug and per m<sup>3</sup> which means lower income groups are paying 50 times more for water.

The Government mid-term strategies to improve the conditions of water supply and sanitation of Ulaanbaatar for 1995-1998 shows that there is a great fiscal need on this subject which is estimated as totally 10.6 mil.\$ as grants of foreign countries.

## **8. PLANNING ACTIVITIES**

Since 1960's planning activities in Mongolia held on the national level. First nationwide physical plan prepared in 1988 with the technical assistance of Russian experts. The scale of the plan was 1:1000000 and the planning period was 20 years. After the liberation, an urgent need for preparation of the new plans was emerged. Under the control of the Ministry of Infrastructure Development those plans had prepared by National Centre of Design and Research (NCDR). The new national physical plan hold by the NCDR at the beginning of 1994, nowadays it is finished and discussion about the new plans hold at the Governmental level. The new general election will be hold in 1996 and there is a hope that the approval will be taken from the new Government to implement the new plan but there is no agreement on the approval system on such plans yet.

The country is divided into 5 economical regions by the NCDR but National Development Board (NDB) is using 4 regions base and there is already no agreement on the numbers of the region in between these two governmental departments. The problem is coming from the western regions. The NCDR is dividing this area into two different regions, for the same area NDB is using only one region base. In 1993 the Western region development plan is prepared with the scale of 1:700000. Nowadays the NCDR is responsible for preparing a regional plan for Eastern region of the country. The regional division of the country is given at the attached map.

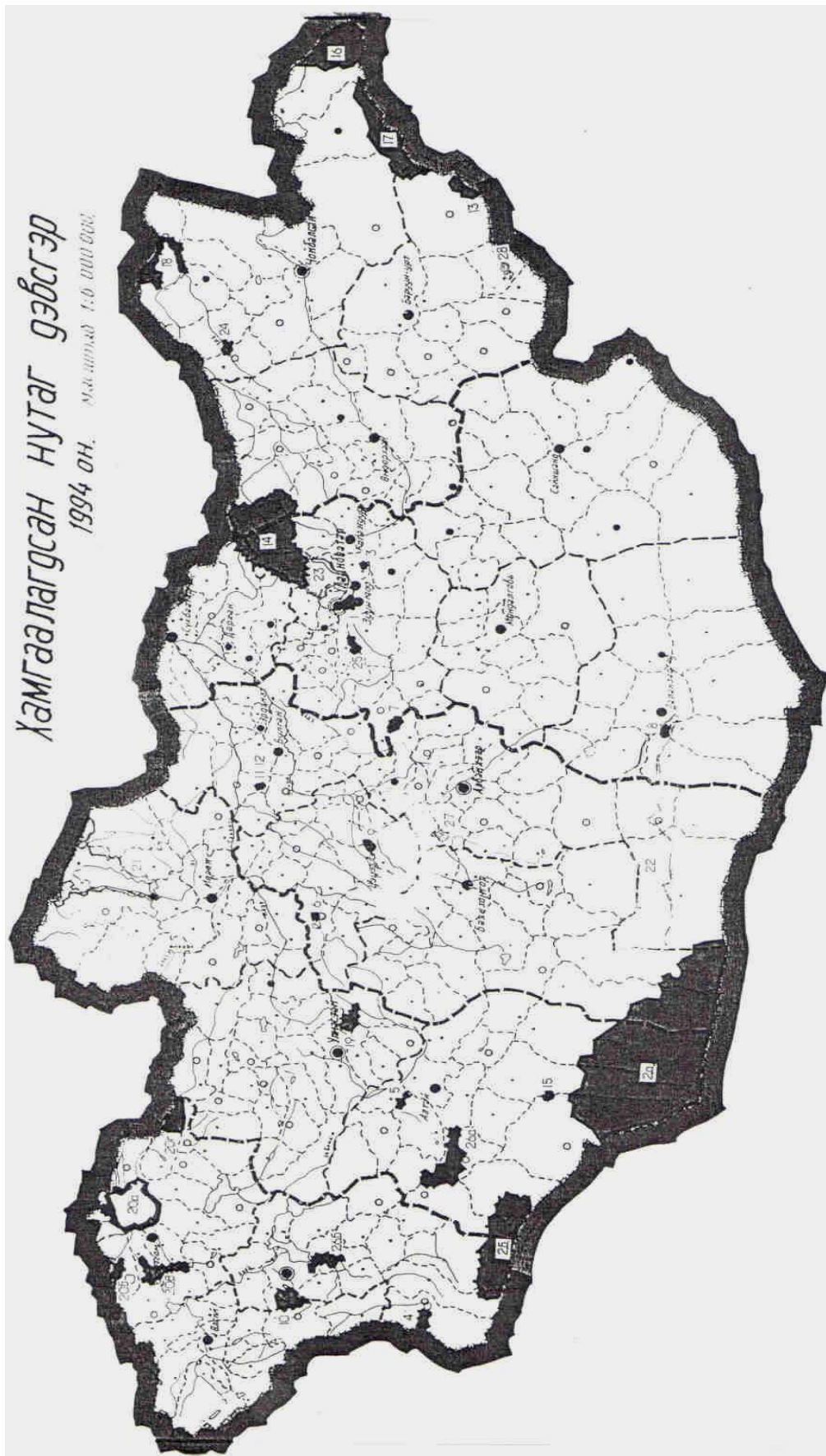
Except the regional plans there are three general type of planning in the NCDR which may classified as National Parks Plans, Natural Protection Plans and Human Settlement Plans with different scales of 1:400.000-1:200.000.

The human settlement plans are dividing into two groups such as Territorial Development plans and Individual Master Plans. Territorial Plans are preparing with different scales from regional scale to urban scales. Master plans are hold after liberation processes of Mongolia as sectors' plans such as Transportation Master Plan, Energy Master Plan, Environmental Protection Master Plan and Communication Master Plan. Those plans are prepared by ADB, JAICA and World Bank with the loan contracts. Most of them, as it is mentioned before, need some radical changes because of the priorities and the policies of the Government got changed during the preparation periods.

The first master plan of Ulaanbaatar worked out in 1950's. The last master plan prepared in 1987, but nowadays those plans become useless because of the liberation process of the country. Nowadays all investments of the Capital city are arranged by permission system without having a wholistic approach to the development the city.

The plans may also be prepared by private companies with the special contracts by the Ministry of Infrastructure Development.

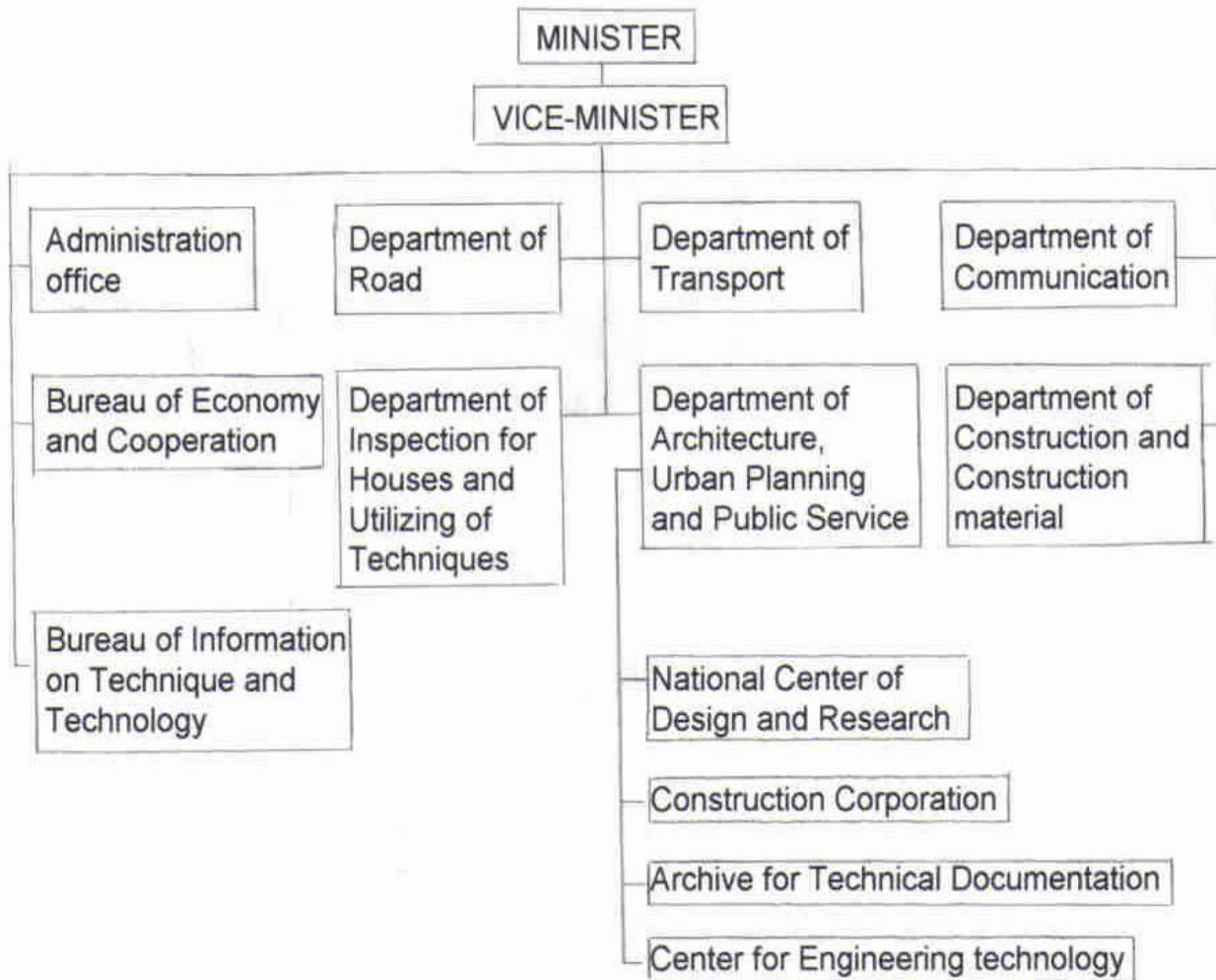
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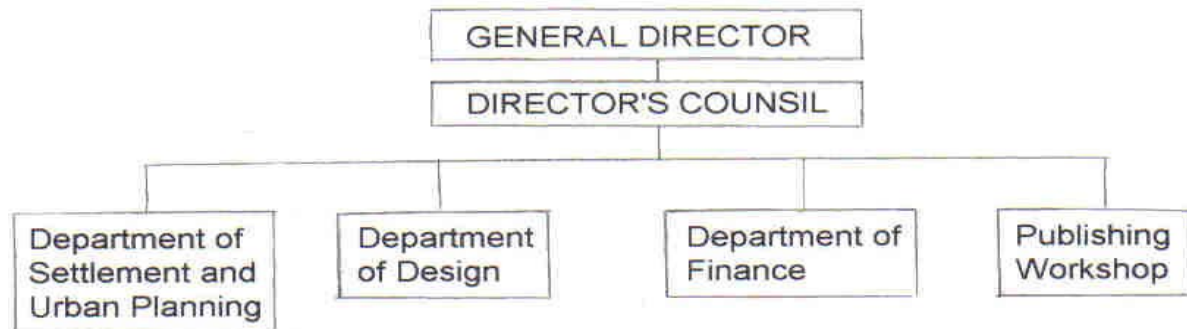
The Ministerial structure is given below:

### MINISTRY OF INFRASTRUCTURE DEVELOPMENT



As the main planning office NCDR has the structure is given below:

### **NATIONAL CENTER OF DESIGN AND RESEARCH**



There are approximately 80 personal who are working at the Ministry including every kind of work. The number of professional personnel is about 60 in the Ministry. At the NCDR there are 50 staffs and the number of professional staff is 35 and the occupational distribution of professional staff are 10 architects, 2 geogaphists, 3 economists, 1 geologist, 10 engineers and 9 technical workers.

The NCDR is also responsible for the preparation of architectural projects for all purposes which are ordered by the government such as special purpose buildings or private housing type projects designs.

The main criticism of the planning activities in Mongolia is based on the planning approaches. The planning activities, which are hold by the Ministry, is already depend on the commanded economy conditions, because of lack of information of the stuffs about market economy. The plans are covering only physical database, thus there are almost no social aspects on planning process and also there is no knowledge for balancing the market conditions by using plans. The plans which have not covering the social aspect of the planning area, has almost no chance for implementations within the market conditions.

The land, which is already owned by the state, has no chance of privatisation because of the nomadic cultural pattern of the country. But after the new Constitution there is a great flow of migration to Ulaanbaatar which can not be controlled. The Governors are giving permissions of the land to the new comers free of charge. To control the migration and to enlarge financial potential of the Capital for public services, there is a great need for new legislation to regulate same fees or rents for land use. There is a great need to create some new attraction centres for migrates and a new legislation for the Capital which means a new comprehensive approach to the existing planning environment.

The privatisation of the housing area is one of the main policies of the Government for the existing planned areas, but the household's income levels are not enough to buy such big buildings. The solution for privatisation of these housing areas may be as the same as in Turkey's Dwelling Units Ownership Law.

The main problems such as urban Ger areas have some similarities to the Turkish squatter housing areas. It is possible to exchange the problem solution experiences in between two countries.

## RECOMMENDATIONS

- There is a great need to improve existing pattern of infrastructure. The lack of infrastructure, especially transportation and energy is the main obstacles for development in Mongolia. It is also necessary to make deep research on mode of transportation and some alternative energy resources such as solar and wind power using stations that, both of them very available because of country's natural and geographical conditions.
- The mode of transportation had been chosen to improve the road capacity with a main road which crosses the country from east to west in National Physical Plan (General Plan of Settlement). This mode of transportation may cause some negative impacts as it is mentioned in the transportation section. Together with its economic impacts to the country, there may be some negative social impacts in the future. A notable impact is coming from the high earthquake risk in the western regions. The road is using the same lines all along the continental breaks, which may possible to create some settlement areas along the road and the risk possibilities may grow to the higher levels than today's conditions.
- Housing construction type in planned areas is based on heavy prefabricated building structures, which grow the earthquake risk for these areas. There is a great need to improve the traditional gers to adapt them to the modern needs by using traditional construction elements and materials and also accumulation of knowledge which is already using in poor conditions that can be a real alternative for the solution of the housing problem in Mongolia.
- Ulaanbaatar is the only attractive centre and there is an urgent need to create some new centres to control the flow of migration and balance the development in between the regions. Almost all activities are accumulated at the central region such as opportunities to find new jobs or to share some public services and opportunities for more suitable settlement conditions that may cause more serious unbalanced development in between regions which is already a vital problem for Mongolia.
- There is a hard pressure on Mongolian Government to privatise the land, which is an advice of the western countries, but also, that is a resistance from the nomadic cultural pattern against the land privatisation. For Mongolia, privatisation of land mustn't have a priority on their liberation policy, because it is not a counter stone for democracy. But, the government has to regulate land use condition especially for Ulaanbaatar and for all settlements for whom that they are not using the land permanently. Some type of fees or rents must be regulated for the settled inhabitants by the measure of the type of land use and the total area that they used or demanded.
- Environmental protection had to have one of the most important priorities on planning process. Mongolia has a chance to improve its economy by tourism activities which is basically depend on environmental conditions. The Government had prepared a number of legislation for environmental protection including environmental impact assessment studies for the new investments. But in all legislation's there is no public participation and some new mechanisms to aware the people against environmental polluters.

- Environmental impact assessment is not only a tool for environmental protection, but also one of the tools of public participation. By neglecting this necessary part of the EIA process, there is no possibility to protect environment in reality. There is a great need for solidarity in between governmental bodies and inhabitants, not only to protect the environment but also to improve democracy by using such vital events as natural school for democratic discussions and creating new mechanisms for public participation.
- Public participation, as a new and very reliable way to improve democracy, had to be taken into account during the planning process also. Within the existing planning process there is no possibility for participation, all discussions are in between governmental bodies. As the country in transition, some new channels and mechanisms had to be improved for more democratic way of life and planning process, just like EIA studies has a chance to create new possibilities for public participation.
- There is a lack of knowledge about market oriented economic conditions in almost every level. This lack of knowledge clarified especially on planning process. The professional stuffs have almost no estimations about market conditions, free circulation of the population and also some hints to control possible social movements. This lack of information may cause some serious problems in the near future.
- There is also lack of information on social aspect of planning because of the influence of the commanded central planning practice. Three seminars prepared to inform professional stuffs about social aspects of planning and also some practical information are given by Dr. Ümit Özcan during the country visit. Unfortunately there was not enough time to practise social aspects of planning.
- A flow-chart which is useful for preparing national and regional level plans is designed for further studies, but there is an urgent need for training the professional stuffs by informing them about Turkish experience of planning, especially south-eastern Anatolia development project which is at the regional level.

## NEEDS FOR TECHNICAL ASSISTANCE

Turkey may cooperate with Mongolian Government by exchanging planning practices and problem solution experiences because of some similarities in between two countries.

- There is an urgent need to inform the professional staffs about the social aspects of planning.
- Urban ger housing areas where there are a lot of similarities to Turkish squatter housing areas is one of the main problems of Mongolia. Some training courses might be hold in Turkey to inform the professional staffs about our experiences and problem solutions.
- The Dwelling Units Ownership Law of Turkey might be a good sample to solve the housing privatisation problem of Mongolia with its different aspect of ownership.
- Earthquake problem and construction regulations to eliminate earthquake risk may also be a training subject for Mongolian staffs.
- Building permission process is also may be a subject for trainees.
- Especially for National Centre of Design and Research there is some technical equipment needs such as:
  - drawing pencil sets and inks
  - drawing papers for different purposes
  - ozalid machine, its developers and special optic papers
  - some computer design programs and social aspect's estimation programs
  - auto cad system for drawing
  - one PC processor 586 to use those high-tech programs.



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## INTERVIEWS

Mr. Ts. Damiran	Vice-Minister of the Ministry of Infrastructure Development
Mr. D. Sain-Er	General Director of the Department of Architecture, Urban Planning, Housing and Public Services of MID
Mr. R. Bud	General Director of the Department of Road of MID
Mr. D. Dandarbaatar	General Director of the National Centre of Design and Research
Mr. Z. Olonbayar	Chief of the Department of Settlement and Urban Planning of NCDR
Ms. S. Ganchimeg	Engineer-ecologist of the Department of Settlement and Urban Planning of NCDR
Mr. T. Jadambaa	General Architect of the Capital City, Chief of the City Construction and Planning Office
Mr. Ouyn-Erdene	Deputy Director of the Department of Natural Resource
Mr. M. Bold	President of Export-Import Bank of Mongolia