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SOME CONSIDERATIONS OF THE ROAD IN
MIDDLE ASIA COUNTRIES

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1. Introduction

The middle Asia countries consist of five countries, namely Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan and Tadjikistan (Figure - 1). They declared independence in the early 90's. Before the independence, those countries belonged to former Soviet Union. The middle Asia countries and Japan will have close relation in the future. However, those countries had been beyond "The iron curtain" in the Soviet era, therefore very few information had been obtained. Here, taking an example in Kyrgyzstan, the information and consideration about roads were shown for future cooperation.

2. Road in general

Since there are not enough statistics of the whole road, the road administrated by the Ministry of Transport which is in charge of main roads is explained in this paper. Under the ministry, the private construction and maintenance companies are in charge of the road administration. In Kyrgyzstan and Kazakhstan, total road lengths are 18,739km and 86,814km respectively. These figures indicate a very rough road network compared with Japan and U.S.A. (Table - 1). However, there is other road called "Enterprise Road" whose length is almost equal to the road mentioned above. The enterprise road is the collector road from farms and industrial complexes. In Kyrgyzstan, only 25% of the road is paved but in Kazakhstan, 94% is paved.

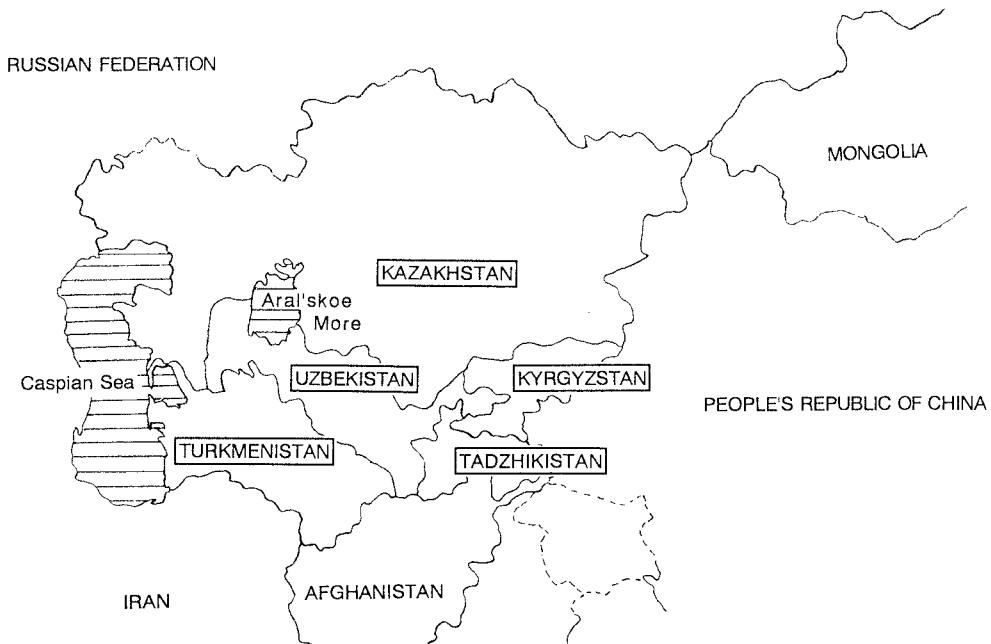


Figure - 1 Middle Asia Countries

Table - 1 Road Statistics

Country	Kyrgyzstan	Kazakhstan	Japan*	U.S.A.*
Road Length (km)	18,739	86,814	184,250	1,439,458
Area (1,000 km ²)	198	2,717	378	9,809
Road Density (km/km ²)	0.095	0.032	0.48	0.15

* Municipal roads were excluded

Table - 2 Road Classification and Specification

Category	Designed Traffic Flow per day	Designed Speed	Number of Lanes	Lane Width
I - a	more than 14,000 pcu	150km/h	4 ; 6 ; 8	3.75 m
I - b	- do -	120	4 ; 6 ; 8	3.75
II	6,000 - 14,000	120	2	3.75
III	2,000 - 6,000	100	2	3.5
IV	200 - 2,000	80	2	3
V	less than 200	60	1	-

3. Road planning and standard

Basically, the road is planned according to the designed traffic volume in twenty years. In these countries, car ownership is still low. Therefore the capacities of the road are generally enough. However there are some inadequate road plannings such as ignoring the traffic volume.

The road standards in these countries follow that of former Soviet Union and modified according to the conditions of their countries. The road is classified into five groups by the volume of the designed traffic flow (Table - 2). Following this classification, designed speed, alignment, road width, gradient and other fundamental figures are given. Compared with the standard in western countries, this standard is rather high and as a result costly in construction.

4. Other features of road

Generally the condition of the road is not good because of lack of the budget for road maintenance. There are also lack of spare parts of construction machines and equipment due to the shortage of budget and the failure of distribution system among former Soviet Union countries.

The big structures such as long bridges or tunnels are well designed and constructed because they were done under technical cooperation of the former central government. On the contrary, other small structures seemed rather poor in design and construction.

5. Summary

In general, the middle Asia countries have high potential in technology and economy. But they are in confusion experiencing the new system of economy and politic. As for roads, it is necessary to secure the budget for maintenance and construction. Also technical cooperation is effective especially in the field of planning which had been done mostly by the former central government.

Reference

- 1) European Bank for Reconstruction and Development : Road and Road Transport Study Russia, Ukraine, Kazakhstan and Belarus, April 1993
- 2) Infrastructure Development Institute : Study of Infrastructure Planning in the middle Asia countries, March 1994