Secret

China's Road Network

Secret

ER RP 74-1
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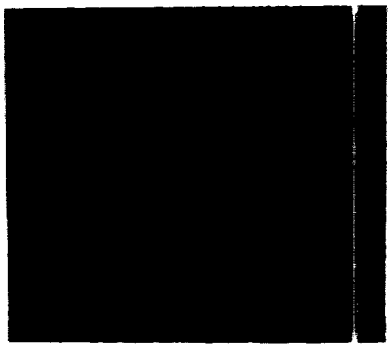

CHINA'S ROAD NETWORK

SUMMARY

1. China's road network, roughly comparable with the US network of the early 1920s, consists of interconnected systems of locally and regionally oriented roads. The network was approximately 700,000 kilometers (km) in length at the end of 1972, compared with only 75,000 km in 1949. Despite this manyfold expansion, roads continue to provide mainly short-haul, farm-to-market transport service. Except in Tibet and other sparsely populated areas of western China, roads do not play a role in long-haul transport; they merely supplement the long-haul transport services of the principal interprovincial carriers -- the railroads and navigable waterways. Direct through routes linking widely separated parts of the country are few in number, and there is no coordinated national highway system. Almost all of the roads in the network are surfaced with either dirt or gravel. Most of the roads, while adequate for their limited traffic, require constant maintenance because of their poor quality.

DISCUSSION

The Primary Network

2. The primary network of roads in China, depicted on the map inside the back cover, consists of principal connections between larger population centers. Roads in this network vary widely in quality, depending on the function and location of the roads -- for example, whether there are nearby rail lines or waterways. Amounting to less than one-fourth of China's road mileage, the roads in the primary network generally are two-lane, gravel or asphalt surfaced, and motorable throughout the year. The roads in this network are divided into three categories:

a. Two-lane, all-weather roads with an oil/asphalt surface, drainage, and bridges or ferries.

b. Two-lane, all-weather roads with a prepared surface of gravel/crushed rock, drainage, and bridges or ferries.

Note: Comments and queries regarding this publication are welcomed. They may be directed to [redacted] of the Office of Economic Research, Code 143, Extension 7884.

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c. Probable two-lane, fair-weather roads – these roads usually have a prepared surface, may have drainage, and have fords at most streams.

Most of the roads in the primary network fall under the latter two categories.

3. The remainder of China's road network, or more than three-fourths of the total mileage in the country, consists of simple farm-to-market connections, surfaced with dirt or gravel. These roads are passable by trucks in good weather and by carts and other types of native transport in most weather.

4. Only 1% to 2% of the entire road network has been surfaced with asphalt, concrete, or residual oil. The largest concentrations of bituminous- or oil-treated roads are located on the North China Plain, the western edge of the Szechwan Basin near Ch'eng-tu, the southern and western edges of the Dzungarian Basin, and in other scattered areas where roads accommodate relatively high levels of traffic or experience excessive erosion. A few major arteries in the larger cities are paved with concrete.

Expansion of the Network

5. Most of the roads in the 75,000-km network inherited by the Communists in 1949 were narrow, poorly constructed, unsurfaced, and furnished only with ferries or low-capacity bridges. After successfully repairing war damage and restoring the existing network to operation, the new government began an extensive expansion program in 1953 that ended in 1960; in this period, more than 350,000 km of roads were built. Additional roads were built at varying rates of construction through the 1960s and early 1970s. Construction is currently progressing at an estimated rate of 30,000 km of new roads per year.

6. Since 1949 the Chinese have increased the total length of the network about eight times, as indicated in the following tabulation:

End of Year	Length of Network (Thousand Kilometers)
1949	75[1]
1950	100
1952	127
1957	255
1958	400
1959	480
1961	490

End of Year	Length of Network (Thousand Kilometers)
1965	550
1970	640
1971	670
1972	700

1. At the time of the Communist takeover in October 1949.

The massive construction effort has greatly improved the quality of the roads and related structures and has provided motorable links to most populated areas in China. The growth and development of the economy – China's gross national product has grown at an average rate of about 4% since 1953 -- has generated the need for an expanding road network to accommodate China's rapidly increasing number of trucks. Truck production has risen from 7,500 units in 1957 to 100,000 units in 1972, and hundreds of heavy-duty trucks (capacity of more than 8 metric tons) have been imported from Japan and Western Europe. At the current rate of construction, the total length of the national network should approach 800,000 km by the end of the present five-year plan in 1975.

Regional Distribution of the Network

7. The geographic distribution of the Chinese road network has changed markedly during the past 20 years. In 1949 the road network was distributed primarily around the population centers of the eastern coastal provinces. A small number of roads in other areas of China, such as the Lan-chou - Sinkiang road in the west and the Burma road in the southwest, completed this sparse network. Detailed data on the growth of the road network (see Appendix A) indicate that in absolute terms the largest increases have taken place in provinces located in Central, South, and Southwest China, where Peking has emphasized economic expansion during the last two decades. Up to the mid-1960s, considerable expansion also took place in Sinkiang, probably as much for strategic as for economic reasons. The smallest increases have occurred in the sparsely populated provinces of Tsinghai, Inner Mongolia, and Tibet and in various provinces of East China where railroads and the Yangtze River provide superior alternative means of transportation. Data on the distribution of the road network (see Appendix B) indicate that the proportion of the network located in Central, South, and Southwest China is substantially greater than in 1949, whereas the proportion located in the North and Northeast is less than in 1949.

8. Appendix B also compares the regional distribution of the road network with the regional distribution of population and area. This comparison indicates that the distribution of the network approximates the distribution of population only in the Northeast, South, and Southwest. Substantial differences exist in the other regions. For example, East China has only about one-tenth of the network but has more than one-quarter of the population; and Northwest China has more than 15% of the network but less than 7% of the population.

9. The density of the road network varies considerably in different parts of the country. The overall density for the country as a whole is about 7 km to 8 km of road per 100 square kilometers of area. In the Northeast, East, Central, and South Regions the density is about double the countrywide average. In two provinces, Chekiang and Kwangtung, the density is almost triple the national average. In the North, Northwest, and Southwest, however, the density is equal to or less than the overall figure.

APPENDIX A

CHINA: GROWTH OF THE ROAD NETWORK

Region and Province	Length of Network (Kilometers) 1949	Length of Network (Kilometers) Present[1]	Increase (Kilometers)	Present Density (Kilometers per 100 Square Kilometers)
Northeast				
Liaoning	8,000	30,000 (73)	22,000	13.0
Kirin	N.A.	N.A.	N.A.	N.A.
Heilungkiang	N.A.	N.A.	N.A.	N.A.
North				
Hopeh	5,000[2]	13,000 (58)	8,000	6.5
Shansi	N.A.	N.A.	N.A.	N.A.
Inner Mongolia	1,875	15,943 (72)	14,068	3.7
East				
Shantung	N.A.	25,500 (70)	N.A.	16.6
Kiangsu	2,800	12,100 (71)	9,300	11.8
Chekiang	1,900	20,900 (72)	19,000	20.5
Anhwei	1,142	15,000 (71)	13,858	10.7
Central				
Honan	2,226	25,000 (73)	22,774	14.9
Kiangsi	3,200	19,000 (65)	15,800	11.5
Hupeh	2,261	26,200 (72)	23,939	13.9
Hunan	1,305	32,824 (72)	31,519	15.5
South				
Fukien	1,800	20,000 (73)	18,200	16.2
Kwangtung	2,523	42,900 (72)	40,377	20.2
Kwangsi	3,000	30,600 (73)	27,600	12.7
Northwest				
Shensi	N.A.	22,000 (73)	N.A.	11.2
Kansu	N.A.	15,000 (57)	N.A.	1.9
Ningsia	N.A.	N.A.	N.A.	
Tsinghai	472	14,000 (72)	13,528	1.9
Sinkiang	3,600	25,600 (64)	22,000	1.5
Southwest				
Szechwan	4,500	50,000 (72)	45,500	8.7
Yunnan	2,700	40,000 (73)	37,300	9.1
Kweichow	1,900	23,000 (71)	21,100	13.2
Tibet	N.A.	16,500 (73)	N.A.	1.3

1. The latest year for which information is available is indicated in parenthesis.
2. Length of the network in 1950.

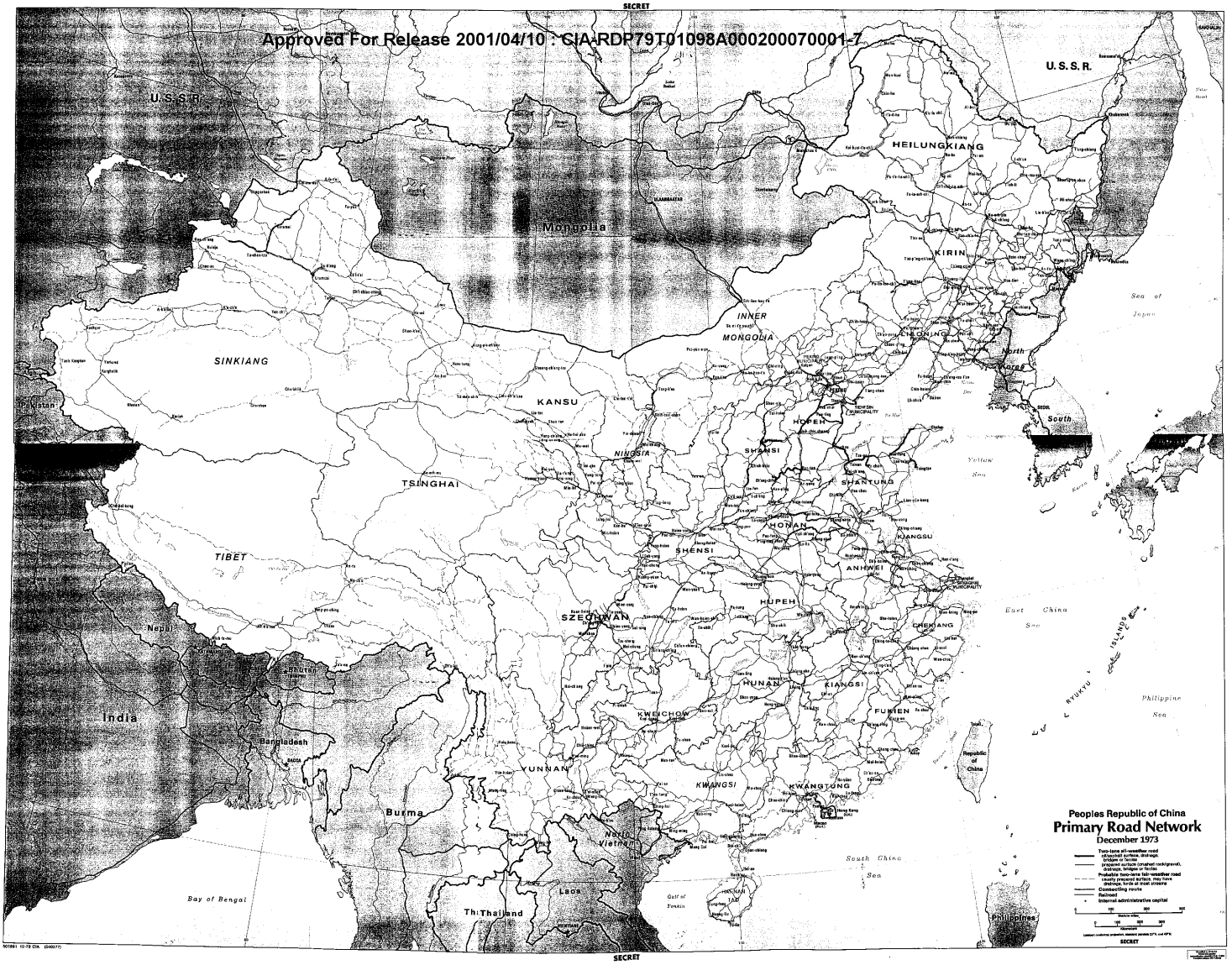
APPENDIX B

CHINA: DISTRIBUTION OF THE ROAD NETWORK, POPULATION, AND AREA

Percent

Region and Province	Length of Network 1949	Length of Network Present[1]	Population[2]	Area
Northeast	**N.A.**	**N.A.**	**10.0**	**12.6**
Liaoning	10.6	4.1 (73)	4.6	2.4
Kirin	N.A.	N.A.	2.3	2.8
Heilungkiang	N.A.	N.A.	3.1	7.4
North	**N.A.**	**N.A.**	**10.9**	**8.2**
Hopeh	5.0	3.2 (58)	7.5	2.2
Shansi	N.A.	N.A.	2.5	1.6
Inner Mongolia	2.5	2.3 (72)	0.9	4.4
East	**N.A.**	**10.9**	**25.1**	**5.4**
Shantung	N.A.	4.0 (70)	8.4	1.6
Kiangsu	3.7	1.7 (71)	7.9	1.2
Chekiang	2.5	3.0 (72)	3.8	1.1
Anhwei	1.5	2.2 (71)	5.0	1.5
Central	**11.8**	**15.2**	**20.0**	**7.7**
Honan	2.9	3.4 (73)	7.2	1.8
Kiangsi	4.2	3.4 (65)	2.8	1.7
Hupeh	3.0	3.7 (72)	4.7	2.0
Hunan	1.7	4.7 (72)	5.3	2.2
South	**9.7**	**13.0**	**11.0**	**6.0**
Fukien	2.4	2.7 (73)	2.3	1.3
Kwangtung	3.3	6.1 (72)	5.5	2.2
Kwangsi	4.0	4.2 (73)	3.2	2.5
Northwest	**N.A.**	**N.A.**	**6.7**	**34.9**
Shensi	N.A.	3.0 (73)	3.0	2.0
Kansu	N.A.	5.9 (57)	2.3	8.2
Ningsia	N.A.	N.A.		
Tsinghai	0.6	2.0 (72)	0.4	7.5
Sinkiang	4.8	4.8 (64)	1.0	17.2
Southwest	**N.A.**	**18.3**	**16.5**	**25.2**
Szechwan	6.0	7.1 (72)	10.8	6.0
Yunnan	3.6	5.5 (73)	2.8	4.6
Kweichow	2.5	3.4 (71)	2.7	1.8
Tibet	N.A.	2.3 (73)	0.2	12.8

1. The latest year for which information is available is indicated in parenthesis.
2. Based on mid-1973 estimates.



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REMARKS

Sources – the map is based on [redacted] but approval was received from [redacted] 25X1A [redacted] to publish it at the SECRET level. Other sources – FBIS, some State and Defense reporting.

RP will be classified SECRET and will be released to the foreign governments indicated above.

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Deletions for release [redacted] 1A

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STATINTL

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15 MAR 1974

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SUBJECT: **Release of ER RP 74-1, China's Road Network, January 1974, Secret, to Foreign Governments**

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STATINTL [redacted]

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 RP 74-1

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