

I. STATUS OF THE ASIAN HIGHWAY NETWORK

A. Introduction

The physical status of the Asian Highway network varies considerably, both across and within the subregions of Asia. The Asian Highway network is currently a mix that extends from expressways or access controlled roads, through dual carriageway highways, to single carriageway two-lane roads and, in rare cases, single lane roads.

The type of pavement also varies in quality from asphalt concrete, cement concrete or double base surface treatment (DBST) to gravel and improved earthen roads in some cases. In addition, the condition of the pavement may be good, fair or poor, based on the visual or actual pavement condition surveys.

The commitments shown by participating member countries hold significant promise for the development of the Asian Highway network to the level of quality and standards that have always been envisaged. However, considerable efforts will be required in finding and allocating sufficient financial resources as well as appropriate road construction and maintenance technology.

The following discussion of the status of the Asian Highway is divided by subregion into: (a) South Asia; (b) Central and South-West Asia; (c) South-East Asia; and (d) North-East Asia. The overviews are based on the Asian Highway database and information received from member countries during the subregional meetings held in 2004 and 2005.

B. Overall status of the Asian Highway network

The Asian Highway classification and design standards³ provide the minimum standards and guidelines for construction, improvement and maintenance of the Asian Highway routes. The Asian Highway routes are classified into four types: (a) Primary (four or more lanes, access controlled); (b) Class I (four or more lanes); (c) Class II (two lanes); and (d) Class III (two lanes). Various technical parameters for type of Asian Highway depend on the classification, terrain and design speed. Table 1 provides a summary of Asian Highway classification and design standards. The Asian Highway classification and design standards specify Class III as the minimum desirable standards. The type of pavement recommended is asphalt concrete; double bituminous surface treatment can be used if only limited funds are available, but this is to be upgraded to an asphalt concrete pavement once resources become available.

The current status of the Asian Highway network is outlined in table 2. As table 2 indicates, China has the greatest length of the Asian Highway at 25,929 km, followed by the Russian Federation (16,869 km), Kazakhstan (13,200 km), India (11,458 km) and the Islamic Republic of Iran (11,153 km). Singapore and Bhutan have only 19 km and 167 km respectively of the Asian Highway.

Some 117,000 km (83 per cent) of the Asian Highway network meets the minimum Class III standard specified in the Agreement. Approximately 67,000 km (48 per cent) of the network exceed Class III.

³ For details see <http://www.unescap.org/ttdw/common/tis/ah/AnnexII-E.pdf>.

Table 1. Asian Highway classification and design standards

Highway classification		Primary (four or more lanes)					Class I (four or more lanes)					Class II (two lanes)					Class III (two lanes)				
Terrain classification		L	R	M	S		L	R	M	S		L	R	M	S		L	R	M	S	
Design speed (km/h)		120	100	80	60		100	80		50		80	60	50	40		60	50	40	30	
Width (m)		(50)					(40)					(40)					(30)				
Lane		3.50					3.50					3.50					3.00 (3.25)				
Shoulder		3.00		2.50			3.00		2.50			2.50		2.00			1.5 (2.0)		0.75 (1.5)		
Median strip		4.00		3.00			3.00		2.50			N/A		N/A			N/A		N/A		
Minimum radii of horizontal curve (m)		520	350	210	115		350	210	80			210	115	80	50		115	80	50	30	
Pavement slope (%)		2					2					2					2-5				
Shoulder slope (%)		3-6					3-6					3-6					3-6				
Type of pavement		Asphalt/cement concrete					Asphalt/cement concrete					Asphalt/cement concrete					Dbl. bituminous treatment				
Maximum super-elevation (%)		10					10					10					10				
Maximum vertical grade (%)		4	5	6	7		4	5	6	7		4	5	6	7		4	5	6	7	
Structure loading (minimum)		HS20-44					HS20-44					HS20-44					HS20-44				

Notes: Figures in parentheses are desirable values.

Minimum radii of horizontal curve should be determined in conjunction with super-elevation.

The recommended width of the median can be reduced with the proper type of guard fence.

The Parties should apply their national standards when constructing structures such as bridges, culverts and tunnels along the Asian Highway.

Table 2. Status of the Asian Highway in member States*(Kilometres)*

Country	Primary	Class I	Class II	Class III	Below III	Other ^a	Total
Afghanistan	0	0	621	77	3 549	–	4 247
Armenia	0	142	377	479	0	–	998
Azerbaijan	0	82	1 012	348	0	228	1 670
Bangladesh	0	20	441	476	868	–	1 805
Bhutan ^b	0	0	6		161	–	167
Cambodia	0	0	398	743	199	–	1 340
China ^c	4 140	189	2749	2 008	1 443	15 400	25 929
Democratic People's Republic of Korea	0	0	0	0	0	1 320	1 320
Georgia	0	8	788	358	0	–	1 154
India	0	484	0	10 869	105	–	11 458
Indonesia	335	18	1 600	1 965	0	34	3 952
Iran (Islamic Republic of)	752	1 067	9 334	0	0	–	11 153
Japan	1 111	0	0	0	0	–	1 111
Kazakhstan	0	72	767	10 004	2 346	–	13 189
Kyrgyzstan	0	0	464	511	720	–	1 695
Lao People's Democratic Republic	0	0	0	2 375	0	3	2 378
Malaysia	795	67	733	0	0	–	1 595
Mongolia	0	0	440	345	3 501	–	4 286
Myanmar	0	147	144	983	1 729	–	3 003
Nepal	0	0	311	1 003	12	–	1 326
Pakistan	358	1 116	160	2 569	1 174		5 377
Philippines	0	17	27	2 872	451	150	3 517
Republic of Korea	466	197	244	0	0	–	907
Russian Federation	0	1 147	8 334	3 210	4 178	–	16 869
Singapore	11	8	0	0	0	–	19
Sri Lanka	0	0	269	190	191	–	650
Tajikistan	0	0	289	603	1 033	–	1 925
Thailand	182	2 572	1 226	1 128	0	4	5 112
Turkey	1 212	155	1 219	2 685	0	–	5 271
Turkmenistan	0	0	0	2 180	24	–	2 204
Uzbekistan	0	255	765	1 618	328	–	2 966
Viet Nam	0	408	1 915	104	251	–	2 678
Total	9 362	8 171	34 633	49 703	22 263	17 139	141 271
<i>Percentage</i>	<i>6.6</i>	<i>5.8</i>	<i>24.5</i>	<i>35.2</i>	<i>15.8</i>	<i>12.1</i>	<i>100.0</i>

Source: Asian Highway Database, 2004 and updates from member States.

^a Other includes sea and river ferries and unknown classification.

^b In Bhutan, the length has been extended to Thimphu.

^c In China, the network comprises 10,529 km of agreed Asian Highway routes and 15,400 km of potential Asian Highway routes which is composed of about 8,800 km of Primary, 1,530 km of Class I, 4,850 km of Class II and 220 km of Class III roads.

However, some 22,000 km (15.8 per cent) of the network remains below Class III standards. Considerable effort will be required to upgrade these segments within member countries. The responsibility for upgrading these national segments lies with each of the member countries concerned.

The overall status of the Asian Highway is shown in figure 4. The network is predominantly at Class II and Class III standards. By promoting investment in highway upgrading and maintenance, the Asian Highway project ultimately aims to develop all segments of the Asian Highway routes in conformity with the design standards. The efforts of member countries in improving the network are dealt with in chapter II.

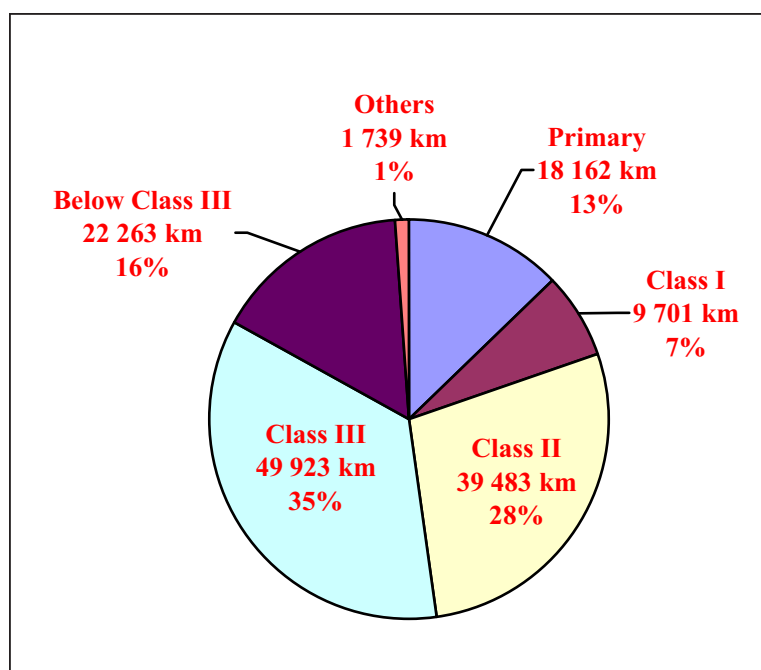


Figure 4. Overall status of the Asian Highway

Table 3 summarizes the status of Asian Highway by four subregions.

Table 3. Status of the Asian Highway network by subregion ^a

(Kilometres)

Subregion	Primary	Class I	Class II	Class III	Below III	Other	Total
South-East Asia	1 323	3 237	6 043	10 170	2 630	191	23 594
South Asia	358	1 620	1 187	15 107	2 511	–	20 783
Central and South-West Asia	1 964	1 781	15 636	18 863	8 000	228	46 472
North-East Asia ^b	5 717	1 533	11 767	5 563	9 122	16 720	50 422
Total	9 362	8 171	34 633	49 703	22 263	17 139	141 271

^a South-East Asia – Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam; South Asia – India, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka; Central and South-West Asia – Afghanistan, Armenia, Azerbaijan, Georgia, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey, Uzbekistan; North-East Asia – China, Democratic People's Republic of Korea, Japan, Mongolia, Republic of Korea, Russian Federation.

^b Includes the Russian Federation.

In absolute terms, the North-East Asian subregion has the greatest lengths of Asian Highway, totalling 50,422 km, as two large countries (the Russian Federation and China) are grouped in this subregion. The South Asian subregion has the shortest length, totalling 20,783 km.

Figure 5 shows the different classes of highways by subregion. North-East Asia is unique in having a much greater length of Primary standard roads than Class I, and a higher number of Class II roads than Class III roads. The majority of South Asia's road network is at Class III standard, while South-East Asia has the highest percentage of its network at Class I or Primary (around 20 per cent).

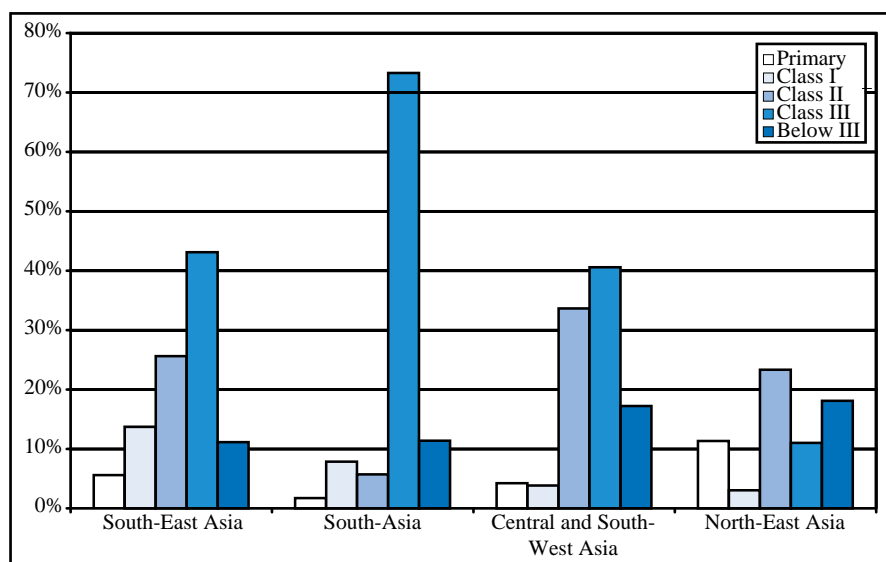


Figure 5. Asian Highway classes by subregion

Figure 6 shows the percentage of highways not conforming to the minimum design standards (below Class III standards) by subregion. The figure clearly indicates that the South-East Asian and South Asian subregions have a below-average percentage of Asian Highway routes that do not conform to the minimum standards. In contrast, the North-East Asian, Central Asian and South-West Asian subregions have above-average percentages of Asian Highway routes that do not conform to the minimum standards.

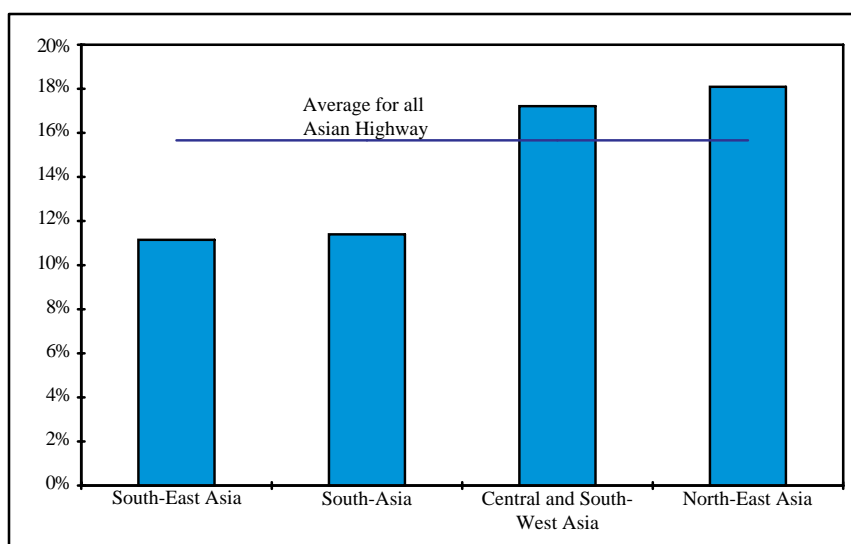


Figure 6. Asian Highway routes not conforming to the minimum standards, by subregion

In addition to the requirement for the Asian Highway to be upgraded in order to meet the specified design standards, the Parties to the Agreement are required to put in place the Asian Highway route signs within five years from the date that the Agreement enters into force for each State concerned. The provision provides flexibility in terms of selecting the background and inscription colour of the Asian Highway route sign as member States are using different road sign designs. Figure 7 shows some suggested Asian Highway route signs.



Figure 7. Asian Highway route signs

C. Status of the Asian Highway network by subregion

1. South Asia

The South Asian subregion⁴ comprises Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka. The total length of the Asian Highway routes in South Asia is 20,783 km, with India and Pakistan having the greater lengths due to their larger relative sizes.

The important international Asian Highway routes in South Asia that connect with the neighbouring subregions are:

- AH1 – New Delhi – Lahore – Islamabad – Peshawar – Kabul.
- AH1 – New Delhi – Lahore – Rohri – Quetta – Taftan – Zahedan.
- AH1 – Dhaka – Jessore – Benapol – Kolkata.
- AH1 – Tamu – Imphal – Dimapur – Shillong.
- AH41/AH2/AH42 – Mongla – Hatikamul – Banglabandh – Kakarbhatta – Narayangarh – Kathmandu.
- AH4 – Karachi – Lahore – Hassanabdal – Khunjarab – Kashi.
- AH48 – India (Siliguri – Phentsholing – Thimpu).⁵
- AH1/AH42 – Kolkata – Barhi – Raxual – Birgunj – Kathmandu – Kodari – Lhasa.
- AH43 – Matara – Colombo – Dhaumbala – Madurai – Bangalore – Agra – New Delhi.

Table 4 shows the status of the Asian Highway routes in the South Asian subregion. Of the total kilometres of Asian Highway in the subregion, the majority currently meet the Class III standard (double lane, paved road), while 2,511 km are below Class III, or approximately 12 per cent of the network. Pakistan and Bangladesh have (in absolute terms) the the greatest number of kilometres below Class III. Pakistan, however, also has the highest number of kilometres currently at Class I standard or above. Table 4 shows that 1,984 km of the Asian Highway network in South Asia are Class I standard or above, representing nearly 10 per cent of the total network in the subregion.

⁴ Maldives, which is also part of South Asia due to its geographical location, is not participating in the Asian Highway.

⁵ The Asian Highway in Bhutan has been extended to Thimphu. India has indicated no objection to designating Siliguri – Hashimara – Jaigaon in India as Asian Highway route linking to Bhutan which will be considered by the next session of the Working Group on the Asian Highway.

Table 4. Status of the Asian Highway routes in South Asia

(Kilometres)

Country	Primary	Class I	Class II	Class III	Below III	Total
Bangladesh	–	20	441	476	868	1 805
Bhutan	–	6	–	–	161	167
India	–	484	–	10 869	105	11 458
Nepal	–	–	311	1 003	12	1 326
Pakistan	358	1 116	160	2 569	1 174	5 377
Sri Lanka	–	–	269	190	191	650
Total	358	1 626	1 181	15 107	2 511	20 783
<i>Percentage</i>	<i>1.7</i>	<i>7.8</i>	<i>5.7</i>	<i>72.7</i>	<i>12.1</i>	<i>100.0</i>

The classification of the Asian Highway in South Asia is shown in figure 8.

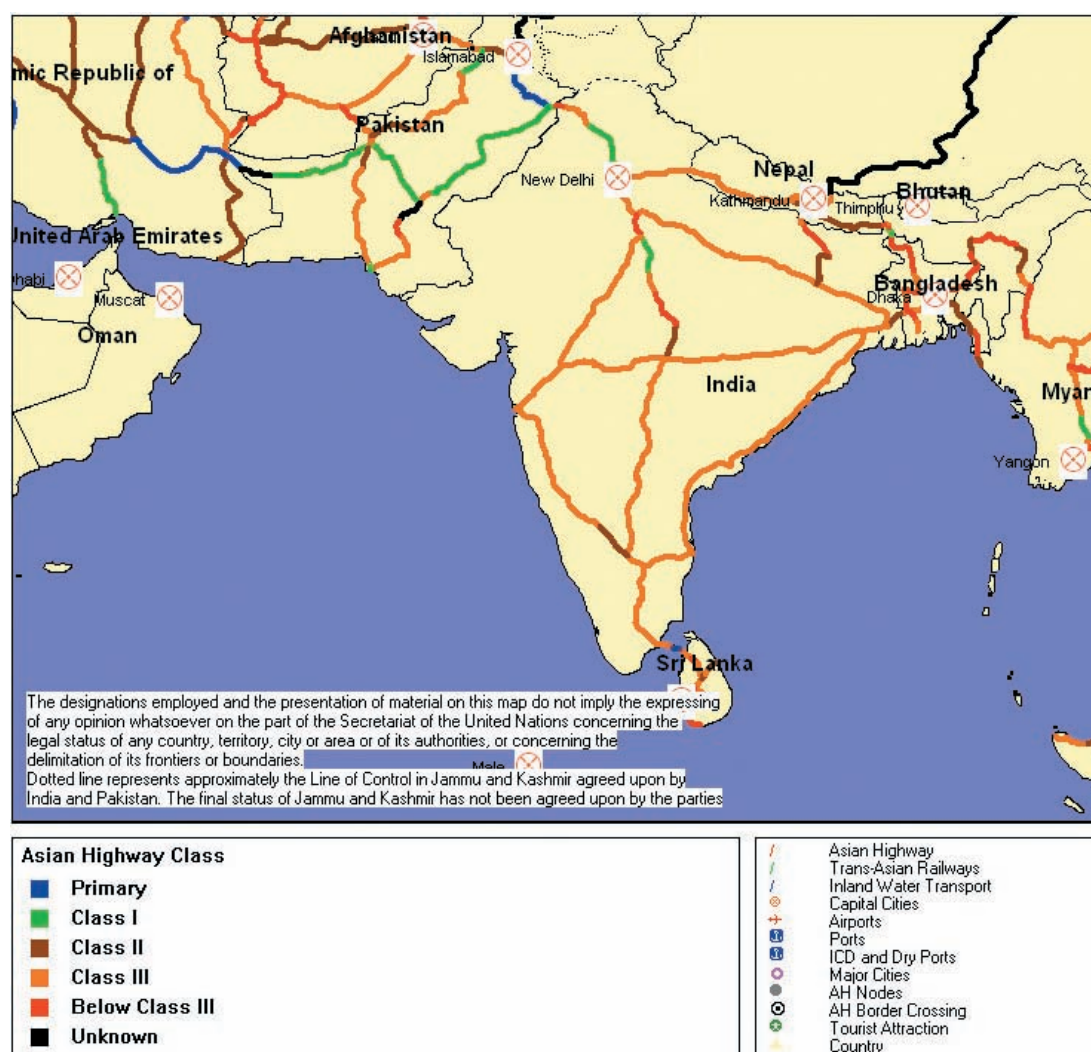


Figure 8. Existing classes of the Asian Highway in South Asia

Figure 9 shows an AH1 route in South Asia. The pavement condition of each of the routes in South Asia is listed in figure 10. As indicated in figure 10, different pavement conditions exist; the bad pavement conditions are shown in red colour, indicating the need for improvement by pavement overlay or rehabilitation in that section.



Figure 9. A section of the Asian Highway route in South Asia (Pakistan)

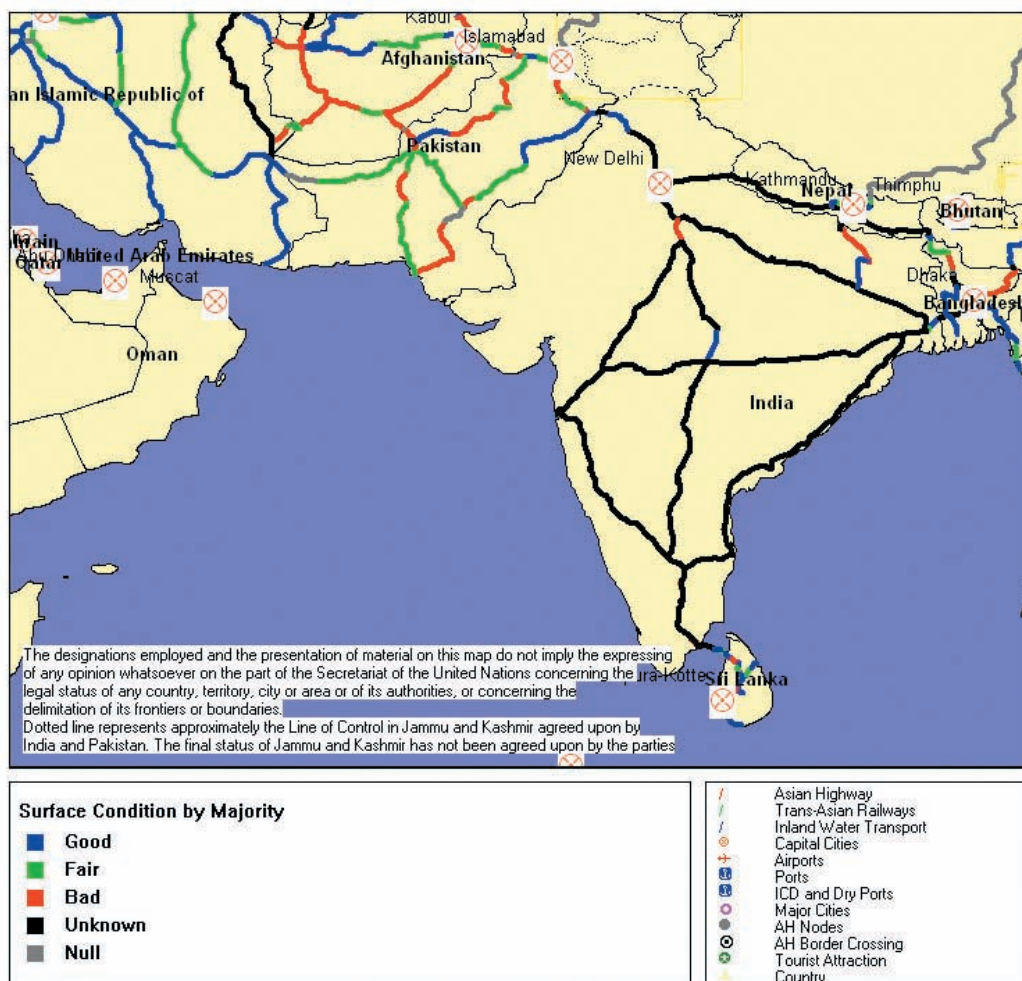


Figure 10. Pavement conditions of the Asian Highway in South Asia

Table 5 outlines the sections of the Asian Highway in each country that carry the highest average annual daily traffic (AADT). Figure 11 shows the level of traffic along the Asian Highway in South Asia.

In terms of overall volume, the highest volume segments of the Asian Highway in South Asia are the AH43 section from Colombo to Panadura in Sri Lanka (48,028 vehicles per day), the AH47 link from Panvel to Pune in India (46,401 vehicles per day) and AH2 from Dhaka (North) to Joydevpur in Bangladesh (46,231 vehicles per day).

Table 5. Sections of the Asian Highway carrying the heaviest traffic

Country	AH No.	AH section	AADT	AH Class
Bangladesh	AH2	Dhaka (North) – Joydevpur	46 231	II
Bhutan	AH48	Phuentshpling – Thimphu	1 168	Below III
India	AH47	Panvel – Pune	46 401	II
Nepal	AH42	Kathmandu Ring Road – Kathmandu	34 705	I
Pakistan	AH1	Islamabad Intersection – Hassanabdal	30 391	I
Sri Lanka	AH43	Colombo – Panadura	48 028	II

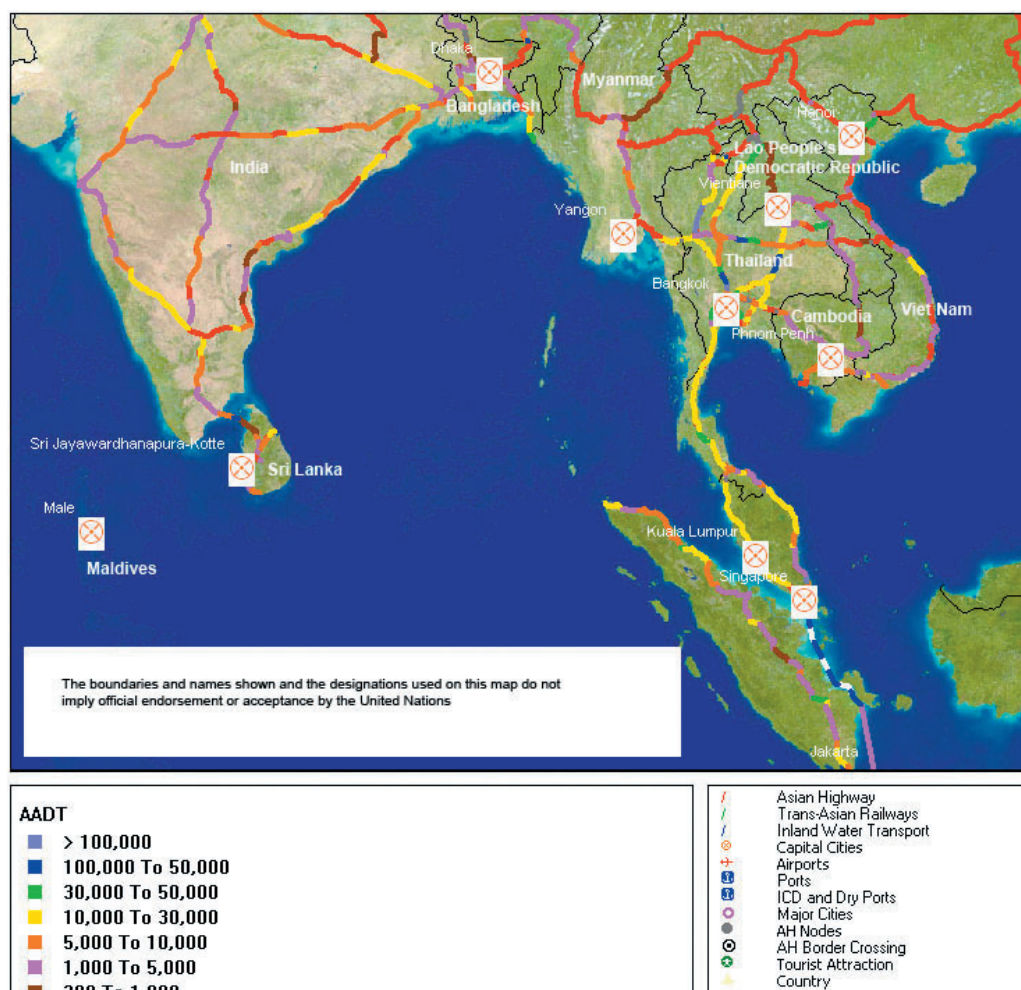


Figure 11. Traffic along the Asian Highway routes

2. Central and South-West Asia

The Central and South-West Asia subregion comprises Afghanistan, Armenia, Azerbaijan, Georgia, the Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan. The subregion currently has some 46,500 km of the Asian Highway, with the Islamic Republic of Iran and Kazakhstan having the greatest number of kilometres (due to their relative sizes).

Some of the main Asian Highway routes in the subregion are outlined below.

- AH1 – Islamabad – Torkham – Kabul – Dilaram – Herat – Mashhad – Tehran – Askala – Ankara – Kapikule to Europe.
- AH2 – Quetta – Taftan – Kerman – Yazd – Qom – Hamadan – Khosravi.
- AH6/AH30 – East-West route from Vladivostok port to Moscow and to Europe.
- AH8 – Bandar Emam – Saveh – Astara – Baku – Astrakhan – Moscow – St. Petersburg.
- AH70 – Bandar Abbas – Yazd – Turkmenbashi – Aktau – Beyneu – Atyaru – Astrakhan.
- AH75 – Chabahar – Zahedan – Mashhad – Mary – Bukhara – Tashkent.
- AH7 – Karachi – Quetta – Kabul – Nizhniy Panj – Dushanbe – Tashkent – Chaldovar – Astana.
- AH5 – Urumqi – Almaty – Bishkek – Tashkent – Ashgabat – Turkmenbashi-Baku – Tbilisi – Poti – Samsun – Istanbul – Kapikule.
- AH75/AH71/AH1/AH76/AH62 – Chabahar – Herat – Mazar-e-Sharif – Termez – Tashkent.
- AH82/81 – Eyvoghli – Jolfa – Meghri – Yerevan – Ashtarak – Tbilisi – Larsi.

The status of the Asian Highway in Central and South-West Asia is shown in table 6. Of the total kilometres of Asian Highway in the subregion, the majority (approximately 41 per cent) is Class III standard (double lane). A total of 8,000 km (around 17 per cent) of the Asian Highway network are below the minimum Class III standard. Afghanistan and Kazakhstan have (in absolute terms) the most kilometres below Class III. Some 3,800 km in the subregion are at Class I standard or above, representing around 8 per cent of the network in Central and South-West Asia.

Table 6. Status of the Asian Highway routes in Central and South-West Asia

(Kilometres)

Country	Primary	Class I	Class II	Class III	Below III	Other	Total
Afghanistan	–	–	621	77	3 549	–	4 247
Armenia	–	142	377	479	–	–	998
Azerbaijan	–	82	1 012	348	–	228	1 670
Georgia	–	8	788	358	–	–	1 154
Iran (Islamic Republic of)	752	1 067	9 334	–	–	–	11 153
Kazakhstan	–	72	767	10 004	2 346	–	13 189
Kyrgyzstan	–	–	464	511	720	–	1 695
Tajikistan	–	–	289	603	1 033	–	1 925
Turkey	1 212	155	1 219	2 685	–	–	5 271
Turkmenistan	–	–	–	2 180	24	–	2 204
Uzbekistan	–	255	765	1 618	328	–	2 966
Total	1 964	1 781	15 636	18 863	8 000	228	46 472
<i>Percentage</i>	<i>4.2</i>	<i>3.8</i>	<i>33.6</i>	<i>40.6</i>	<i>17.2</i>	<i>0.5</i>	<i>100.0</i>

Figure 12 shows a section of the Asian Highway route in Central Asia while the different classes of the Asian Highway in the subregion are shown in figure 13.



Figure 12. A section of the Asian Highway route in Central Asia (Kyrgyzstan)



Figure 13. Classification of the Asian Highway in Central and South-West Asia

Figure 14 shows two Asian Highway routes in Central Asia (Kazakhstan and Tajikistan).



Figure 14. Sections of Asian Highway routes in Central Asia (Kazakhstan and Tajikistan)

The pavement surface conditions of the Asian Highway routes in Central and South-West Asia are displayed in figure 15.

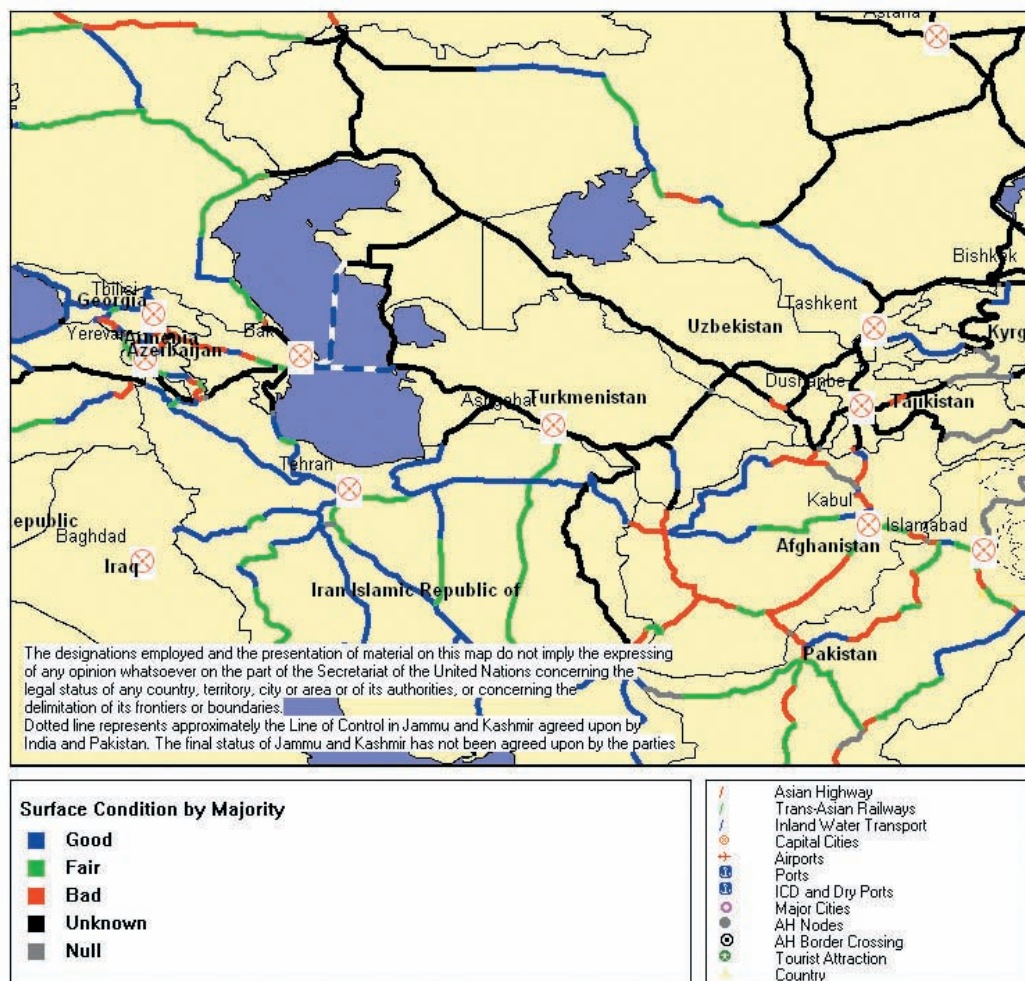


Figure 15. Surface conditions of the Asian Highway in Central and South-West Asia

Table 7 outlines the section of Asian Highway in each country that carries the highest traffic volume. In terms of overall volume, the highest volume segments of the Asian Highway in Central and South-West Asia are those located around major cities as well as the routes that connect with high-population areas. Most of the sections of highway carrying highest traffic have either Primary or Class I classification roads with good pavement condition.

Table 7. Traffic along the Asian Highway in Central and South-West Asia

Country	AH No.	AH Section	AADT	AH Class
Armenia	AH81	Yerevan – Ararat	12 100	I
Azerbaijan	AH8	Sumgayit – Baku (ferry terminal)	45 332	I
Iran (Islamic Republic of)	AH1	Tehran – Karaj	45 664	P
Kazakhstan	AH5	Almaty – Kaskelen	8 446	I
Kyrgyzstan	AH5	Bishkek – Kara Balta	20 976	I, II
Tajikistan	AH65	Kofirnigan – Dushanbe	8 700	I, II
Turkey	AH1	Istanbul (Anadolu Otoyolu Jct) – Istanbul (Mahmutbey Dogu Int)	171 794	P
Uzbekistan	AH63	Gazli – Bukhara	18 550	I , II, III

3. South-East Asia

The South-East Asian⁶ subregion comprises Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam. The subregion currently has some 23,400 km of Asian Highway, with Thailand, Indonesia, the Philippines and Myanmar having the largest number of kilometres. Some of the main Asian Highway routes forming international transport corridors in the subregion are outlined below.

- AH1 – Beijing – Guangzhou – Nanning – Youyiguan – Huu Nghi – Ha Noi – Hue – Da Nang – Hoi An – Nha Trang – Ho Chi Minh City – Phnom Penh-Bangkok – Tak – Yangon – Mandalay – Tamu.
- North-South routes:
 - (a) AH2 – Denpasar – Jakarta – Singapore – Kuala Lumpur – Hat Yai – Bangkok – Chiang Rai – Kyaing Tong – Meiktila – Mandalay – Tamu.
 - (b) AH3/AH13 – Kunming – Jinghong – Oudomxai – Uttaradit – Phitsanulok – Bangkok.
 - (c) AH3/AH12/AH19 – Kunming – Jinghong – Oudomxai – Vientiane – Khon Kaen – Kabin Buri – Laem Chabang.
 - (d) AH11 – Vientiane – Seno – Pakse – Stung Treng – Phnom Penh – Sihanoukville.
 - (e) AH14/AH1 – Kunming – Muse – Lashio – Mandalay – Payaggi – Yangon.
- East-West route AH16 – Dong Ha – Seno – Khon Kaen – Phitsanulok – Mae Sot – Myanmar.
- AH26 – Laoag – Manila – Matnog – ferry – Allen – Tacloban (– Ormoc – ferry – Cebu) – Liloan – ferry – Surigao – Davao (– Cagayan de Oro – General Santos – Zamboanga).
- AH25/AH2 – Bandar Aceh – Dumai – Jambi – Tanjung Karang – Jakarta – Semarang – Surabaya – Denpasar.

The current status of the Asian Highway in South-East Asia is shown in table 8. The majority of the network (10,170 km or about 43 per cent) in the subregion is Class III standard. Just over 2,600 km (11 per cent) of the Asian Highway network in the subregion are below the minimum Class III standard. Some 4,660 km are Class I standard or above, representing more than 19 per cent of the network in the subregion.

⁶ Brunei Darussalam, which is part of South-East Asia, has shown interest in joining the Asian Highway network and is already participating in related activities and meetings.

Table 8. Classification of the Asian Highway in South-East Asia

(Kilometres)

Country	Primary	Class I	Class II	Class III	Below III	Other	Total
Cambodia	–	–	398	743	199	–	1 340
Indonesia	335	18	1 600	1 965	–	34	3 952
Lao People's Democratic Republic	–	–	–	2 375	–	3	2 378
Malaysia	795	67	733	–	–	–	1 595
Myanmar	–	147	144	983	1 729	–	3 003
Philippines	–	17	27	2 872	451	150	3 517
Singapore	11	8	–	–	–	–	19
Thailand	182	2 572	1 226	1 128	–	4	5 112
Viet Nam	–	408	1 915	104	251	–	2 678
Total	1 323	3 237	6 043	10 170	2 630	191	23 594
<i>Percentage</i>	<i>5.6</i>	<i>13.7</i>	<i>25.6</i>	<i>43.1</i>	<i>11.1</i>	<i>0.8</i>	<i>100.0</i>

The Asian Highway routes and their status in South-East Asia are shown in figures 16a-16c. Figure 17 shows two sections of Asian Highway routes in South-East Asia.

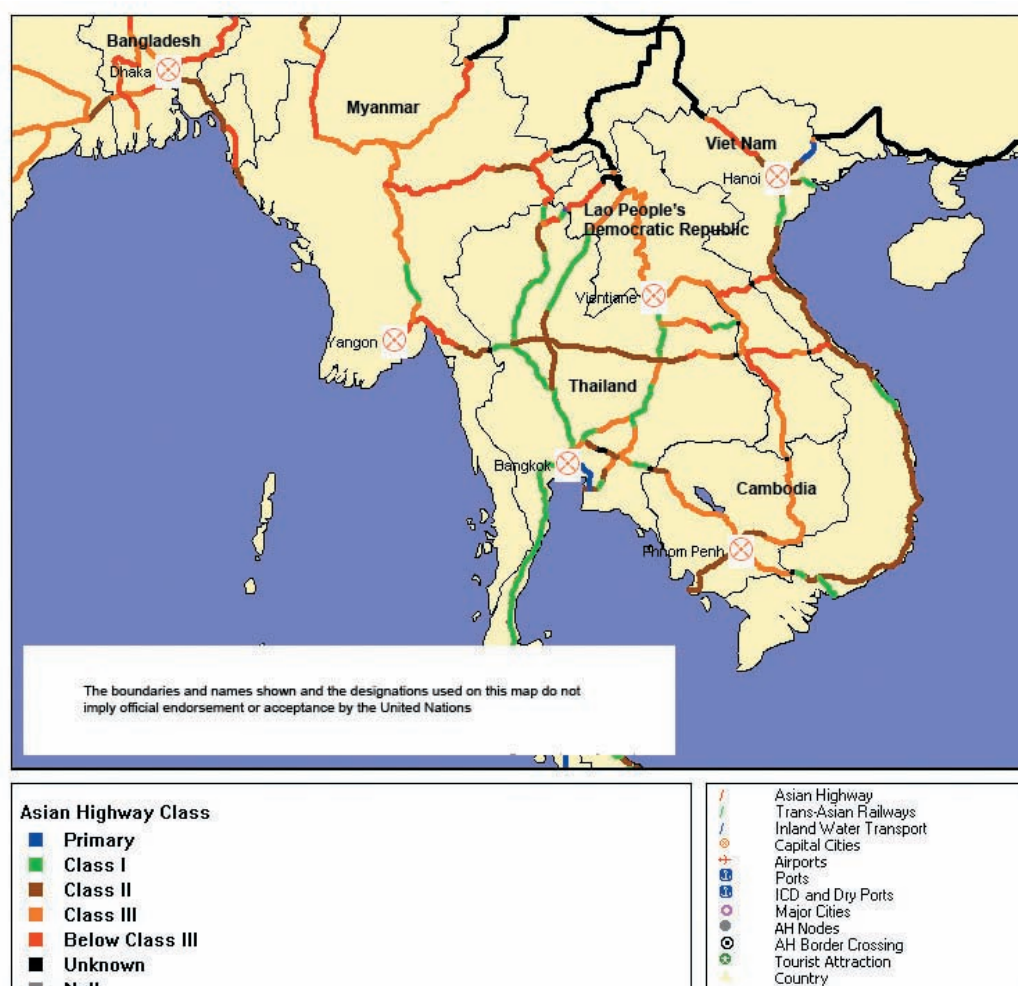


Figure 16a. Status of the Asian Highway in South-East Asia

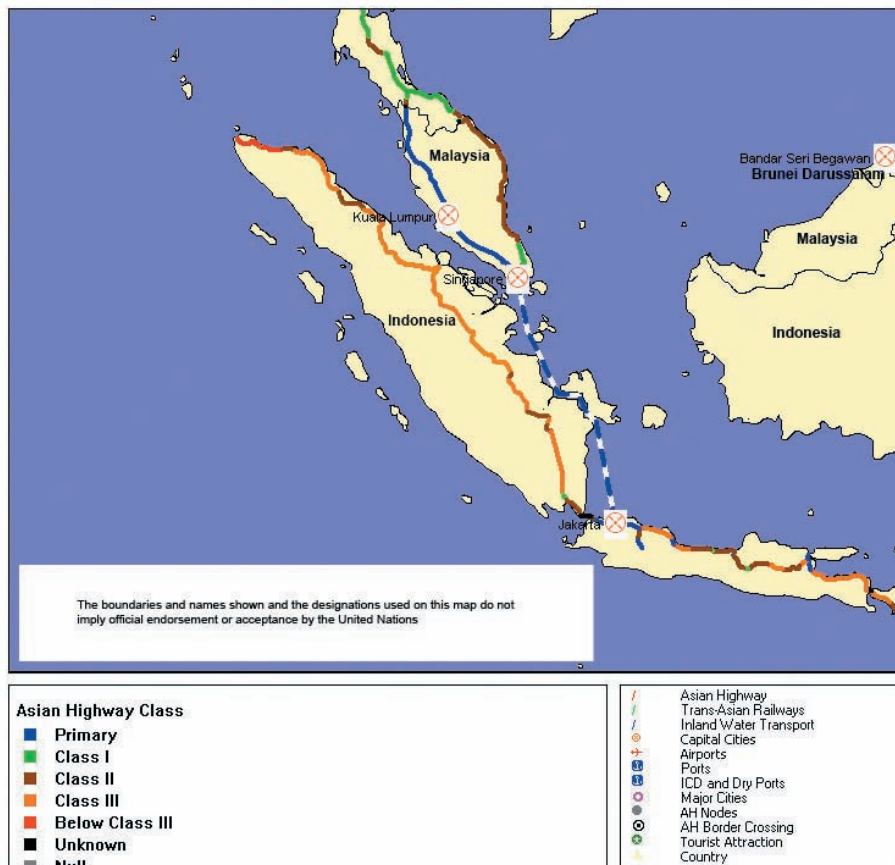


Figure 16b. Status of the Asian Highway in South-East Asia

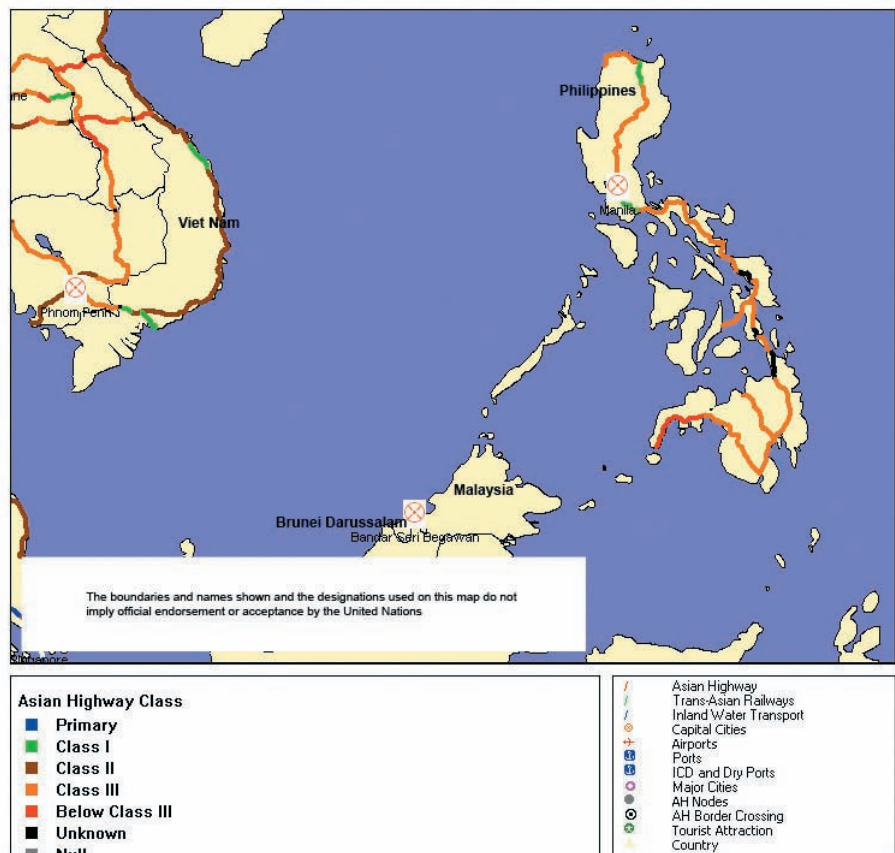


Figure 16c. Status of the Asian Highway in South-East Asia



**Figure 17. Sections of Asian Highway routes in South-East Asia
(Cambodia and Viet Nam)**

Table 9 outlines the section of Asian Highway in each country that carry the highest traffic volumes. Many of these segments are in good, at Class III or above standards and are located near highly populated cities, and those routes that connect these high population areas.

Table 9. Asian Highway links carrying the highest traffic volumes

Country	AH No.	AH Section	Km	AADT	AH class
Cambodia	AH1	Neak Loeung – Phnom Penh	61	41 538	III
Indonesia	AH2	Cawang – Tomang	16	282 861	P
Lao People's Democratic Republic	AH16	Muang Phin – Seno	127	1 804	III
Malaysia	AH18	Johor Bahru Causeway – Johor Bahru Interchange	9	146 739	I
Myanmar	AH1	Payagyi – Nyaunglebin	64	6 865	III
Philippines	AH26	Luneta, Manila – South Expressway	8	166 531	I
Singapore	AH2	Anak Buki Interchange – Woodlands Check post	11	64 400	P, I
Thailand	AH2	Nakhon Pathom – Bangkok West	25	380 084	I
Viet Nam	AH1	Hanoi – Phu Ly	46	15 201	I

4. North-East Asia

The North-East Asian subregion, which comprises China, the Democratic People's Republic of Korea, Japan, Mongolia, the Republic of Korea and the Russian Federation, currently has some 50,400 km of the Asian Highway, with China and the Russian Federation accounting for the largest number of kilometres.

Some of the main Asian Highway routes forming international transport corridors in North-East Asia are outlined below.

- AH4 – Novosibirsk – Barnaul – Tashanta – Ulaanbaishint – Hovd – Yarantai – Urumqi – Kashi – Honquiraf.
- AH3 – Ulan – Ude – Altanbulag – Ulaanbaatar – Choir-Zamin Uud – Erenhot – Beijing – Tanggu.
- AH1 – Tokyo – Osaka – Fukuoka – ferry – Busan – Daejeon – Seoul – Gaesong – Pyongyang – Sinuiju – Dandong – Shenyang – Beijing.
- AH6 – Nahodka – Razdolnoe – Ussuriysk – Suifenh – Harbin – Manzhouli – Chita – Ulan – Ude – Omsk – Moscow.
- AH30 – Khasan – Hasan – Razdolnoe – Ussuriysk – Khabarovsk.
- AH31 – Dalian-Shenyang – Changchun – Harbin – Heihe – Belogorsk.
- AH32 – Sonbong – Wonjong – Hunchun – Changchun – Arshan – Numreg – Sumer – Choybalsan – Ulaanbaatar – Uliastay – Hovd.

The status of the Asian Highway in North-East Asia is shown in table 10. The subregion has 11,767 km of the network (23 per cent) at Class II standard. Just over 9,100 km (18 per cent) of the network are below the minimum Class III standard. Some 6,300 kilometres are Class I standard or above, representing just over 14 per cent of the network in the subregion.

Table 10. Status of the Asian Highway routes in North-East Asia

(Kilometres)

Country	Primary	Class I	Class II	Class III	Below III	Other	Total
China ^a	4 140	189	2 749	2 008	1 443	15 400	25 929
Democratic People's Republic of Korea	–	–	–	–	–	1 320	1 320
Japan	1 111	–	–	–	–	–	1 111
Mongolia	–	–	440	345	3 501	–	4 286
Republic of Korea	466	197	244	–	–	–	907
Russian Federation	–	1 147	8 334	3 210	4 178	–	16 869
Total	5 717	1 533	11 767	5 563	9 122	16 720	50 422
<i>Percentage</i>	<i>11.3</i>	<i>3.0</i>	<i>23.3</i>	<i>11.0</i>	<i>18.1</i>	<i>33.2</i>	<i>100.0</i>

^a Of the total for China, Asian Highway routes comprise 10,529 km and potential Asian Highway routes comprise 15,400 km.

Figure 18 shows the Asian Highway routes and their classification in North-East Asia. The routes in Japan and the Republic of Korea are either Primary or Class I. The routes in Mongolia are mostly Class III and below. Figure 19 shows a section of AH4 near Yarantai in western Mongolia being upgraded to Class III standard. Figure 20 shows the pavement condition of the Asian Highway routes in North-East Asia. Figure 21 shows a section of route AH4 in Mongolia near Ulaanbaishint, the pavement of which needs from a gravelled to a bituminous surface.



Figure 18. Asian Highway routes and classification in North-East Asia



Figure 19. Upgrading a section of AH4 to Class III in North-East Asia (Mongolia)



Figure 20. Pavement conditions of the Asian Highway in North-East Asia



Figure 21. Gravelled section of AH4 in North-East Asia (Mongolia)

Table 11 outlines the section of Asian Highway in each country that carry the highest traffic volumes. Many of these segments are in good condition, at Class I or above and are located around highly populated cities and connecting these cities.

Table 11. Asian Highway sections carrying the highest traffic volumes

Country	AH No.	AH Section	Km	AADT	AH class
Japan	AH1	Yokohama Machida Interchange – Atsugi Interchange	15	117 446	P
Mongolia	AH3	Ulaanbaatar – Nalyh	37	1 728	III
Republic of Korea	AH1	Chongju – Pyongtaek	55	104 000	P
Russian Federation	AH6	Ryazan – Moscow	183	30 125	I, II