

Table 4 Road transport

Indicator	Unit	Cambodia		China		Indonesia		Lao PDR		Mongolia		Philippines		Thailand		Vietnam		
		1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	
Rd1	Total Road Network	kilometers	—	38,257	1,278,474	1,809,828	355,363	368,263	22,788	31,210*	49,250*	49,308*	199,950*	202,205*	57,233	63,730	207,264	229,488
Rd2	Motorways, Highways, Main or National Roads	kilometers	—	4,757	123,519	157,644	27,977	27,616	—	7,140	11,063	11,121	28,162	30,434	—	—	15,284	17,295
Rd3	Secondary or Regional Roads	kilometers	—	5,700	189,961	223,425	47,863*	48,905*	—	10,350	38,187	38,187	28,503*	26,926*	—	—	16,403	21,840
Rd4	Other roads: Urban	kilometers	—	0	—	—	—	—	1,760	604*	627*	5,767*	7,052*	—	—	45,577	60,353	
Rd5	Other roads: Rural	kilometers	—	27,800	920,560	1,371,235	279,523*	291,841*	—	11,360	—	—	137,518*	137,793*	—	—	130,000	130,000
Rd6	Paved roads: Total	kilometers	—	1,648	1,190,086	1,647,412	168,072	211,998	3,544	4,497*	3,572	3,742	39,316	43,754	52,969	61,523	—	—
Rd7	Paved Motorways, Highways, Main or National Roads	kilometers	—	1,333*	123,519	157,644	—	—	3,033	3,771	2,685	2,708	16,029	19,228	—	—	—	—
Rd8	Paved Secondary or Regional Roads	kilometers	—	315	189,961	223,425	—	—	117	228	—	—	5,825	5,606	—	—	—	—
Rd9	Paved Other Roads: Urban	kilometers	—	0	—	—	—	—	394	429	604*	627*	4,048	5,427	—	—	—	—
Rd10	Paved Other Roads: Rural	kilometers	—	—	832,172	1,266,343	—	—	—	14	—	—	13,414	13,493	—	—	—	—
Rd11	Roads in "Good" or "Regular" (fair) Condition: Total	kilometers	—	16,957	—	—	—	197,474	9,532	17,746	1,678	1,802	—	—	57,233	63,730	—	—
Rd12	Motorways, Highways, Main or National Roads in "Good" or "Regular" (fair) Condition	kilometers	—	1,988	—	—	—	20,712*	2,715	5,460	1,283	1,405	—	—	—	—	—	—
Rd13	Secondary or Regional Roads in "Good" or "Regular" (fair) Condition	kilometers	—	3,389*	—	—	—	36,679*	2,691	6,424	396	397	—	—	—	—	—	—
Rd14	Other Roads: Urban in "Good" or "Regular" (fair) Condition	kilometers	—	—	—	—	—	—	4,126*	1,493	340*	353*	—	—	—	—	—	—
Rd15	Other Roads: Rural in "Good" or "Regular" (fair) Condition	kilometers	—	11,580	—	—	—	140,084*	0	4,369	—	—	—	—	—	—	—	—

(Continued on the next page)

Road transport

Rd1: Road Total Road Network—Kilometer length of the road network. The road network includes all roads in a given area.

- i Country Notes
 - i Philippines—National, provincial, city, municipal, and barangay roads
 - ii Lao PDR—Includes 600 kilometers (km) of “special roads” that aren’t included in Rd2 through Rd5
 - iii Mongolia— The Ministry of Road, Transport, and Tourism classifies roads according to national and regional roads only. This figure does not include rural roads.

Rd2: Motorways, Highways, Main Roads, or National Roads—Motorways include roads specifically designed and built for motor traffic, which do not serve properties bordering on it, and which (1) are provided, except at special points or temporarily, with separate carriage-ways for the two directions of traffic, separated from each other, either by a dividing strip not intended for traffic, or exceptionally by other means;(2) do not cross at level with any road, railway or tramway track, or footpath; and (3) are specially identified by signposts as motorways and are reserved for specific categories of road motor vehicles. Entry and exit lanes of motorways are included irrespectively of the location of the signposts. Highways, main, or national roads include kilometer length of A-level roads. A-level roads are roads outside urban areas that are not motorways but belong to the top-level road network. A-level roads are characterized by a comparatively high-quality standard, either non divided roads with oncoming traffic or similar to motorways. In most countries, these roads are financed by the federal or national government.

Rd3: Secondary or Regional Roads—Kilometer length of roads that are the main feeder routes into—and provide the main links among—highways, main roads, or national roads.

- Country Notes
 - i Indonesia—Provincial roads
 - ii Philippines—Provincial roads

Rd4: Other Urban Roads—Length of roads within the boundaries of a built-up area, which is an area with entries and exists specially identified by signposts as such.

- Country Notes
 - i Philippines—City roads
 - ii Mongolia— The national and regional network in Rd2 and Rd3includes urban roads.

Rd5: Other Rural Roads—Length of all remaining roads in a country not included in categories Rd2, Rd3, and Rd4

- Country Notes
 - i Indonesia—Kabupaten roads
 - ii Philippines—Municipal and barangay roads

Rd6: Total Paved Roads—Length of all roads that are surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete or with cobblestones. Aggregate of Rd7, Rd8, Rd9, and Rd10.

- Country Notes
 - i Lao PDR—Includes 55 km of paved “special roads” not captured in Rd7 though Rd10

Rd7: Paved Motorways, Highways, Main Roads, or National Roads—Length of highways, main roads, or national roads that are paved.

- Country Notes
 - i Cambodia—Includes national roads 1–7

Rd8: Paved Secondary or Regional Roads—Length of secondary or regional roads that are paved.

Rd9: Paved Other Urban Roads—Length of other urban roads that are paved.

- Country Notes
 - i Mongolia—A portion of these roads are national roads in urban areas and are included in Rd7

Rd10: Paved Other Rural Roads—Length of other rural roads that are paved.

Rd11: Total Roads in “Good” or “Regular” (Fair) Condition—Total length of roads that are in “good” or “regular” condition. “Roads in good condition” include the following: Paved roads, largely free of defects, requiring only routine maintenance and perhaps surface treatment. Unpaved roads that need only routine grading and localized repairs. “Roads in regular (or fair) condition” include the following: Paved roads with defects and weakened structural resistance. They require resurfacing of the pavement, but without the need to demolish the existing pavement. Unpaved roads that require grading and additional new gravel, plus drainage repair in some places. Aggregate of Rd12, Rd13, Rd14, and Rd15.

Rd12: Motorways, Highways, Main Roads, or National Roads in “Good” or “Regular” (Fair) Condition—Length of highways, main roads, or national roads in “good” or “fair” condition.

- Country Notes
 - i Indonesia—75 percent of the national and provincial network in “good” or “fair” condition; assumes same percentage across both categories

Rd13: Secondary or Regional Roads in “Good” or “Regular” (Fair) Condition—Length of secondary or regional roads in “good” or “fair” condition.

- Country Notes
 - i Cambodia—Includes national B and provincial trafficable roads Indonesia—75 percent of the national and provincial network in “good” or “fair” condition; assumes same percentage across both categories

Rd14: Other Urban Roads in “Good” or “Regular” (Fair) Condition—Length of other urban roads in “good” or “fair” condition.

- Country Notes
 - i Lao PDR—Includes other rural and urban roads
 - ii Mongolia—These roads are national and regional roads in urban areas and are included in those figures (Rd12 and Rd13)

Rd15: Other Rural Roads in “Good” or “Regular” (Fair) Condition—Length of other rural roads in “good” or “fair” condition.

- Country Notes
 - i Indonesia—38 percent of the Kabupaten road network is in “good” or “fair” condition

Rd16: Does an institution that advises the Minister on various matters pertaining to management (and financing) of roads, namely a National Roads Board (NRB) or a Road Council/Highways Agency Board exist? No definition needed.

Rd17: Does the Main (National) Road Agency, responsible for the main road network, operate with a report published at least on an annual basis? No definition needed.

Rd18: Main (National) Road Agency Administration Cost—The amount of resources spent by the Main (National) Road Agency in conjunction with its own operation and service per year.

Rd19: Annual Road Expenditure—The total amount of expenditure on new construction and extension of existing roads, including reconstruction, renewal, and major repairs of roads per year.

- Country Notes
 - i Lao PDR—National roads only
 - ii Indonesia—Government expenditure only (includes national, provincial, district, and toll roads)
 - iii Philippines—Includes national and local roads
 - iv Thailand—Highway department only

Rd20: Capital Investment—The total amount of investment in the road sector to maintain sufficient capacity as well as increase capacity per year.

- Country Notes
 - i China—Capital investment in highway construction; does not include urban roads, which are under the jurisdiction of the Ministry of Construction
 - ii Indonesia—Government expenditure only (includes national, provincial, district, and toll roads)
 - iii Lao PDR—National roads only
 - iv Philippines—Includes national and local roads

Rd21: Maintenance Expenditure—The total expenditure for keeping roads in working order per year. This includes maintenance, patching, and running repairs (work relating to roughness of carriageway's wearing course, roadsides, and so on).

- Country Notes
 - i Cambodia—Includes all costs other than capital investment
 - ii Indonesia—Government expenditure only (includes national, provincial, district, and toll roads)
 - iii Lao PDR—National roads only
 - iv Philippines—Includes national and local roads

Rd22: Road Maintenance Requirement—The amount of financing required per year to keep roads in working order. This includes maintenance, patching, and running repairs (work relating to roughness of carriageway's wearing course, roadsides, shoulder, drains, structures, slopes, signs, and so on).

Rd23: Total Daily Traffic—Total number of road motor vehicles that move on a given network per day. When a road motor vehicle is being carried on another vehicle, only the movement of the carrying vehicle (active mode) is considered.

- Country Notes
 - i Mongolia—Calculated by multiplying the average traffic flow over 11,121 km of the road network

Rd24: Daily Traffic on Motorways, Highways, Main Roads, or National Roads—Total average daily road motor vehicle traffic on main/national highways

- Country Notes
 - i Mongolia—Calculated by multiplying the average traffic flow over 1,720 km of the main national road network [Ulaanbaatar (UB) Darhan, UB-Zuunmod, UB-Lun, UB-Baganuur]

Rd25: Daily Traffic on Secondary or Regional Roads—Total average daily road motor vehicle traffic on secondary/regional highways.

Rd26: Number of Rural People Living within 2 km of an All-Season Road—“With access” means that the distance from a village or household to an all-season road is no more than 2 km; that is, that a walk of no more than 20 minutes or so is required to reach an all-season road. An “all-season road” is a road that is passable by the prevailing means of rural transport (often a pickup or a truck that does not have four-wheel-drive) all year round. Predictable interruptions of

short duration during inclement weather (for example, heavy rainfall) are permitted, particularly on low-volume roads.

- Country Notes
 - i Thailand—Percentage of rural villages, not number of people

Rd27: Are there clear and reasonable processes for transport operators to be legally able to deliver different forms of transport service in a competitive manner? No definition needed.

- Country Notes
 - i Cambodia—Bidding processes are in place though real competition is doubtful

Rd28: Are road construction works and road traffic measures subject by law to a thorough appraisal (at least equivalent to the standards required for World Bank investment) of environmental impact and monitoring? No definition needed.

- Country Notes
 - i Cambodia—Decree is in place though implementation is doubtful
 - ii Indonesia—Processes in place though implementation is doubtful

Rd29: Is there a government-endorsed plan to improved road safety, which is published and being actively implemented? No definition needed.

- Country Notes
 - i China—A new road safety law was passed on October 28, 2003, and implemented in May 2004

Rd30: Number of Fatalities from Road Accidents—Number of people who were involved in any injury accident with at least one motor road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one person killed as a result of the accident and within 30 days of its occurrence. Included are collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles, and with one road vehicle alone. Included are collisions between road and rail vehicles. Multi vehicle collisions are counted as only one accident provided that any successive collisions happen at short intervals. Injury accident excludes accidents incurring only material damage.

Rd31: Are road construction works and road traffic measures subject by law to a thorough appraisal (at least equivalent to the standards required for World Bank investment) of social impact and monitoring? No definition needed.

Table 4 (Continued)

Indicator	Unit	Cambodia		China		Indonesia		Lao PDR		Mongolia		Philippines		Thailand		Vietnam		
		1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003	
Rd16	Does an institution that advises the Minister on various matters pertaining to management and financing of roads, namely a National Roads Board (NRB) or Road Council, Highways Agency Board exist?	Yes/No	N	N	N	N	Y	Y	N	N	N	Y	N	Y	N	Y	Y	Y
Rd17	Does the Main (National) Road Agency responsible for the main road network operate with a report published at least on an annual basis?	Yes/No	N	N	N	Y	N	N	—	—	Y	Y	Y	Y	Y	Y	—	—
Rd18	Main (National) Road Agency Administration Cost	Million US\$, Nominal	—	—	—	—	—	—	—	—	0.17	0.21	—	—	319	160	—	—
Rd19	Annual Road Expenditure	Million US\$, Nominal	5.0	37.5	—	44,836	426*	—	78*	71*	7.0	17	741*	665*	1,153*	527*	761	1,225
Rd20	Capital Investment	Million US\$, Nominal	2.8	29.7	26,190	38,836*	384*	—	73*	52*	5.2	14.9	602*	525*	939	220	710	1,138
Rd21	Maintenance Expenditure	Million US\$, Nominal	2.3*	7.7*	—	6,000	43*	—	5*	19*	1.8	2.1	137*	140*	214	307	51.90	87.00
Rd22	Road Maintenance Requirement	Million US\$, Nominal	—	—	9,463	14,111	—	475	—	15	—	6.4	—	—	558	518	—	—
Rd23	Daily Traffic: Total	Million vehicle kilometers	—	—	—	—	—	—	—	—	91*	188*	—	—	131,691	140,657	—	—
Rd24	Daily Traffic on Motorways, Highways, Main or National Roads	Million vehicle kilometers	—	—	—	—	—	—	—	—	12*	24*	—	—	45,995	—	—	—
Rd25	Daily Traffic on Secondary or Regional Roads	Million vehicle kilometers	—	—	—	—	—	—	—	—	—	—	—	—	85,697	—	—	—
Rd26	Number of rural people living within 2 km of an all-season road	million people	—	—	—	757	—	—	—	3.2	—	—	—	—	—	43% of rural villages*	—	—

Rd27	Are there clear and reasonable processes for transport operators to be legally able to deliver different forms of transport service in a competitive manner?	Yes/No	Y*	Y*	—	Y	Y	Y	—	Y	Y	Y	Y	Y	N	N	N	N
Rd28	Are road construction works and road traffic measures subject by law to a thorough appraisal [at least equivalent to the standards required for World Bank (WB) investment] of environmental impact and monitoring?	Yes/No	N*	Y*	N	N	N*	N*	N	Y	Y	Y	Y	Y	Y	Y	—	—
Rd29	Is there a government-endorsed plan to improve road safety, which is published and being actively implemented?	Yes/No	N	N	N	N*	N	N	N	N	—	—	N	N	Y	Y	Y	Y
Rd30	Number of Fatalities from Road Accidents	People	102	824	78,067	104,372	12,769	13,399	332	430	271	—	940	800	12,234	13,116	6,067	11,309
Rd31	Are road construction works and road traffic measures subject by law to a thorough appraisal (at least equivalent to the standards required for WB investment) of social impact and monitoring?	Yes/No	N	N	N	N	N	N	N	N	—	—	Y	Y	Y	Y	—	—