

VII. Environment

Environment includes the key issues of deforestation and greenhouse gas emissions. Indicators related to land use, forest resources, air and water pollution, and freshwater resources per capita are presented in the tables.

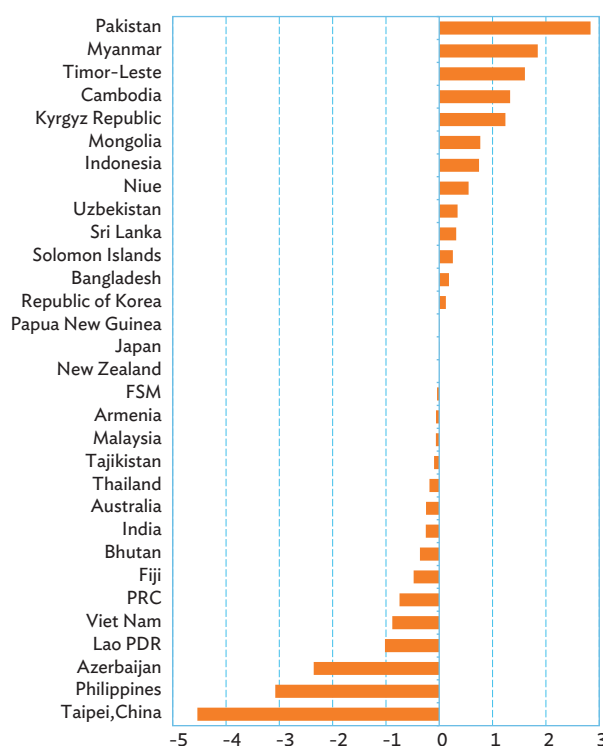
The amount of forested land increased in slightly more than half of Asia and Pacific economies in 2017

Forests cover about 30% of the earth's surface and are home to about 80% of the world's terrestrial biology. An estimated 1.6 billion people use forests for part of their livelihoods, and many millions more depend on forest resources for clean air and fresh water (UN-REDD 2020). Forests also play a crucial role in the fight against climate change by absorbing and storing more carbon dioxide (CO₂) than is currently in the atmosphere.⁵

In 2017, the total amount of forested land increased in 16 economies of Asia and the Pacific, while decreasing in 15 economies (Figure 2.7.1). The region's leaders in terms of reforestation in 2017 were Taipei,China (4.5%); the Philippines (3.1%); Azerbaijan (2.4%); and the Lao PDR (1.0%). The highest levels of deforestation occurred in Pakistan (2.8%), Myanmar (1.8%), Timor-Leste (1.6%), and Cambodia (1.3%).

On an aggregate basis, the amount of forested land in Asia and the Pacific reporting economies increased 0.2% in 2017 (Table 2.7.2).

Figure 2.7.1: Deforestation Rates in Select Economies of Asia and the Pacific, 2017 (%)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Notes: A negative deforestation rate implies an increase in the forested area compared with the previous year (i.e. "reforestation"). Deforestation rates for Afghanistan, Brunei Darussalam, the Cook Islands, Georgia, Kazakhstan, Kiribati, Maldives, the Marshall Islands, Nepal, Palau, Samoa, Singapore, Tonga, Turkmenistan, Tuvalu, and Vanuatu are zero.

Source: Table 2.7.2, Key Indicators for Asia and the Pacific 2020.

[Click here for figure data](#)

⁵ For more information about the role of forests in the Earth's environment, go to <https://www.un-redd.org/forest-facts>.

Carbon dioxide emissions per capita increased in more than four-fifths of Asia and Pacific economies between 2000 and 2016

Asia and the Pacific's rising aggregate CO₂ emissions are the result of increased power generation and use of energy-consuming technologies such as cars and air conditioning units (ADB 2013). From 2000 to 2016, the region's total CO₂ emissions more than doubled from 7.98 billion metric tons to 17.14 billion metric tons (Table 2.7.2).

From 2000 to 2016, only 8 of 47 regional economies with available data were successful in reducing CO₂ emissions on a per capita basis (Figure 2.7.2).

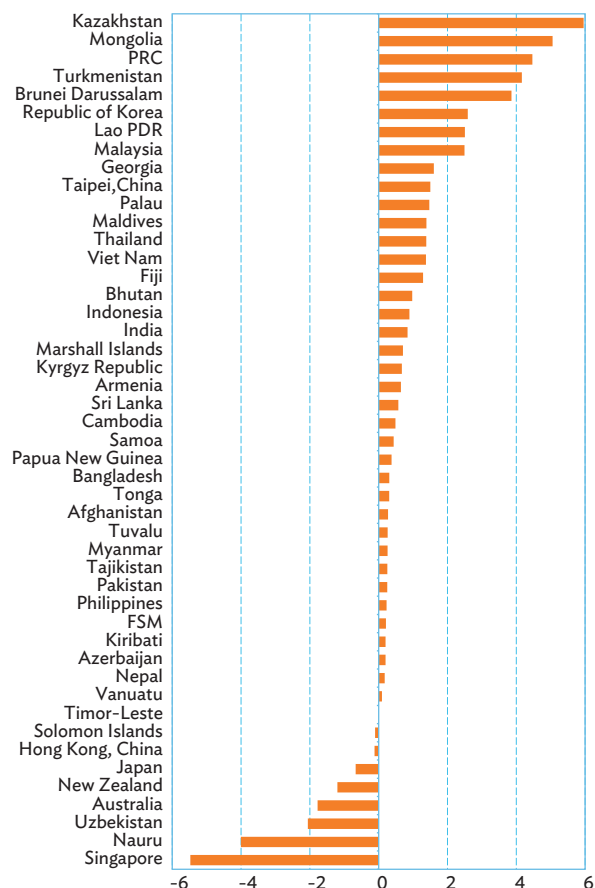
Reductions of more than 1,000 metric tons of CO₂ emissions per capita were achieved in Singapore (5,473 metric tons), Nauru (4,003 metric tons), Uzbekistan (2,059 metric tons), Australia (1,774 metric tons), and New Zealand (1,200 metric tons).

During the review period, the largest increases in CO₂ emissions per capita occurred in Kazakhstan (5,958 metric tons), Mongolia (5,056 metric tons), and the PRC (4,468 metric tons).

Data Issues and Comparability

Data on greenhouse gases (GHGs) have been compiled from the Emissions Database for Global Atmospheric Research, a joint project of the European Commission Joint Research Centre and the Netherlands Environmental Assessment Agency. This database applies a technology-based emissions factor approach consistently for all economies. It utilizes a consistent set of activity data for calculating various substances, GHGs, and air pollutants; and relies on the spatial allocation of emissions on a 0.1-degree by 0.1-degree grid.

Figure 2.7.2: Change in Carbon Dioxide Emissions in Select Economies of Asia and the Pacific, 2000–2016
(t'000 per capita)



t = metric ton, FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Notes: Only economies with available data for both 2000 and 2016 are included. For Taipei, China, data refer to 2001 and 2016. For Timor-Leste, data refer to 2002 and 2016.

Source: ADB estimates using Table 2.7.2 and Table 2.1.1, Key Indicators for Asia and the Pacific 2020.

[Click here for figure data](#)

There may be substantial uncertainty in economy-level data—especially for methane, nitrous oxide, and other GHGs—due to the limited accuracy of international activity data and the emission factors selected for calculating emissions on an economy level. However, since Intergovernmental Panel on Climate Change methodologies are consistently used, and data are based on international information sources, there is sound basis for comparability.⁶

⁶ For more information on the methodologies of the Emissions Database for Global Atmospheric Research, go to <https://edgar.jrc.ec.europa.eu/methodology.php>.

The Food and Agricultural Organization of the UN monitors land use and forestry data using its own expert sources, country reports, satellite imagery, and official data reported on through questionnaires conducted by the organization.

Land

Table 2.7.1: Agriculture Land Use
(% of total land area)

ADB Regional Member	Agricultural Land				Arable Land				Permanent Cropland			
	2000	2005	2010	2017	2000	2005	2010	2017	2000	2005	2010	2017
Developing ADB Member Economies												
Central and West Asia^a	68.2	67.2	67.7	67.9	14.6	14.1	13.9	14.3	0.4	0.4	0.4	0.4
Afghanistan	57.8	58.1	58.1	58.1	11.8	12.0	11.9	11.8	0.1	0.2	0.2	0.3
Armenia	46.5	56.4	60.9	58.9	15.8	16.0	15.8	15.7	1.3	1.8	1.9	2.1
Azerbaijan	57.4	57.6	57.7	57.8	22.1	22.3	22.8	25.3	2.9	2.7	2.8	3.0
Georgia	43.2	36.3	35.4	34.3	11.4	6.8	5.7	4.7	3.9	1.6	1.8	1.7
Kazakhstan	79.8	78.6	80.4	80.4	11.2	10.6	10.6	10.9	0.1	0.0	0.0	0.0
Kyrgyz Republic	55.9	56.0	55.3	55.0	7.1	6.7	6.7	6.7	0.3	0.4	0.4	0.4
Pakistan	47.6	46.7	45.7	48.0	40.3	39.1	38.1	40.5	0.9	1.0	1.1	1.0
Tajikistan	32.7	33.4	34.0	34.2	5.6	5.4	5.3	5.2	0.7	0.8	1.0	1.1
Turkmenistan	75.5	74.2	72.4	72.0	4.1	4.3	4.1	4.1	0.1	0.1	0.1	0.1
Uzbekistan	64.2	62.3	60.2	60.0	10.5	10.3	9.8	9.5	0.8	0.8	0.8	0.9
East Asia^a	59.2	57.2	56.9	57.9	11.0	10.4	9.9	11.0	1.0	1.2	1.3	1.5
China, People's Republic of	55.6	55.1	54.8	56.2	12.6	12.0	11.4	12.7	1.2	1.3	1.5	1.7
Hong Kong, China	6.7	6.7	5.2	4.9	4.8	4.8	3.3	3.0	1.0	1.0	1.0	1.0
Korea, Republic of	20.5	19.4	18.2	17.2	17.8	17.0	15.5	14.3	2.1	1.9	2.1	2.3
Mongolia	84.0	73.0	73.1	71.3	0.8	0.4	0.4	0.4	0.0	0.0	0.0	0.0
Taipei, China	24.0	23.5	23.0	22.4	17.5	17.0	16.9	16.6	6.5	6.5	6.1	5.8
South Asia^a	59.0	58.8	58.6	58.6	51.5	51.0	50.3	50.1	3.2	3.6	4.2	4.5
Bangladesh	72.2	71.5	71.0	70.6	64.1	60.8	59.9	59.1	3.5	6.1	6.5	6.8
Bhutan	13.3	15.6	13.6	13.6	2.7	4.4	2.6	2.6	0.5	0.5	0.3	0.1
India	60.9	60.6	60.4	60.4	54.1	53.6	52.8	52.6	3.1	3.4	4.1	4.4
Maldives	30.0	30.0	26.3	26.3	10.0	10.0	13.0	13.0	16.7	16.7	10.0	10.0
Nepal	29.6	29.3	28.8	28.7	16.4	15.9	15.2	14.7	0.8	0.9	1.1	1.5
Sri Lanka	37.5	40.0	41.8	43.7	14.6	17.5	19.1	20.7	15.9	15.5	15.6	15.9
Southeast Asia^a	25.7	27.4	29.4	31.5	14.5	15.1	15.7	16.6	7.4	8.4	9.8	11.1
Brunei Darussalam	1.9	2.1	2.5	2.7	0.4	0.4	0.8	0.9	0.8	0.9	1.1	1.1
Cambodia	27.0	30.3	30.9	31.5	21.0	21.0	21.5	22.2	0.8	0.9	0.9	0.9
Indonesia	26.0	28.6	30.7	33.2	11.3	12.7	13.0	14.0	8.6	9.9	11.6	13.3
Lao People's Democratic Republic	7.8	8.6	9.6	10.4	4.0	5.0	6.1	6.7	0.4	0.4	0.6	0.7
Malaysia	21.1	21.7	22.5	26.1	2.6	2.9	2.6	2.6	17.6	18.0	19.0	22.7
Myanmar	16.5	17.2	19.2	19.7	15.2	15.4	16.5	16.9	0.9	1.4	2.2	2.3
Philippines	37.7	38.1	40.6	41.7	16.9	16.8	17.8	18.7	15.8	16.3	17.8	17.9
Singapore	1.8	1.1	1.1	0.9	1.5	1.0	0.9	0.8	0.3	0.1	0.1	0.1
Thailand	38.8	38.4	41.2	43.3	30.6	29.8	30.8	32.9	6.6	7.1	8.8	8.8
Timor-Leste	22.7	25.9	25.0	25.6	8.1	11.4	10.1	10.4	4.5	4.4	4.8	5.0
Viet Nam	28.2	32.4	34.7	39.2	19.9	20.5	20.8	22.5	6.2	9.8	11.9	14.6
The Pacific^a	3.6	3.6	4.0	4.0	0.9	0.9	1.0	1.0	1.9	1.9	2.1	2.1
Cook Islands	20.0	11.4	5.6	6.3	7.5	5.2	2.9	4.2	12.5	6.2	2.7	2.1
Fiji	23.4	23.4	23.3	23.3	9.3	9.3	9.0	9.0	4.5	4.5	4.7	4.7
Kiribati	42.0	42.0	42.0	42.0	2.5	2.5	2.5	2.5	39.5	39.5	39.5	39.5
Marshall Islands	66.7	72.2	72.2	62.8	5.6	11.1	11.1	11.1	44.4	44.4	44.4	35.0
Micronesia, Federated States of	32.1	32.1	31.4	31.4	3.6	3.6	2.9	2.9	24.3	24.3	24.3	24.3
Nauru	20.0	20.0	20.0	20.0	-	-	-	-	20.0	20.0	20.0	20.0
Niue	18.5	18.5	19.2	19.2	3.8	3.8	3.8	3.8	10.8	10.8	11.5	11.5
Palau	10.9	10.9	10.9	10.9	2.2	2.2	2.2	2.2	4.3	4.3	4.3	4.3
Papua New Guinea	2.2	2.3	2.6	2.6	0.5	0.5	0.7	0.7	1.4	1.3	1.5	1.5
Samoa	17.0	14.8	12.4	12.4	4.9	3.9	2.8	2.8	11.0	9.5	7.8	7.8
Solomon Islands	2.7	3.2	3.8	3.9	0.5	0.6	0.7	0.7	2.0	2.3	2.9	2.9
Tonga	41.7	41.7	44.4	45.8	20.8	20.8	23.6	25.0	15.3	15.3	15.3	15.3
Tuvalu	66.7	56.7	60.0	60.0	-	-	-	-	66.7	56.7	60.0	60.0
Vanuatu	14.4	15.0	15.3	15.3	1.6	1.6	1.6	1.6	9.3	9.9	10.3	10.3
Developed ADB Member Economies^a	57.3	51.3	47.2	46.5	3.5	3.8	3.6	4.3	0.1	0.1	0.1	0.1
Australia	59.3	53.4	49.0	48.3	3.1	3.4	3.3	4.0	0.0	0.0	0.1	0.0
Japan	14.4	12.9	12.6	12.2	12.3	12.0	11.7	11.4	1.0	0.9	0.9	0.8
New Zealand	58.5	44.5	43.3	40.5	5.7	1.6	1.9	2.2	0.2	0.2	0.3	0.3
DEVELOPING ADB MEMBER ECONOMIES^a	54.1	53.3	53.6	54.4	17.7	17.3	17.1	17.8	2.3	2.6	3.0	3.4
ALL ADB REGIONAL MEMBERS^a	54.9	52.8	52.0	52.4	14.1	13.9	13.7	14.4	1.8	2.0	2.3	2.5
WORLD^a	37.8	37.4	37.2	37.1	10.5	10.4	10.4	10.7	1.0	1.1	1.2	1.3

- = magnitude equals zero, 0.0 = magnitude is less than half of unit employed, ADB = Asian Development Bank.

a Aggregates are weighted averages estimated using total land area for the respective year headings.

Source: Food and Agriculture Organization of the United Nations. FAOSTAT Database. <http://www.fao.org/faostat/en/#data/RL> (accessed 1 July 2020).

Table 2.7.2: Deforestation and Pollution

ADB Regional Member	Deforestation Rate ^{a,b} (average % change)		Carbon Dioxide Emissions ^c (t '000)		Nitrous Oxide Emissions (t '000 CO ₂ equivalent)	
	2000	2017 ^e	2000	2016	2000	2012
Developing ADB Member Economies						
Central and West Asia	0.13	0.19	429,061	687,471	64,678	79,475
Afghanistan	-	-	774	8,672	3,317	3,424
Armenia	0.06	-0.06	3,465	5,156	462	1,023
Azerbaijan	-0.23	-2.36	29,508	37,620	2,030	2,673
Georgia	-0.03	-	4,536	10,128	2,437	2,352
Kazakhstan	0.17	-	118,099	247,207	14,865	17,822
Kyrgyz Republic	-0.26	1.24	4,635	9,787	1,452	1,567
Pakistan	1.91	2.84	106,449	201,150	26,350	30,651
Tajikistan	-0.05	-0.10	2,237	5,310	1,110	1,848
Turkmenistan	-	-	37,539	70,630	3,046	4,924
Uzbekistan	-0.52	0.34	121,818	91,811	9,610	13,192
East Asia^f	-0.97	-0.67	4,130,776	10,861,569	442,145	610,871
China, People's Republic of	-1.13	-0.75	3,405,180	9,893,038	414,138	587,166
Hong Kong, China	...	...	40,440	43,645	513	476
Korea, Republic of	0.13	0.12	447,561	620,302	18,576	14,979
Mongolia	0.69	0.77	7,506	25,368	5,058	3,548
Taipei, China	-	-4.54	230,089 (2001)	279,216	3,860 (2001)	4,701 (2016)
South Asia	-0.07	-0.22	1,073,635	2,527,091	235,040	273,793
Bangladesh	0.18	0.18	27,627	84,246	20,770	26,683
Bhutan	-0.38	-0.36	396	1,261	281	555
India	-0.22	-0.25	1,031,853	2,407,672	207,700	239,755
Maldives	-	-	451	1,445	12	27
Nepal	2.30	-	3,069	9,105	4,232	4,598
Sri Lanka	0.42	0.32	10,238	23,362	2,044	2,174
Southeast Asia^f	0.94	0.36	755,714	1,508,989	204,597	241,470
Brunei Darussalam	0.40	-	4,712	7,664	395	342
Cambodia	1.20	1.33	1,977	9,919	3,295	16,685
Indonesia	1.89	0.75	263,419	563,325	94,933	93,139
Lao People's Democratic Republic	0.67	-1.02	968	17,763	3,265	8,987
Malaysia	0.36	-0.06	125,734	248,289	13,822	15,310
Myanmar	1.23	1.85	10,088	25,280	31,300	26,783
Philippines	-0.68	-3.08	73,307	122,287	12,365	12,762
Singapore	-	-	49,006	37,535	6,635	1,909
Thailand	-1.80	-0.18	172,697	283,763	18,677	30,833
Timor-Leste	1.29	1.61	161 (2002)	495	164	226
Viet Nam	-2.06	-0.88	53,645	192,668	19,746	34,494
The Pacific^f	0.00	0.01	4,543	10,906	4,574	4,422
Cook Islands	-0.47	-	...	...	...	...
Fiji	-0.28	-0.48	843	2,046	343	344
Kiribati	-	-	33	66	3	4
Marshall Islands	-	-	99	143	0	0
Micronesia, Federated States of	-0.04	-0.04	125	143	11	11
Nauru	...	...	84	48	0	0
Niue	0.51	0.55	...	...	...	...
Palau	-0.36	-	209	224	0	0
Papua New Guinea	0.01	0.01	2,666	7,536	1,613	1,234
Samoa	-2.46	-	143	246	37	40
Solomon Islands	0.25	0.26	154	169	2,425	2,656
Tonga	-	-	95	128	22	22
Tuvalu	-	-	7	11	1	1
Vanuatu	-	-	84	147	118	109
Developed ADB Member Economies	-0.04	-0.19	1,581,705	1,546,176	117,542	91,039
Australia	-0.02	-0.25	329,443	375,908	75,581	54,247
Japan	0.03	0.01	1,219,281	1,135,886	30,411	24,911
New Zealand	-0.48	-0.00	32,981	34,382	11,549	11,880
DEVELOPING ADB MEMBER ECONOMIES^f	0.03	-0.16	6,393,729	15,596,026	951,034	1,210,030
ALL ADB REGIONAL MEMBERS^f	0.02	-0.16	7,975,435	17,142,202	1,068,576	1,301,069

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Pollution

Table 2.7.2: Deforestation and Pollution (continued)

ADB Regional Member	Methane Emissions (t '000 CO ₂ equivalent)		Other Greenhouse Gases ^d (t '000 CO ₂ equivalent)	
	2000	2012	2000	2012
Developing ADB Member Economies				
Central and West Asia	247,209	350,891	20,645	61,304
Afghanistan	9,384	13,763	-1,596	-6,529
Armenia	2,565	3,426	290	3,155
Azerbaijan	9,955	19,955	2,810	4,672
Georgia	4,137	5,019	-222	222
Kazakhstan	38,779	71,350	21,926	29,301
Kyrgyz Republic	3,486	4,291	296	638
Pakistan	117,125	158,337	-4,421	28,977
Tajikistan	3,304	5,408	2,940	4,515
Turkmenistan	21,241	22,009	-155	-3,906
Uzbekistan	37,233	47,333	-1,222	258
East Asia^f	1,098,575	1,799,956	5,721	169,888
China, People's Republic of	1,043,400	1,752,290	-13,867	141,901
Hong Kong, China	2,695	3,147	-49	7,583
Korea, Republic of	30,916	32,625	-15,104	15,096
Mongolia	9,218	6,257	28,437	2,178 (2010)
Taipei, China	12,346 (2001)	5,637 (2016)	6,304 (2001)	3,130 (2016)
South Asia	682,859	779,205	54,475	37,139
Bangladesh	89,247	105,142	-75	-9,406
Bhutan	1,032	1,770	384	-393
India	561,733	636,396	51,325	39,956
Maldives	34	52	...	...
Nepal	21,206	23,982	2,473	5,994
Sri Lanka	9,606	11,864	368	988
Southeast Asia^f	503,408	674,039	200,182	714,564
Brunei Darussalam	3,882	4,539	538	2,808
Cambodia	14,985	35,915	21,857	70,139
Indonesia	170,032	223,316	63,007	21,192
Lao People's Democratic Republic	7,219	15,011	12,865	134,458
Malaysia	29,309	34,271	3,637	14,128
Myanmar	66,942	80,637	76,980	412,033
Philippines	49,911	57,170	13,268	10,485
Singapore	1,684	2,386	-8,889 (2001)	6,773
Thailand	83,564	106,499	11,347	45,142
Timor-Leste	450	732	-268	-556
Viet Nam	75,430	113,564	5,840	-2,038
The Pacific^f	4,594	4,818		
Cook Islands	...	...	...	...
Fiji	705	715	-4	-97
Kiribati	13	16	-2	...
Marshall Islands	6	8	...	...
Micronesia, Federated States of	28	30	...	...
Nauru	3	3	...	...
Niue	...	...	...	...
Palau	1	1	...	...
Papua New Guinea	2,001	2,143	1,730	806
Samoa	116	133	36	55
Solomon Islands	1,394	1,449	127	229
Tonga	58	61	-88	-116 (2011)
Tuvalu	3	3	-0	0
Vanuatu	267	254	16	-20
Developed ADB Member Economies	202,213	193,202	592,126	282,885
Australia	128,133	125,588	520,957	164,077
Japan	47,496	38,957	68,010	114,664
New Zealand	26,584	28,658	3,158	4,144
DEVELOPING ADB MEMBER ECONOMIES^f	2,536,645	3,608,909	282,836	983,750
ALL ADB REGIONAL MEMBERS^f	2,738,858	3,802,112	874,962	1,266,635

... = data not available, - = magnitude equals zero, -0 or 0 = magnitude is less than half of unit employed, ADB = Asian Development Bank, CO₂ = carbon dioxide, t = metric ton.

a Rate refers to percentage change over previous year. A negative value indicates that the deforestation rate is decreasing (i.e., reforestation).

b Aggregates are calculated as the percent change of the sum of forested land area of the reporting economies.

c Data from the World Bank are expressed in kilotons (kt), while data provided in the table are expressed in thousands of metric tons (t), using a conversion factor of 1 kt = 1000 metric tons.

d Other greenhouse gas emissions refer to hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.

e Estimates are calculated by taking the difference of the average of 2015–2017 and 2014 data.

f For estimating aggregates, imputation was done for economies with missing data by substituting available data from the nearest years.

Sources: Food and Agriculture Organization of the United Nations. FAOSTAT Database. <http://www.fao.org/faostat/en/#data/RL> (accessed 3 July 2020); and World Bank. World Development Indicators. <http://data.worldbank.org/indicator> (accessed 3 July 2020). For Taipei, China: Government of Taipei, China, Directorate General of Budget, Accounting and Statistics. Statistical Yearbook 2018. https://eng.dgbas.gov.tw/public/data/dgbas03/bs2/yearbook_eng/Yearbook2018.pdf (accessed 3 July 2020).

Table 2.7.3: Freshwater Resources

ADB Regional Member	Internal Renewable Freshwater Resources		Annual Freshwater Withdrawals (m ³ billion)	Water Productivity ^a (constant 2010 \$ per m ³)
	(m ³ billion per year)	(m ³ per inhabitant per year)		
	2017 ^b	2017 ^c		
Developing ADB Member Economies				
Central and West Asia	370	1,155		
Afghanistan	47	1,327	20 (2000)	...
Armenia	7	2,341	3 (2017)	3.5 (2015)
Azerbaijan	8	826	13 (2017)	4.4 (2012)
Georgia	58	14,859	2 (2008)	6.6 (2008)
Kazakhstan	64	3,535	22 (2017)	7.4 (2010)
Kyrgyz Republic	49	8,094	8 (2006)	0.5 (2006)
Pakistan	55	279	200 (2017)	0.9 (2008)
Tajikistan	63	7,114	11 (2006)	0.4 (2006)
Turkmenistan	1	244	28 (2004)	0.4 (2004)
Uzbekistan	16	512	59 (2017)	0.6 (2005)
East Asia^d	2,913	1,948		
China, People's Republic of	2,813	1,952	594 (2015)	15.0 (2015)
Hong Kong, China	...	...	...	...
Korea, Republic of	65	1,272	29 (2005)	31.9 (2005)
Mongolia	35	11,313	0 (2016)	12.3 (2009)
Taipei, China	...	...	...	...
South Asia	1,880	1,209		
Bangladesh	105	638	36 (2008)	2.9 (2008)
Bhutan	78	96,582	0 (2008)	3.8 (2008)
India	1,446	1,080	648 (2010)	2.6 (2010)
Maldives	0	69	0 (2008)	553.4 (2008)
Nepal	198	6,763	9 (2006)	1.4 (2006)
Sri Lanka	53	2,529	13 (2005)	3.2 (2005)
Southeast Asia	4,993	7,696		
Brunei Darussalam	9	19,827	...	...
Cambodia	121	7,535	2 (2006)	4.1 (2006)
Indonesia	2,019	7,648	223 (2016)	4.0 (2000)
Lao People's Democratic Republic	190	27,763	3 (2005)	1.4 (2005)
Malaysia	580	18,341	7 (2017)	18.3 (2005)
Myanmar	1,003	18,793	33 (2000)	0.5 (2000)
Philippines	479	4,565	93 (2017)	2.4 (2009)
Singapore	1	105	0 (2017)	...
Thailand	225	3,252	57 (2007)	5.5 (2007)
Timor-Leste	8	6,339	1 (2004)	0.5 (2004)
Viet Nam	359	3,762	82 (2005)	1.0 (2005)
The Pacific				
Cook Islands	...	...	...	...
Fiji	29	31,530	0 (2005)	35.7 (2005)
Kiribati	...	...	...	...
Marshall Islands	...	...	...	...
Micronesia, Federated States of	...	...	...	...
Nauru	...	...	...	...
Niue	...	...	...	...
Palau	...	...	...	...
Papua New Guinea	801	97,079	0 (2005)	27.3 (2005)
Samoa	...	...	...	...
Solomon Islands	45	73,123	...	...
Tonga	...	...	...	...
Tuvalu	...	...	...	...
Vanuatu	10	36,206	...	...
Developed ADB Member Economies	1,249	7,974		
Australia	492	20,123	16 (2017)	78.3 (2015)
Japan	430	3,373	81 (2009)	67.4 (2009)
New Zealand	327	69,486	10 (2014)	28.2 (2010)
DEVELOPING ADB MEMBER ECONOMIES^d	11,040	2,740		
ALL ADB REGIONAL MEMBERS^d	12,289	2,936		

... = data not available, 0 = magnitude is less than half of unit employed, \$ = United States dollars, ADB = Asian Development Bank, m³ = cubic meter.

- a Gross domestic product in constant 2010 United States dollars per cubic meter of total freshwater withdrawal.
b Aggregates are calculated as the sum of the economies.
c Aggregates are weighted averages estimated using population.
d For reporting economies only.

Sources: Food and Agriculture Organization of the United Nations. AQUASTAT Database. <http://www.fao.org/nr/water/aquastat/data/query/index.html> (accessed 4 July 2020); and World Bank. World Development Indicators. <http://data.worldbank.org/indicator> (accessed 4 July 2020).