



APPENDIX TABLE 5-30

S&E articles in biological sciences, by region, country, or economy: 2003–16

(Number)

Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	204,709.0	218,773.0	230,356.0	237,684.0	249,605.0	262,930.0	271,339.0	282,223.0	305,909.0	328,879.0	344,741.0	361,805.0	356,715.0	351,877.0
North America	71,605.6	75,921.0	77,660.8	78,018.1	80,768.7	81,521.9	82,430.6	83,292.6	87,789.5	92,760.5	93,738.2	94,895.3	91,568.0	85,798.2
Canada	7,100.7	7,381.3	7,787.3	8,052.1	8,499.2	8,723.6	8,692.6	8,749.6	9,136.8	9,915.4	9,927.6	10,195.6	9,968.0	9,332.0
Greenland	3.2	6.9	3.6	5.5	2.6	4.6	1.2	3.0	3.9	4.0	7.6	3.6	6.1	4.6
Mexico	1,182.9	1,277.7	1,413.0	1,569.1	1,634.1	1,882.5	1,918.8	1,987.3	2,143.6	2,416.2	2,657.0	2,918.7	3,036.8	3,131.5
United States	63,318.8	67,255.1	68,457.0	68,391.4	70,632.9	70,911.3	71,817.9	72,552.7	76,505.1	80,425.0	81,146.0	81,777.5	78,557.2	73,330.2
Central America and Caribbean	491.1	575.1	569.5	610.8	629.0	656.9	669.4	698.6	731.3	762.4	736.2	866.7	688.7	657.7
Antigua and Barbuda	0.0	0.0	0.4	0.1	0.3	0.9	0.0	0.1	0.2	1.3	0.5	0.2	0.7	0.3
Bahamas, The	0.7	0.5	0.3	0.6	1.3	1.1	0.5	0.8	1.0	2.4	2.1	3.4	1.9	2.9
Barbados	4.7	3.0	2.7	5.7	4.3	10.0	2.1	2.4	4.8	1.4	4.1	3.7	7.0	5.0
Belize	0.7	1.4	1.8	3.4	1.9	0.1	2.0	2.4	1.4	3.6	2.9	2.0	1.9	2.8
Costa Rica	68.1	77.9	110.0	75.8	96.0	95.4	95.0	99.4	108.1	102.6	102.4	124.5	103.5	107.7
Cuba	213.7	269.5	257.9	279.8	244.8	279.4	300.7	286.2	290.5	300.5	292.9	309.1	221.2	155.9
Dominica	0.0	0.0	0.1	0.6	0.8	0.2	1.4	0.4	3.1	2.8	0.3	1.2	2.0	1.9
Dominican Republic	3.4	4.2	1.1	1.2	2.3	5.9	4.4	5.5	3.9	6.6	6.1	9.6	10.1	7.2
El Salvador	0.3	2.4	3.4	2.0	1.8	2.7	3.8	4.9	1.8	3.1	5.9	5.2	2.5	9.0



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Grenada	1.1	1.4	1.9	9.9	10.3	12.3	7.7	4.5	10.9	8.1	9.8	22.1	11.8	9.1
Guatemala	11.9	11.1	16.0	7.9	9.4	10.9	21.5	24.5	15.2	29.6	22.0	20.1	21.9	20.2
Haiti	1.9	0.4	0.8	2.3	1.7	1.3	3.0	1.5	2.6	4.2	6.0	8.4	6.2	6.5
Honduras	1.4	1.9	3.7	3.1	3.4	5.1	4.6	6.0	7.4	8.8	9.6	8.9	11.2	16.6
Jamaica	16.8	17.2	12.8	22.8	19.1	16.9	19.1	22.2	36.8	21.3	26.8	35.4	18.0	21.3
Nicaragua	3.1	4.6	4.5	6.7	5.7	6.5	8.5	9.1	11.0	8.9	8.0	12.0	8.2	12.4
Panama	43.7	43.9	42.1	51.1	63.7	68.8	64.9	66.8	64.1	78.1	83.6	90.3	87.9	95.0
Puerto Rico	98.7	111.4	85.9	120.6	136.5	115.6	105.3	130.3	141.8	147.4	122.4	153.0	145.4	153.4
Saint Kitts and Nevis	0.2	0.2	0.0	0.2	0.6	0.2	1.3	2.0	0.5	5.1	4.6	6.1	4.4	5.6
Saint Lucia	0.0	0.3	0.3	0.5	0.2	0.5	0.0	0.4	0.3	0.4	0.5	0.0	0.6	2.3
Saint Vincent and the Grenadines	0.0	0.1	0.0	0.5	0.1	0.0	0.0	0.1	0.0	0.0	0.6	0.1	0.3	1.1
Trinidad and Tobago	20.8	23.7	23.8	15.9	24.9	23.2	23.4	29.2	25.9	26.3	25.0	51.3	22.0	21.4
South America	5,756.4	6,409.0	6,671.4	8,118.0	8,929.9	10,189.9	10,938.0	11,595.9	12,763.2	14,210.5	14,806.7	15,880.3	16,060.7	16,616.2
Argentina	1,260.6	1,258.2	1,295.0	1,501.4	1,528.3	1,729.9	1,886.0	1,979.5	2,155.7	2,330.3	2,214.4	2,307.5	2,181.5	2,226.2
Bolivia	21.8	15.5	24.4	27.9	41.9	42.1	39.4	34.0	42.4	33.4	40.9	38.8	32.3	31.5
Brazil	3,520.7	4,069.6	4,180.1	5,316.5	5,993.0	6,797.6	7,174.7	7,672.2	8,505.3	9,652.8	10,246.7	10,886.1	11,117.3	11,488.7
Chile	394.6	438.9	505.4	554.2	625.2	698.3	727.5	770.1	894.6	934.1	1,015.8	1,138.7	1,211.1	1,232.2
Colombia	139.5	182.0	187.4	234.4	224.3	302.8	392.7	528.9	524.7	635.8	639.0	758.9	834.6	879.6
Ecuador	20.1	25.1	40.4	43.1	52.4	53.9	74.0	60.1	61.2	79.3	81.9	110.3	118.0	185.2



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Guyana	1.1	1.7	3.5	2.1	3.5	1.9	3.0	6.9	3.0	1.9	2.8	1.7	3.0	6.0
Paraguay	7.3	9.0	9.2	6.4	7.8	8.4	8.0	7.8	12.6	13.4	12.7	18.1	16.7	21.1
Peru	60.6	55.7	54.4	75.4	94.3	96.8	89.1	94.7	121.1	113.7	148.8	180.1	183.1	212.6
Suriname	1.1	2.7	2.1	1.4	0.6	3.0	1.7	1.2	0.7	2.1	3.4	1.0	2.7	6.4
Uruguay	83.1	92.8	107.3	91.7	98.9	113.1	134.2	120.6	161.5	138.6	152.1	208.4	162.6	182.3
Venezuela	246.1	257.7	262.4	263.5	259.8	342.1	407.6	319.8	280.3	275.2	248.1	230.7	198.0	144.4
Europe	76,461.2	79,555.2	82,133.1	82,569.8	84,676.1	89,494.4	91,366.4	93,195.5	99,259.0	107,054.7	109,928.8	114,037.6	112,498.8	108,675.6
EU	66,309.4	68,862.2	71,100.5	72,590.5	74,331.1	78,671.4	79,835.1	80,921.1	85,863.6	92,766.1	95,400.6	98,408.8	96,384.5	92,324.1
Austria	1,244.4	1,297.3	1,313.1	1,300.1	1,411.5	1,454.8	1,524.5	1,581.6	1,690.9	1,749.3	1,881.5	1,920.5	1,961.3	1,870.5
Belgium	1,974.1	2,124.7	2,204.1	2,054.5	2,123.9	2,241.5	2,380.8	2,428.7	2,665.9	2,828.5	2,889.6	2,865.6	2,787.8	2,718.2
Bulgaria	289.2	252.0	377.5	323.7	487.1	501.2	586.3	503.1	504.2	582.3	580.3	581.7	505.3	507.5
Croatia	285.3	301.6	340.7	416.9	470.4	582.0	504.8	452.1	571.7	556.3	550.3	497.7	478.4	520.0
Cyprus	9.0	12.9	18.3	18.7	27.5	29.0	34.5	38.1	38.5	57.0	75.7	69.0	70.7	89.0
Czech Republic	1,068.5	1,206.3	1,173.0	1,280.7	1,460.2	1,587.3	1,623.9	1,812.4	1,741.1	1,904.9	1,925.3	2,276.8	2,334.6	2,221.8
Denmark	1,609.6	1,642.4	1,595.9	1,639.6	1,663.3	1,712.2	1,727.7	1,861.8	1,968.8	2,247.5	2,410.1	2,527.0	2,550.9	2,439.7
Estonia	121.7	122.7	162.2	168.1	191.2	189.3	245.3	242.4	263.9	268.8	270.1	293.0	327.5	285.8
Finland	1,452.5	1,473.9	1,476.3	1,531.6	1,496.8	1,597.3	1,490.2	1,533.2	1,614.5	1,704.4	1,673.3	1,745.9	1,686.7	1,606.6
France	8,580.3	8,828.9	8,922.1	8,992.5	9,005.4	9,191.4	9,279.9	9,390.8	9,911.3	10,605.9	10,689.0	10,877.5	10,536.3	10,034.6
Germany	11,638.1	12,157.1	12,719.9	12,751.6	13,172.1	13,557.0	13,995.0	13,941.6	14,848.1	16,014.9	16,334.2	17,175.6	16,621.6	15,979.6



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Greece	808.5	942.2	1,074.2	1,235.5	1,149.8	1,471.4	1,326.8	1,351.6	1,319.5	1,378.0	1,419.9	1,340.8	1,251.3	1,243.6
Hungary	852.8	862.9	1,105.5	1,070.7	1,113.0	1,390.6	1,124.8	1,022.9	1,168.6	1,206.8	1,155.9	1,208.9	1,164.5	1,103.3
Ireland	469.4	547.5	617.5	603.4	695.4	773.1	864.7	964.6	1,131.7	1,104.2	1,035.8	1,108.0	1,002.0	974.7
Italy	6,491.2	6,783.2	6,876.5	7,294.0	7,640.8	8,051.9	8,375.4	8,295.7	8,955.2	9,621.8	10,136.3	10,404.1	10,032.1	9,905.8
Latvia	46.2	45.7	30.2	41.4	41.1	41.7	50.3	54.2	79.1	88.5	86.0	95.0	97.9	108.4
Lithuania	80.0	86.3	98.2	108.9	116.4	102.6	109.1	118.7	136.6	184.1	152.5	180.1	273.9	227.9
Luxembourg	20.5	42.8	23.5	31.2	29.8	47.5	49.9	62.9	83.4	75.4	93.4	110.9	122.5	109.5
Malta	19.2	9.8	7.4	7.9	9.1	21.6	18.6	12.0	18.1	17.0	18.9	21.1	32.5	28.7
Netherlands	3,705.4	3,824.7	3,987.6	3,885.3	3,889.7	4,224.0	4,182.3	4,390.8	4,666.5	5,146.5	5,359.4	5,543.5	5,313.4	5,107.3
Poland	2,573.4	2,479.7	2,711.8	2,769.2	2,714.4	2,910.1	2,941.3	3,098.5	3,403.2	3,786.4	4,410.9	4,725.0	4,555.9	4,572.5
Portugal	734.7	777.5	816.5	894.8	970.8	1,188.6	1,294.5	1,315.1	1,564.9	1,887.6	1,981.0	2,079.0	2,049.2	1,910.5
Romania	148.6	156.9	127.8	184.2	189.3	318.7	487.5	548.8	637.6	777.7	794.1	732.1	759.5	693.0
Slovakia	382.6	408.7	407.9	448.4	439.1	507.1	480.1	483.4	511.9	519.1	627.6	571.1	662.1	587.4
Slovenia	231.2	204.2	298.3	250.8	296.6	349.3	360.1	354.0	377.3	413.7	468.3	432.2	442.2	406.4
Spain	5,182.1	5,365.2	5,868.4	6,285.4	6,340.5	7,032.2	7,386.8	7,696.6	8,199.7	9,170.3	9,156.2	9,453.7	9,218.5	8,533.3
Sweden	2,975.1	2,962.7	3,031.0	2,974.1	2,998.4	3,022.6	3,016.9	2,944.3	3,054.1	3,254.1	3,482.8	3,495.0	3,445.8	3,368.5
United Kingdom	13,316.0	13,942.4	13,715.1	14,027.2	14,187.4	14,575.3	14,373.3	14,421.1	14,737.3	15,615.1	15,742.7	16,078.2	16,099.9	15,169.8
Other Europe	10,151.8	10,693.0	11,032.6	9,979.3	10,345.0	10,823.0	11,531.2	12,274.5	13,395.4	14,288.5	14,528.1	15,628.8	16,114.3	16,351.5
Albania	5.2	4.0	5.5	5.0	8.1	5.8	12.6	9.0	13.0	33.6	13.8	19.3	19.3	25.2



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Andorra	0.5	0.4	1.0	0.0	0.4	0.0	0.0	0.0	0.6	1.1	0.9	0.9	2.0	3.8
Belarus	100.7	101.0	94.9	85.2	98.4	74.5	84.7	75.4	75.3	92.2	65.4	88.6	94.2	67.0
Bosnia and Herzegovina	5.8	5.9	12.4	18.2	15.1	34.7	23.2	38.0	31.5	39.4	40.0	37.9	59.4	42.3
Holy See (Vatican City)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Iceland	54.1	60.5	61.7	54.1	59.9	69.5	66.0	65.0	68.4	85.3	96.3	77.9	87.6	91.3
Kosovo	0.0	0.0	0.0	0.0	0.0	5.0	8.0	5.2	4.2	12.8	7.8	14.9	8.2	15.6
Liechtenstein	0.4	1.8	0.8	0.9	0.5	1.8	0.6	2.2	1.8	1.0	2.8	1.4	3.5	3.8
Macedonia	10.5	40.2	25.3	14.4	22.4	26.9	29.2	21.5	25.0	51.4	39.5	54.8	48.0	61.4
Moldova	9.8	7.5	4.5	8.1	5.8	9.3	7.9	7.2	5.5	7.1	15.9	16.6	17.1	18.0
Monaco	4.8	2.7	2.6	3.8	3.2	3.4	4.8	5.0	7.4	4.2	4.8	6.5	10.2	6.7
Montenegro ^a	na	na	na	na	4.9	9.0	8.6	9.8	16.1	24.4	19.6	28.9	22.9	31.7
Norway	858.9	920.2	994.3	1,062.4	1,119.2	1,104.8	1,187.7	1,211.4	1,342.0	1,361.7	1,469.7	1,526.7	1,506.8	1,475.5
Russia	4,547.6	4,521.2	4,563.4	3,271.4	3,439.1	3,741.2	3,759.9	4,097.9	4,492.6	4,660.0	4,566.3	5,050.4	5,694.7	5,818.9
San Marino	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.4	1.2	0.2	0.3	1.0	0.3	0.5
Serbia ^a	na	na	na	na	308.4	451.2	513.1	557.7	577.0	751.1	732.8	789.5	717.4	673.8
Serbia and Montenegro ^b	161.3	192.4	248.6	277.8	na	na	na	na	na	na	na	na	na	na
Switzerland	2,447.4	2,681.8	2,602.1	2,795.0	2,766.2	2,825.7	3,006.2	3,071.9	3,376.0	3,722.4	3,872.7	4,005.9	3,930.4	3,851.9
Turkey	1,549.9	1,741.4	1,948.9	2,075.2	2,152.0	2,126.0	2,436.2	2,714.0	2,926.6	2,990.3	3,106.8	3,358.2	3,394.6	3,693.3
Ukraine	395.0	411.5	466.7	307.9	341.4	334.1	382.2	383.0	431.2	450.2	472.5	549.5	498.0	470.7

Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Middle East	2,801.6	2,931.3	3,078.7	3,478.3	3,899.6	4,090.7	4,571.2	5,454.9	7,469.7	7,217.3	7,445.7	8,628.3	8,664.6	9,408.5
Armenia	26.4	31.7	28.6	28.6	25.6	47.1	23.0	26.4	42.0	43.7	44.9	37.9	39.5	35.7
Azerbaijan	9.2	13.9	21.9	14.8	12.0	7.0	10.2	15.2	24.3	21.9	15.0	21.4	25.1	22.0
Bahrain	15.0	12.9	17.2	16.1	13.4	12.1	10.8	12.5	10.1	10.3	12.6	13.4	19.4	17.3
Gaza Strip	0.0	2.3	1.2	4.1	3.8	1.9	4.2	5.9	7.3	8.8	9.3	8.8	6.5	7.2
Georgia	11.6	22.3	34.2	20.5	21.6	20.7	20.3	37.1	32.6	43.8	36.6	53.1	51.6	44.5
Iran	394.5	536.8	680.7	1,060.4	1,376.1	1,555.4	1,961.8	2,517.0	4,129.8	3,668.4	3,715.8	4,365.4	4,466.2	5,179.8
Iraq	15.5	7.7	8.9	17.5	18.9	14.4	34.8	52.5	64.6	63.0	74.0	83.0	76.9	91.0
Israel	1,751.9	1,764.7	1,720.8	1,743.2	1,800.9	1,782.1	1,781.3	1,788.4	1,880.3	1,973.4	1,891.5	1,991.7	1,984.2	1,850.4
Jordan	92.4	86.4	88.0	101.1	117.4	84.7	140.7	136.4	150.5	157.0	156.7	162.0	173.1	204.1
Kuwait	92.2	82.5	96.6	75.4	89.8	86.5	80.4	85.7	99.5	96.6	92.8	82.5	82.2	90.2
Lebanon	65.0	71.0	57.0	54.9	70.6	76.3	72.5	82.7	91.2	103.3	111.8	135.3	130.8	147.1
Oman	28.0	17.4	29.0	29.0	35.9	29.4	27.1	47.5	43.3	56.0	69.4	101.6	79.2	75.9
Qatar	9.7	13.6	8.3	9.5	14.5	17.4	18.6	29.8	33.1	42.8	56.2	80.6	107.0	118.8
Saudi Arabia	198.2	165.1	171.6	183.6	176.6	207.4	259.1	439.7	676.3	745.0	950.7	1,237.0	1,204.7	1,267.8
Syria	25.3	29.1	26.3	25.8	34.6	47.6	32.9	44.8	55.7	53.0	53.6	59.0	40.2	48.7
United Arab Emirates	53.2	60.2	79.7	76.8	69.7	86.6	66.7	95.5	95.2	95.4	118.2	144.9	146.8	164.9
West Bank	5.5	7.2	4.9	8.5	13.2	10.1	16.0	21.9	18.9	21.6	21.9	24.8	19.7	32.7
Yemen	8.0	6.5	3.8	8.5	4.9	4.0	10.7	15.9	15.0	13.2	14.7	25.9	11.6	10.6



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Africa	2,602.6	2,677.7	2,881.8	3,336.7	3,775.4	4,084.1	4,744.7	5,406.3	6,131.1	6,212.1	6,577.7	7,155.0	7,202.8	7,649.6
Algeria	40.0	42.7	34.4	60.8	82.2	83.0	90.3	112.0	125.0	160.1	205.1	223.9	236.7	258.6
Angola	0.6	1.9	1.8	0.8	2.0	0.9	3.6	3.1	3.3	5.4	3.8	3.2	4.9	7.6
Benin	13.6	13.4	22.0	25.6	25.8	40.8	38.7	25.7	53.8	62.9	60.1	63.6	52.6	42.4
Botswana	21.4	21.1	16.6	19.2	23.4	19.3	23.1	16.7	22.4	30.3	36.7	29.4	30.2	41.4
Burkina Faso	23.8	18.0	22.2	33.2	27.3	33.7	40.8	38.4	45.3	63.7	48.4	53.4	53.5	45.7
Burundi	0.0	0.5	0.8	0.1	0.9	0.4	0.9	3.8	1.4	3.1	2.5	0.7	2.6	2.2
Cameroon	62.2	54.1	68.9	75.1	105.8	87.4	92.3	115.4	107.7	112.6	117.1	137.5	146.6	142.8
Cape Verde	0.0	0.5	0.0	0.6	0.3	0.7	1.2	1.0	0.0	2.5	2.4	0.7	1.8	2.9
Central African Republic	3.3	4.4	2.8	3.5	1.9	2.2	3.4	5.8	5.6	4.6	4.9	6.2	4.6	6.8
Chad	0.7	0.7	2.0	2.0	1.0	1.6	2.7	0.7	2.7	1.8	0.9	2.6	2.1	2.5
Comoros	0.3	0.2	0.0	0.2	0.1	0.4	0.2	1.1	2.0	1.0	0.6	0.7	0.9	1.6
Congo, Democratic Republic of the	2.6	4.2	6.6	4.0	8.5	9.2	9.7	15.5	15.2	23.9	22.0	25.7	26.1	24.8
Congo, Republic of the	7.4	6.2	12.6	10.6	9.9	11.1	11.7	17.1	12.2	17.0	13.4	17.7	12.6	19.5
Côte d'Ivoire	23.6	26.7	29.3	25.2	30.6	31.4	36.9	38.6	54.4	48.9	45.6	53.2	40.1	32.8
Djibouti	0.0	0.2	0.3	0.1	0.3	0.4	0.5	1.1	1.0	0.8	2.2	0.9	0.6	0.5
Egypt	421.8	415.2	407.9	424.0	471.0	597.8	872.4	903.6	1,260.0	1,309.0	1,264.3	1,615.8	1,501.8	1,772.3
Equatorial Guinea	0.7	1.6	0.5	0.8	1.0	0.7	1.0	1.3	0.7	1.3	1.2	1.0	2.9	3.3
Eritrea	3.9	1.9	2.0	3.1	1.0	1.5	0.4	0.0	2.0	2.0	3.3	3.0	3.9	1.1



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ethiopia	55.2	32.9	50.5	45.5	74.1	64.8	88.7	83.4	118.5	137.3	194.0	221.2	238.9	271.1
Gabon	13.0	16.3	19.4	21.1	15.9	19.4	19.6	17.7	21.0	25.3	24.1	25.2	25.2	25.5
Gambia, The	11.5	14.3	14.6	21.7	19.4	26.4	21.7	28.3	17.0	22.6	20.7	22.5	18.3	22.8
Ghana	31.1	28.2	34.8	33.5	44.4	47.4	66.2	71.7	75.0	98.7	109.5	106.8	148.4	189.8
Guinea	1.6	2.3	1.5	6.6	4.1	4.4	3.3	2.4	4.1	5.9	3.1	5.2	6.3	11.7
Guinea-Bissau	3.2	3.8	5.9	3.7	5.2	3.0	4.2	3.8	5.4	3.7	4.9	8.7	5.0	6.5
Kenya	130.4	123.5	127.0	177.7	161.4	197.8	212.9	215.4	277.7	252.0	272.9	319.0	320.1	317.8
Lesotho	0.0	0.3	1.2	0.2	0.3	0.4	0.7	0.9	3.3	3.0	2.0	1.3	4.4	1.2
Liberia	0.0	0.0	0.2	1.1	0.5	0.2	0.8	1.1	0.5	0.6	0.5	2.0	4.0	3.3
Libya	4.6	8.2	8.0	12.1	12.1	8.9	13.5	25.3	19.9	24.9	26.7	22.7	15.5	21.4
Madagascar	17.8	20.1	31.4	33.0	44.4	31.4	30.0	43.1	42.1	45.7	59.3	43.9	50.6	40.5
Malawi	20.6	12.4	14.2	20.8	24.1	29.5	18.6	31.4	34.2	47.6	36.5	47.1	46.8	43.8
Mali	8.2	10.8	15.2	27.8	27.7	32.6	24.6	34.5	33.4	24.1	19.1	16.8	21.7	23.8
Mauritania	0.6	0.9	1.1	0.6	1.0	0.6	1.7	1.2	3.3	4.3	4.7	2.7	1.9	2.5
Mauritius	7.8	14.1	14.9	15.7	11.0	10.3	11.3	9.2	13.7	19.2	23.5	41.9	16.4	29.9
Morocco	100.1	91.3	87.3	72.5	109.0	110.8	107.8	128.3	141.4	192.4	215.8	176.5	196.6	198.4
Mozambique	5.0	4.6	13.3	6.0	9.9	6.8	11.9	13.4	24.9	21.3	23.2	24.3	37.7	30.4
Namibia	21.7	13.3	18.1	14.3	11.0	12.8	11.3	10.4	15.5	21.7	24.5	26.4	25.0	25.1
Niger	2.1	3.9	3.2	6.8	8.9	5.3	12.5	15.0	12.0	8.5	8.5	12.8	16.3	10.9



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Nigeria	211.5	235.5	226.5	392.5	468.2	438.7	638.6	876.7	862.5	716.9	625.4	711.2	622.2	594.1
Rwanda	1.6	1.9	2.8	2.6	4.3	4.4	6.4	7.8	13.1	13.9	17.1	17.3	23.5	27.8
São Tomé and Príncipe	0.2	0.2	0.3	0.5	0.0	0.0	1.0	0.1	0.0	0.5	0.2	0.7	0.0	0.0
Senegal	30.0	33.2	37.7	33.4	38.9	41.1	30.6	38.4	53.5	59.5	64.0	61.4	59.9	71.7
Seychelles	7.7	2.1	2.4	2.5	3.2	2.2	3.4	2.8	5.4	3.7	7.5	5.3	8.4	8.4
Sierra Leone	0.5	0.0	0.0	0.0	0.3	3.1	2.7	3.9	2.6	5.2	3.1	4.8	9.5	13.4
Somalia	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.4	0.3	0.0	0.6	0.2	0.0
South Africa	1,029.3	1,084.9	1,156.1	1,216.2	1,218.3	1,365.2	1,381.7	1,543.3	1,620.3	1,645.0	1,937.9	1,996.9	2,114.9	2,194.8
South Sudan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.4	0.7	0.7
Sudan	13.7	18.4	17.3	26.8	28.8	40.1	73.1	74.5	83.9	51.5	55.8	50.0	55.9	62.8
Swaziland	3.5	0.3	3.5	3.1	2.7	5.3	6.2	9.4	8.1	6.2	8.0	4.6	4.1	6.4
Tanzania	37.2	41.6	51.5	60.1	68.4	53.4	78.4	83.8	88.5	79.5	96.5	122.3	137.6	146.5
Togo	3.3	2.3	5.7	6.5	5.1	8.7	8.5	8.3	16.1	12.5	10.5	10.0	14.1	18.4
Tunisia	112.7	129.2	197.7	272.7	385.1	449.7	477.1	518.9	613.2	584.2	596.0	535.5	581.0	531.2
Uganda	39.3	75.4	46.9	61.2	115.1	78.4	91.5	132.7	117.5	133.8	148.7	147.5	148.9	156.1
Western Sahara	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Zambia	12.5	11.3	13.0	16.3	15.8	22.7	17.1	24.6	35.4	34.2	34.3	40.5	38.9	46.3
Zimbabwe	39.0	26.4	28.3	33.1	43.8	35.7	37.3	43.0	33.2	54.6	64.3	79.6	59.3	85.9
Asia	37,653.2	43,539.5	49,752.6	53,742.3	58,995.9	64,262.8	67,879.1	72,689.1	81,127.3	88,972.0	99,213.9	108,673.1	108,577.7	111,541.2



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Afghanistan	2.4	0.0	1.1	1.5	0.3	2.2	1.9	2.5	5.9	4.9	1.0	2.9	1.6	6.6
Bangladesh	107.6	99.7	120.8	129.3	196.0	196.8	258.5	279.9	348.8	373.4	327.0	373.0	345.5	383.6
Bhutan	1.0	1.4	0.6	5.6	2.5	0.9	3.0	3.1	5.0	4.6	8.3	5.1	6.4	12.0
Brunei	1.2	3.3	2.6	3.2	7.5	4.6	5.7	5.4	5.8	6.9	8.3	11.2	14.8	18.0
Burma	4.0	3.2	6.8	7.9	5.1	4.8	8.5	8.0	9.4	6.1	9.0	10.7	15.2	22.5
Cambodia	5.8	7.6	10.6	9.5	9.3	10.8	17.9	17.4	21.5	24.2	33.5	32.0	35.8	35.9
China	11,070.0	14,572.6	19,937.8	22,891.4	26,314.6	29,308.9	31,305.9	33,103.8	36,613.5	41,794.1	49,740.2	57,282.3	57,415.9	59,744.3
India	4,515.8	5,018.7	5,477.4	6,163.5	7,158.0	7,302.7	8,684.1	10,705.7	12,959.6	13,911.8	13,957.7	14,852.0	14,861.8	15,953.1
Indonesia	81.4	71.5	83.8	85.1	101.2	107.4	144.4	144.8	198.2	238.5	371.2	375.7	482.0	524.9
Japan	15,609.8	16,251.8	16,002.9	15,614.9	15,648.6	15,899.8	15,466.9	14,665.6	14,994.0	15,294.1	15,858.9	15,540.1	15,056.5	14,661.7
Kazakhstan	28.5	17.6	18.7	9.7	16.4	17.2	19.7	20.3	29.4	20.2	42.0	52.3	84.4	70.1
Kyrgyzstan	1.4	4.7	1.8	2.6	1.2	1.9	3.9	3.8	3.9	3.9	6.2	6.4	3.9	7.8
Laos	1.5	3.2	7.2	7.3	7.1	5.7	16.6	11.8	11.4	15.2	23.0	14.1	18.5	18.8
Malaysia	180.2	228.8	301.6	319.3	372.6	489.1	727.1	1,015.4	1,567.1	1,601.0	1,705.3	2,019.5	1,792.6	1,880.7
Maldives	0.1	0.0	1.4	0.0	0.6	0.0	1.4	0.0	0.4	0.4	0.2	1.7	1.2	2.0
Mongolia	5.9	5.9	7.9	6.8	12.9	16.4	20.6	25.6	15.4	24.8	26.5	26.9	19.5	29.5
Nepal	40.8	23.5	34.7	41.6	45.9	36.9	41.3	46.9	42.6	48.6	70.4	76.1	90.8	91.4
North Korea	0.3	15.4	8.6	1.3	1.4	3.6	4.0	2.1	2.0	3.7	1.4	0.9	2.5	5.2
Pakistan	283.4	319.0	409.4	557.7	607.2	769.2	904.0	1,200.1	1,491.5	1,449.3	1,580.5	1,672.2	1,773.3	1,704.0



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Papua New Guinea	24.9	13.2	7.8	15.1	17.1	25.7	21.5	16.3	18.4	22.8	13.7	22.3	23.6	21.9
Philippines	74.3	59.1	88.0	67.5	74.6	91.2	106.9	118.3	152.4	121.0	179.8	169.3	232.7	215.1
Singapore	455.9	641.9	734.2	800.5	798.7	839.9	932.9	1,066.0	1,110.0	1,244.5	1,330.8	1,400.2	1,425.8	1,440.0
South Korea	3,126.2	3,741.1	3,793.1	4,051.6	4,503.7	5,428.4	5,526.7	6,087.5	6,912.2	7,531.9	8,338.9	8,877.8	9,355.7	9,022.4
Sri Lanka	56.9	54.7	84.2	77.4	94.5	103.3	117.6	98.1	129.6	130.1	122.7	132.8	182.6	237.0
Taiwan	1,540.3	1,902.1	1,977.7	2,185.2	2,184.7	2,591.2	2,584.3	2,829.0	3,244.6	3,616.4	3,813.2	3,978.1	3,541.9	3,375.8
Tajikistan	3.9	5.4	5.2	2.1	0.4	1.4	1.0	2.5	2.3	7.9	2.9	2.0	4.0	3.2
Thailand	373.0	409.0	555.8	595.8	712.6	895.8	842.2	1,073.8	1,066.7	1,277.3	1,407.8	1,484.2	1,486.9	1,730.6
Timor-Leste	0.0	0.0	0.0	0.2	0.2	0.5	0.0	0.9	0.1	2.6	1.3	1.9	0.0	2.3
Turkmenistan	0.3	0.7	0.5	0.2	2.0	0.0	0.0	1.1	0.2	0.4	0.0	3.0	0.0	0.0
Uzbekistan	18.2	17.8	8.6	16.5	22.9	17.3	13.4	16.3	17.9	14.6	16.5	21.3	12.9	21.3
Vietnam	38.2	46.8	62.0	72.0	76.1	89.1	97.3	117.1	147.5	176.7	215.9	225.2	289.5	299.5
Australia and Oceania	5,963.7	6,278.0	6,595.4	7,062.2	7,157.6	7,764.3	7,931.0	8,325.6	8,925.9	9,630.3	10,737.9	11,032.6	11,027.9	11,044.1
Australia	4,875.8	5,176.0	5,388.9	5,876.0	5,840.0	6,465.2	6,575.6	6,829.1	7,442.7	7,966.5	9,035.2	9,315.1	9,278.6	9,362.7
Cook Islands	0.0	0.0	0.3	0.7	0.0	0.0	0.3	0.5	0.9	0.2	1.5	0.4	0.0	0.3
Fiji	4.5	5.0	14.5	8.0	14.9	8.0	8.9	9.2	8.4	8.3	9.2	12.6	13.1	30.5
Kiribati	0.1	0.0	0.0	0.3	1.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.7
Marshall Islands	1.0	0.6	0.5	1.4	0.3	0.0	0.0	0.0	0.4	0.1	0.3	0.4	0.1	0.6
Micronesia, Federated States of	1.1	0.9	1.9	0.2	4.8	3.1	1.1	7.4	4.5	3.2	1.7	1.1	2.1	1.9



Region, country, or economy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Nauru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
New Zealand	1,078.2	1,092.6	1,185.5	1,168.2	1,290.3	1,284.9	1,339.1	1,472.1	1,463.7	1,643.8	1,684.1	1,697.8	1,719.3	1,635.1
Niue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Palau	0.0	0.5	1.5	1.1	2.1	0.3	1.9	1.6	0.4	2.2	0.4	1.6	2.2	0.8
Samoa	0.7	0.1	0.3	0.4	1.0	1.1	2.4	1.4	1.5	1.1	0.8	1.0	2.7	3.5
Solomon Islands	0.8	0.1	0.8	2.5	1.0	0.3	0.5	2.2	1.4	0.9	2.2	1.5	4.8	2.6
Tonga	0.7	1.0	0.0	0.1	0.2	0.0	0.2	0.5	0.3	0.6	0.0	0.2	0.7	0.4
Tuvalu	0.6	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Vanuatu	0.1	1.0	1.2	3.0	1.5	1.5	1.1	1.6	1.9	3.4	1.9	1.0	3.7	4.4
Unassigned	1,373.6	886.2	1,012.8	747.8	772.8	864.9	808.7	1,564.5	1,712.0	2,059.2	1,555.8	636.1	425.8	485.9

na = not applicable; country data do not exist.

EU = European Union.

^a Beginning in 2006, Serbia and Montenegro represented individual countries.

^b Serbia and Montenegro represented a single country for data purposes from 1992 to 2006.

Note(s)

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