

World Air Conditioner Demand by Region

April 2017

JRAIA 一般社団法人
日本冷凍空調工業会

The Japan Refrigeration and Air Conditioning Industry Association

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The Japan Refrigeration and Air Conditioning Industry Association (JRAIA) has just summarized the estimated results of 2016 air conditioner (AC) demand in the main countries around the world. These estimates are performed by the JRAIA's Air Conditioning Global Committee every year and were collected this time for AC demand in the main countries during the past six years from 2011 to 2016.

Note: The AC demand summarized in this document stands for the total AC demand for houses, buildings, and other structures comprising demand of "Room Air Conditioners (RAC)," including window type and small-sized split type ACs as well as "Packaged Air Conditioners (PAC)." Breakdown for RAC demand is given only from 2014 to 2016.

1. Overview

1) Overall AC Demand

The 2016 world AC demand is estimated to reach 102.31 million units with a 2.9% increase compared with the previous year. When dividing the 2016 AC demand into the main markets of Japan, China, Asian countries other than Japan and China, Europe, North America, and other countries, the largest market is China, whose demand reached 40.59 million units with a 3.5% increase. Chinese demand occupies 39.7% of the total world demand. The second largest market is Asia, excluding Japan and China, whose demand reached 16.41 million units with a 8.4% increase. The third largest market is North America, whose demand reached 14.60 million units with a 1.8% increase.

Japan reached 9.15 million units with a 2.8% increase, followed by Latin America with 6.47 million units and a 11.7% decrease, and Europe with 6.07 million units and a 12.2% increase.

2) "Room Air Conditioners (RAC)"

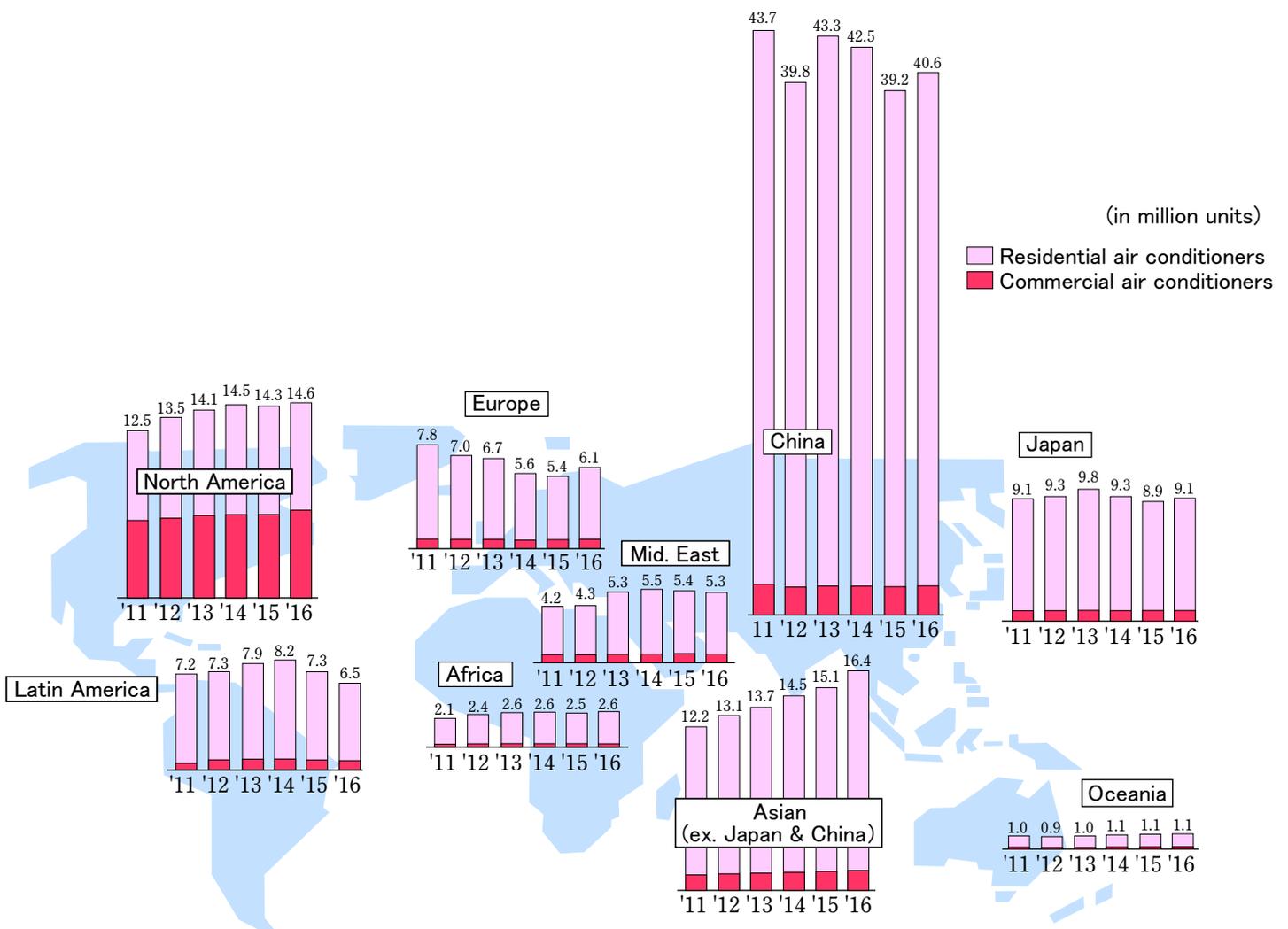
The 2016 world RAC demand is estimated to reach 88.81 million units with a 2.9% increase compared with the previous year. The largest market is China, whose demand reached 38.41 million units with a 3.5% increase. The second largest market is Asia, excluding Japan and China, whose demand reached 14.93 million units with a 8.8% increase. The third largest market is Japan, whose demand reached 8.35 million units with a 3.1% increase.

North America reached 8.04 million units with a 0.9% decrease, followed by Latin America with 5.78 million units and a 12.2% decrease, and Europe with 5.37 million units and a 13.4% increase.

3) “Packaged Air Conditioners (PAC)”

The 2016 world PAC demand is estimated to reach 13.50 million units with a 3.0% increase compared with the previous year. The largest market is North America, whose demand reached 6.57 million units with a 5.2% increase. The second largest market is China, whose demand reached 2.18 million units with a 2.8% increase. The third largest market is Asia, excluding the countries of Japan and China, whose demand reached 1.49 million units with a 4.6% increase. Japan reached 0.79 million units with a 0.1% decrease, followed by Europe with 0.70 million units and a 3.5% increase, and Middle East with 0.66 million units and a 4.1% decrease.

Note: The graph shows RAC and PAC demand by region from 2011 to 2016.



2. Target and Method to Survey

1) Scope and Division of Products

The targeted ACs are used for houses, buildings, and other structures, and completed units including heat pump types for both cooling and heating. Portable type ACs and fan coil units used for hydronic system are excluded.

RAC demand consists of window type and small-sized split type ACs as well as residential-use multi systems.

PAC demand consists of commercial-use medium/large-sized split type ACs, remote condenser type ACs, single packaged ACs, and VRF systems, including unitary type ACs and unitary type heat pumps that are mainstream in North America.

2) Method to Survey

The JRAIA has collected and compiled the JRAIA market demand survey format reported by the member companies of the JRAIA's Air Conditioning Global Committee, and projected the estimated demand in each major market.

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* "Asia in total": AC demand in Asia, excluding countries of Japan and China.

* Period: from January to December in the calendar year

* The AC demand in and before 2015 have been revised and adjusted as necessary.

* From 2012 onward, estimated demand of VRF systems has been listed to be included in PAC demand.

The VRF demand in each country is shown only if country demand exceeds 3,000 units. The same is listed in Japan for the fiscal year from April to March.

(1) Overall AC demand

(in thousands)

	2011	2012	2013	2014	2015	2016
World total	99,791	97,593	104,367	103,779	99,355	102,311
Japan	9,057	9,271	9,817	9,336	8,899	9,146
Overseas	90,734	88,322	94,550	94,443	90,456	93,165
China	43,729	39,843	43,308	42,477	39,222	40,587
Asian countries	12,217	13,065	13,672	14,538	15,146	16,411
India	3,547	3,500	3,633	3,862	4,063	4,507
Indonesia	1,638	2,030	2,246	2,286	2,202	2,300
Vietnam	659	917	998	1,229	1,607	1,984
Thailand	933	1,112	1,163	1,315	1,388	1,561
South Korea	1,227	1,190	1,236	1,236	1,253	1,252
Taiwan	922	987	952	1,014	1,014	1,005
Malaysia	816	871	902	898	878	936
Philippines	561	611	664	687	717	800
Pakistan	724	623	613	672	675	720
Hong Kong incl. Mac	551	538	539	538	531	530
Myanmar	70	80	123	180	181	206
Bangladesh	147	164	156	170	183	185
Singapore	162	163	163	162	158	157
Cambodia	69	77	81	85	90	110
Sri Lanka	68	79	80	81	84	88
Others	123	123	123	123	123	71
Middle East	4,246	4,279	5,300	5,501	5,384	5,264
Saudi Arabia	1,581	1,666	2,226	2,238	2,164	1,926
UAE	497	493	713	737	763	731
Iran	462	447	452	562	589	577
Israel	524	516	495	495	517	729
Oman	248	217	297	321	320	296
Qatar	189	179	275	284	286	278
Kuwait	144	147	214	217	225	211
Iraq	274	296	315	320	193	187
Bahrain	77	82	82	78	77	80
Lebanon	69	68	69	77	76	80
Others	181	168	162	173	174	169
Europe	7,760	6,961	6,739	5,619	5,411	6,070
Italy	1,035	919	958	772	870	1,029
Russia	2,625	2,000	1,891	1,442	926	1,012
Turkey	977	1,107	1,027	776	787	790
Spain	643	516	510	477	644	713
France	400	355	362	348	408	453
Greece	240	278	229	180	186	210
Ukraine	415	366	339	233	184	195
UK	161	154	153	167	169	168
Germany	126	127	129	128	138	150
Romania	92	106	101	87	93	134
Bulgaria	104	113	95	88	92	105
Poland	73	70	69	77	82	92
Portugal	110	69	66	65	67	77
Sweden	66	55	53	57	55	60
Norway	72	66	61	56	57	57
Netherlands	53	48	49	51	51	52
Others	568	612	647	615	602	776
North America	12,525	13,505	14,060	14,461	14,348	14,603
USA	12,126	13,097	13,662	14,061	13,916	14,163
Canada	399	408	398	400	431	440
Latin America	7,157	7,333	7,943	8,202	7,324	6,469
Brazil	3,492	3,514	4,212	4,451	3,729	2,906
Argentina	1,331	1,352	1,302	1,299	1,195	1,062
Mexico	889	1,021	1,034	1,073	1,037	1,078
Venezuela	401	413	371	330	322	312
Colombia	167	176	187	210	235	277
Panama	159	169	170	161	161	149
Ecuador	113	100	102	103	103	128
Chile	121	128	86	71	71	113
Peru	128	111	117	115	115	113
Puerto Rico	150	129	133	134	103	103
Cuba	89	98	106	116	116	92
Jamaica				53	53	53
Others	117	122	123	86	83	83
Africa	2,130	2,417	2,555	2,595	2,526	2,633
Egypt	747	803	765	781	782	758
Nigeria	412	488	566	603	549	505
South Africa	203	215	221	232	225	253
Algeria	172	176	206	205	194	229
Libya	180	174	189	159	159	155
Morocco	122	131	132	135	135	130
Ghana		95	97	97	97	92
Tunisia				54	54	58
Others	294	335	379	329	329	453
Oceania	970	919	973	1,050	1,096	1,128
Australia	861	817	869	946	985	1,008
New Zealand	102	95	97	97	105	114
Others	7	7	7	7	6	6

(2) Room Air Conditioners (RAC)

(in thousands)

	2011	2012	2013	2014	2015	2016
World total	87,565	85,105	91,432	90,704	86,244	88,807
Japan	8,279	8,487	9,013	8,500	8,104	8,352
Overseas	79,286	76,618	82,419	82,204	78,140	80,455
China	41,425	37,756	41,148	40,325	37,103	38,409
Asian countries	11,056	11,823	12,379	13,196	13,724	14,923
India	3,383	3,333	3,446	3,674	3,847	4,282
Indonesia	1,588	1,941	2,153	2,198	2,109	2,209
Vietnam	632	877	956	1,178	1,546	1,912
Thailand	855	1,028	1,072	1,203	1,268	1,423
South Korea	635	622	668	668	667	666
Taiwan	900	939	901	960	959	950
Malaysia	749	793	821	811	789	843
Philippines	515	563	608	628	651	731
Pakistan	697	593	583	640	644	679
Hong Kong incl. Mac	517	506	506	505	499	497
Myanmar	65	74	117	174	174	197
Bangladesh	135	150	142	152	164	166
Singapore	141	141	140	135	130	129
Cambodia	67	75	78	81	85	103
Sri Lanka	62	73	73	74	77	81
Others	115	115	115	115	115	55
Middle East	3,639	3,681	4,667	4,843	4,699	4,607
Saudi Arabia	1,439	1,522	2,051	2,063	1,980	1,746
UAE	341	342	570	577	594	570
Iran	425	405	415	519	535	525
Israel	422	418	398	398	418	635
Oman	209	184	261	282	280	257
Qatar	158	148	241	252	250	243
Kuwait	102	103	163	166	173	162
Iraq	253	274	286	290	174	170
Bahrain	65	70	70	66	65	70
Lebanon	62	61	62	70	69	73
Others	163	154	150	160	161	156
Europe	7,037	6,269	6,048	4,974	4,731	5,366
Italy	977	872	915	731	821	976
Russia	2,523	1,884	1,771	1,349	861	951
Turkey	916	1,025	944	700	708	710
Spain	521	424	413	377	511	578
France	305	269	279	275	324	363
Greece	225	266	219	170	177	197
Ukraine	403	353	325	225	178	188
UK	76	73	73	84	80	80
Germany	83	84	84	85	92	103
Romania	87	101	96	80	85	126
Bulgaria	101	111	93	86	90	103
Poland	59	57	56	63	66	75
Portugal	97	60	59	58	60	69
Sweden	62	52	50	54	52	57
Norway	69	63	59	54	55	55
Netherlands	37	33	34	35	36	36
Others	496	542	578	548	535	700
North America	6,726	7,545	7,894	8,237	8,107	8,038
USA	6,580	7,400	7,754	8,092	7,958	7,881
Canada	146	145	140	145	149	157
Latin America	6,661	6,584	7,145	7,393	6,583	5,782
Brazil	3,243	3,147	3,809	4,028	3,349	2,578
Argentina	1,302	1,295	1,248	1,261	1,166	1,035
Mexico	809	850	847	882	847	891
Venezuela	377	388	349	311	303	293
Colombia	156	160	170	190	212	253
Panama	143	150	151	141	141	128
Ecuador	108	95	97	98	98	123
Chile	113	117	78	66	66	108
Peru	111	94	99	97	97	93
Puerto Rico	106	83	83	82	64	64
Cuba	88	96	104	114	114	90
Jamaica				43	43	43
Others	105	109	110	80	83	83
Africa	1,910	2,168	2,294	2,337	2,267	2,385
Egypt	675	733	696	717	718	695
Nigeria	386	458	533	567	517	477
South Africa	149	153	158	173	163	200
Algeria	160	165	192	191	180	215
Libya	177	171	186	156	156	152
Morocco	111	119	120	122	122	117
Ghana		82	84	84	84	79
Tunisia				44	44	48
Others	252	287	325	283	283	402
Oceania	832	792	844	899	926	946
Australia	741	706	756	811	830	843
New Zealand	85	80	82	82	90	97
Others	6	6	6	6	6	6

(3) Breakdown for RAC demand

	2014		2015		2016	
	Window-Type	Split-Type	Window-Type	Split-Type	Window-Type	Split-Type
World total	14,384	76,320	13,879	72,365	13,119	75,688
Japan		8,500		8,104		8,352
Overseas	14,384	67,820	13,879	64,261	13,119	67,336
China	325	40,000	303	36,800	309	38,100
Asian countries	1,846	11,350	1,840	11,884	1,730	13,193
India	703	2,971	705	3,142	620	3,662
Indonesia	9	2,189	9	2,100	9	2,200
Vietnam	2	1,176	2	1,544	2	1,910
Thailand	3	1,200	3	1,265	3	1,420
South Korea	12	656	11	656	11	655
Taiwan	216	744	205	754	198	752
Malaysia	5	806	5	784	4	839
Philippines	418	210	425	226	487	244
Pakistan	40	600	38	606	34	645
Hong Kong incl. Mac	312	193	312	187	299	198
Myanmar	4	170	4	170	4	193
Bangladesh	31	121	30	134	30	136
Singapore	5	130	5	125	4	125
Cambodia	1	80	1	84	1	102
Sri Lanka	25	49	25	52	24	57
Others	60	55	60	55		55
Middle East	2,494	2,349	2,360	2,339	2,080	2,527
Saudi Arabia	1,385	678	1,300	680	1,091	655
UAE	320	257	320	274	305	265
Iran	196	323	192	343	177	348
Israel	10	388	10	408	10	625
Oman	164	118	158	122	137	120
Qatar	170	82	156	94	151	92
Kuwait	92	74	92	81	85	77
Iraq	83	207	59	115	57	113
Bahrain	31	35	30	35	27	43
Lebanon	1	69	1	68	1	72
Others	42	118	42	119	39	117
Europe	90	4,884	76	4,655	66	5,300
Italy	5	726	6	815	6	970
Russia	29	1,320	19	842	14	937
Turkey	0	700	0	708	0	710
Spain	6	371	5	506	5	573
France	4	271	4	320	4	359
Greece	0	170	0	177	0	197
Ukraine	4	221	4	174	3	185
UK	1	83	1	79	1	79
Germany	4	81	4	88	3	100
Romania	1	79	1	84	1	125
Bulgaria	1	85	1	89	1	102
Poland	1	62	1	65	1	74
Portugal	0	58	0	60	0	69
Sweden	0	54	0	52	0	57
Norway	0	54	0	55	0	55
Netherlands	0	35	0	36	0	36
Others	34	514	30	505	28	672
North America	7,647	590	7,400	707	7,288	750
USA	7,578	514	7,335	623	7,223	658
Canada	69	76	65	84	65	92
Latin America	1,564	5,829	1,483	5,100	1,236	4,546
Brazil	758	3,270	685	2,664	532	2,046
Argentina	118	1,143	116	1,050	105	930
Mexico	271	611	281	566	239	652
Venezuela	83	228	74	229	73	220
Colombia	48	142	48	164	42	211
Panama	30	111	30	111	23	105
Ecuador	23	75	23	75	23	100
Chile	24	42	24	42	20	88
Peru	24	73	24	73	25	68
Puerto Rico	40	42	33	31	33	31
Cuba	100	14	100	14	76	14
Jamaica	23	20	23	20	23	20
Others	22	58	22	61	22	61
Africa	347	1,990	352	1,915	353	2,032
Egypt	76	641	80	638	80	615
Nigeria	92	475	92	425	75	402
South Africa	25	148	26	137	26	174
Algeria	34	157	34	146	32	183
Libya	13	143	13	143	10	142
Morocco	3	119	3	119	3	114
Ghana	1	83	1	83	1	78
Tunisia	1	43	1	43	3	45
Others	102	181	102	181	123	279
Oceania	71	828	65	861	58	888
Australia	68	743	62	768	55	788
New Zealand	2	80	2	88	2	95
Others	1	5	1	5	1	5

(4) Packaged Air Conditioners (PAC)

(in thousands)

	2011	2012	2012(VRF)	2013	2013(VRF)	2014	2014(VRF)	2015	2015(VRF)	2016	2016(VRF)
World total	12,226	12,488	994	12,935	1,104	13,075	1,180	13,110	1,156	13,503	1,312
Japan	778	784	125	804	126	836	134	795	129	794	131
Overseas	11,448	11,704	869	12,131	978	12,239	1,046	12,315	1,027	12,709	1,181
China	2,304	2,087	500	2,160	597	2,152	653	2,119	611	2,178	710
Asian countries	1,161	1,242	174	1,293	171	1,342	181	1,422	195	1,488	220
India	164	167	26	187	22	188	25	216	30	225	32
Indonesia	50	89	6	93	7	88	9	93	7	91	8
Vietnam	27	40	5	42	6	51	8	61	10	72	12
Thailand	78	84	4	91	5	112	5	120	6	138	8
South Korea	592	568	101	568	100	568	100	586	103	586	103
Taiwan	22	48	8	51	8	54	9	55	10	55	10
Malaysia	67	78	5	81	5	87	5	89	6	93	7
Philippines	46	48	3	56	4	59	4	66	6	69	7
Pakistan	27	30		30		32		31		41	5
Hong Kong incl.	34	32	3	33	4	33	5	32	5	33	8
Myanmar	5	6		6		6		7		9	
Bangladesh	12	14		14		18		19		19	
Singapore	21	22	8	23	7	27	7	28	8	28	9
Cambodia	2	2		3		4		5		7	
Sri Lanka	6	6		7		7		7		7	
Others	8	8		8		8		8		16	8
Middle East	607	598	13	633	14	658	20	685	22	657	24
Saudi Arabia	142	144	3	175		175	3	184	3	180	3
UAE	156	151	3	143	3	160	4	169	5	161	5
Iran	37	42		37		43		54	3	52	3
Israel	102	98		97		97	4	99	4	94	6
Oman	39	33		36		39		40		39	
Qatar	31	31		34		32		36		35	
Kuwait	42	44		51		51		52		49	
Iraq	21	22		29		30		19		17	
Bahrain	12	12		12		12		12		10	
Lebanon	7	7		7		7		7		7	
Others	18	14		12		13		13		13	
Europe	723	692	124	691	128	645	123	680	126	704	145
Italy	58	47	13	43	12	41	12	49	14	53	18
Russia	102	116	12	120	13	93	11	65	7	61	6
Turkey	61	82	22	83	24	76	28	79	29	80	33
Spain	122	92	8	97	7	100	7	133	8	135	10
France	95	86	15	83	15	73	15	84	17	90	20
Greece	15	12		10		10		9		13	4
Ukraine	12	13		14		8		6		7	
UK	85	81	15	80	15	83	17	89	18	89	19
Germany	43	43	10	45	10	43	11	46	11	47	12
Romania	5	5		5		7		8		8	
Bulgaria	3	2		2		2		2		3	
Poland	14	13		13	4	14	3	16	4	17	4
Portugal	13	9		7		7		7		8	
Sweden	4	3		3		3		3		3	
Norway	3	3		2		2		2		2	
Netherlands	16	15		15		16		15		16	
Others	72	70	18	69	18	67	11	67	11	75	14
North America	5,799	5,960	26	6,166	31	6,224	30	6,241	34	6,565	38
USA	5,546	5,697	22	5,908	27	5,969	27	5,958	30	6,282	33
Canada	253	263	3	258	4	255	3	282	3	283	5
Latin America	496	749	17	798	21	809	22	741	22	687	23
Brazil	249	367	8	403	12	423	13	380	12	328	10
Argentina	29	57		54		38		29		27	
Mexico	80	171	3	187	3	191	3	190	4	187	4
Venezuela	24	25		22		19		19		19	
Colombia	11	16		17		20		23		24	
Panama	16	19		19		20		20		21	
Ecuador	5	5		5		5		5		5	
Chile	8	11		8		5		5		5	
Peru	17	17		18		18		18		20	
Puerto Rico	44	46		50		52		39		39	
Cuba	1	2		2		2		2		2	
Jamaica						10		10		10	
Others	12	13		13		6		0		0	
Africa	220	249	5	261	5	258	5	259	5	249	6
Egypt	72	70		69		64		64		63	
Nigeria	26	30		33		36		32		28	
South Africa	54	62	3	63	3	59	3	62	3	53	4
Algeria	12	11		14		14		14		14	
Libya	3	3		3		3		3		3	
Morocco	11	12		12		13		13		13	
Ghana		13		13		13		13		13	
Tunisia						10		10		10	
Others	42	48		54		46		46		51	
Oceania	138	127	11	129	11	151	12	170	12	182	15
Australia	120	111	10	113	10	135	11	155	11	165	14
New Zealand	17	15		15		15		15		18	
Others	1	1		1		1		0		0	

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