

Table SPBS-17

S&E articles in all S&E fields, whole count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	992,538	1,021,319	1,026,965	1,029,278	1,076,635	1,113,462	1,161,725	1,223,864	1,334,488	1,497,326	1,587,879	1,657,902	1,751,394	1,850,488	1,938,121	2,036,090	2,090,551	2,153,533	2,223,983	2,275,565	2,357,663	2,432,385	2,567,468	2,739,272	2,940,807
North America	385,361	383,581	376,122	370,842	383,043	382,311	403,627	427,703	460,063	503,171	516,032	524,210	532,725	544,016	560,086	581,490	592,919	602,428	611,976	619,886	628,272	638,096	654,979	667,610	702,229
Canada	42,386	41,901	41,012	40,303	42,299	41,508	45,310	49,898	55,364	62,095	66,145	68,649	71,553	74,836	76,807	78,865	82,511	84,195	86,443	87,895	89,774	91,114	95,220	98,483	105,538
Greenland	11	11	14	14	23	17	27	36	47	45	50	53	51	39	69	78	99	110	105	125	109	106	124	129	115
Mexico	4,956	5,451	5,926	6,231	6,434	6,906	7,578	8,772	9,522	10,790	12,173	12,538	13,581	13,930	14,708	15,640	16,553	17,356	18,411	19,110	20,154	21,404	22,721	24,828	27,593
United States	345,574	344,039	337,143	332,161	342,588	341,926	359,784	380,566	408,074	444,754	453,050	459,157	464,303	472,788	486,873	506,054	514,182	521,885	529,455	535,831	542,700	550,819	563,720	572,476	600,053
Central America and Caribbean	2,280	2,385	2,593	2,643	2,600	2,808	2,859	2,986	3,208	3,713	4,308	4,432	4,630	4,983	5,009	5,331	5,658	5,642	5,881	5,766	5,904	6,218	6,530	6,901	8,006
Antigua and Barbuda	0	3	1	3	1	1	3	3	2	5	4	8	9	7	5	4	7	10	7	8	11	16	19	15	22
Bahamas, The	5	6	10	6	3	11	10	8	7	16	11	25	16	26	21	30	29	45	42	39	35	63	69	83	82
Barbados	40	40	42	42	40	57	57	70	84	66	77	73	72	71	68	80	98	91	91	98	107	103	92	116	145
Belize	9	9	7	6	3	2	9	13	13	17	18	8	9	21	24	14	22	26	23	30	26	37	32	37	45
Costa Rica	267	281	258	219	219	278	288	294	377	417	428	478	478	511	547	561	615	599	754	777	854	963	1,092	1,157	1,389
Cuba	761	874	1,088	1,200	1,211	1,276	1,241	1,086	1,079	1,332	1,655	1,605	1,618	1,887	1,756	2,030	2,077	2,125	2,021	1,895	1,724	1,707	1,802	1,776	2,002
Dominica	3	2	7	0	0	8	2	6	4	10	11	10	7	6	20	20	29	31	25	34	33	35	30	26	21
Dominican Republic	39	27	23	27	32	20	21	26	37	37	40	53	57	49	50	69	76	113	104	125	134	143	171	244	302
El Salvador	11	13	5	11	7	13	24	14	42	29	36	31	36	38	46	49	56	48	57	84	89	69	89	78	78
Grenada	7	4	4	5	4	5	5	12	12	16	37	67	78	46	49	73	96	95	132	108	116	196	207	200	237
Guatemala	64	56	58	62	50	49	48	64	75	106	79	85	95	121	122	122	173	182	176	245	250	267	265	286	383
Haiti	4	8	14	4	13	9	15	13	15	25	34	27	29	33	39	63	52	77	103	105	104	112	95	104	127
Honduras	24	27	29	37	28	16	31	29	36	34	38	37	43	63	63	69	77	78	75	97	84	121	160	199	314
Jamaica	170	152	147	164	143	188	201	186	224	199	199	239	289	281	261	282	294	295	310	272	282	285	327	310	434
Nicaragua	35	40	31	26	32	22	18	35	45	55	84	62	76	89	88	88	103	82	91	102	115	134	115	126	142
Panama	111	83	90	113	98	115	113	153	179	190	226	264	302	308	344	352	435	442	446	486	494	550	578	713	756
Puerto Rico	654	679	679	633	618	628	664	849	851	998	1,211	1,186	1,270	1,214	1,325	1,246	1,270	1,209	1,235	1,224	1,310	1,290	1,293	1,297	1,379
Saint Kitts and Nevis	1	3	3	6	2	1	4	0	1	5	8	7	11	11	14	13	26	25	46	59	84	76	88	96	116
Saint Lucia	5	3	6	1	3	4	3	1	2	6	6	10	4	2	7	9	4	6	4	15	15	9	9	13	14
Saint Vincent and the Grenadines	2	2	1	1	2	0	2	2	1	1	3	5	0	3	4	1	3	4	5	3	9	12	5	20	28
Trinidad and Tobago	104	106	130	109	120	142	165	176	199	241	194	260	253	331	323	343	311	274	362	268	314	329	352	378	405
South America	17,264	20,053	21,392	23,099	25,142	26,368	30,252	32,920	36,006	40,215	49,295	52,932	60,331	65,114	70,080	74,671	81,254	85,068	90,665	94,181	100,540	106,072	114,460	120,257	133,364
Argentina	4,137	4,586	4,659	4,983	5,262	5,382	5,807	5,836	6,165	6,545	7,376	7,601	8,380	9,120	9,576	10,261	10,598	10,747	11,278	11,488	11,857	12,102	12,803	12,787	14,204
Bolivia	62	89	95	118	75	85	102	123	126	153	171	220	233	227	222	226	217	258	272	293	296	271	319	347	428
Brazil	9,488	11,314	12,781	13,736	15,315	16,280	18,920	20,940	23,381	26,255	32,924	35,867	40,797	43,939	47,555	50,735	55,353	58,268	61,142	63,361	66,637	70,266	74,937	78,178	85,765
Chile	1,812	1,984	1,906	2,114	2,194	2,316	2,828	3,113	3,372	3,846	4,690	4,931	5,548	5,882	6,324	6,894	7,758	8,017	9,426	9,957	11,263	11,439	12,825	13,538	15,692
Colombia	574	651	634	749	852	806	1,024	1,122	1,291	1,512	2,126	2,367	3,381	3,895	4,520	5,102	5,984	6,491	7,179	7,828	8,906	9,739	10,989	12,283	13,773
Ecuador	98	157	150	132	137	122	167	199	205	287	296	333	387	462	427	446	588	661	907	1,448	2,165	3,023	3,683	4,085	4,852
Guyana	8	21	9	21	20	17	18	15	23	29	24	26	21	19	33	20	29	26	29	32	35	34	44	46	66

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(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Paraguay	30	31	37	26	27	32	26	37	52	49	58	62	72	77	87	108	125	129	141	200	213	271	226	367	396
Peru	197	215	192	258	282	307	323	468	485	562	812	749	788	903	1,000	1,125	1,224	1,274	1,483	1,768	2,016	2,376	2,817	3,519	4,444
Suriname	5	6	5	11	5	11	9	7	12	14	9	18	13	12	10	12	26	32	18	36	56	46	53	62	57
Uruguay	268	322	327	329	363	357	406	453	507	567	593	630	750	808	836	985	988	1,027	1,258	1,238	1,429	1,365	1,592	1,725	1,812
Venezuela	1,017	1,213	1,176	1,249	1,346	1,367	1,420	1,576	1,530	1,790	1,894	1,937	2,179	2,196	2,032	1,788	1,788	1,736	1,802	1,511	1,411	1,432	1,304	1,191	1,312
Europe	430,723	447,951	453,997	451,065	470,750	481,511	498,147	524,240	556,203	606,212	630,021	659,153	688,603	718,898	740,236	772,254	802,854	824,061	847,819	867,720	889,853	906,744	930,473	972,905	1,032,672
EU-27 and UK ^a	367,102	383,715	388,397	388,090	406,491	410,889	425,803	449,351	476,951	523,206	549,987	575,090	601,100	626,094	643,305	669,840	696,834	713,541	731,035	742,071	751,359	761,082	774,116	798,335	846,948
UK	85,483	88,000	89,015	88,447	93,785	89,553	92,189	97,295	103,587	111,707	117,479	122,481	124,289	128,938	130,783	134,660	139,697	144,569	148,277	153,408	157,527	161,571	166,519	170,738	182,907
EU-27 ^b	292,318	307,400	311,824	312,372	326,214	334,404	348,064	370,058	393,322	433,766	456,598	478,849	504,846	527,225	544,155	569,242	593,788	608,835	625,152	634,290	642,250	650,153	660,342	681,577	722,965
Austria	7,605	8,162	8,178	8,336	8,794	9,302	9,978	10,953	11,530	12,904	13,282	14,534	15,535	16,318	17,025	18,343	19,316	20,003	20,646	21,681	22,115	22,441	23,045	24,040	25,790
Belgium	11,428	11,834	12,468	12,391	12,789	13,015	13,859	15,385	16,417	18,312	18,880	20,101	21,323	22,322	23,254	24,638	25,843	26,679	27,753	28,456	28,924	29,054	30,120	30,322	32,904
Bulgaria	2,358	2,243	2,293	2,358	2,173	2,192	2,257	2,452	2,676	2,944	2,843	3,520	3,360	3,779	3,614	3,521	3,766	3,781	3,806	3,679	3,890	4,421	4,818	5,567	5,846
Croatia	1,724	1,644	1,738	1,823	2,070	2,150	2,436	2,840	2,992	3,539	3,553	4,108	4,398	4,948	4,908	5,637	5,732	5,535	5,431	5,561	5,629	6,062	6,540	6,653	7,118
Cyprus	152	195	206	199	240	215	307	305	445	543	613	732	884	1,120	1,247	1,354	1,479	1,686	1,599	1,720	1,984	2,253	2,479	2,705	3,211
Czechia	5,499	5,774	5,810	6,186	6,633	7,110	7,493	8,172	9,021	10,068	11,311	12,698	13,663	14,135	15,807	16,912	17,733	18,024	20,052	21,915	22,032	22,608	22,363	23,516	23,397
Denmark	8,451	9,358	9,336	9,273	9,745	9,636	9,728	10,701	11,297	12,209	12,779	13,469	14,067	14,930	15,919	17,676	19,218	20,334	22,433	23,370	24,079	24,699	25,707	26,199	28,649
Estonia	591	597	657	675	648	714	717	816	921	1,048	1,234	1,413	1,578	1,624	2,022	2,064	2,296	2,353	2,652	2,580	2,732	2,816	2,890	3,252	3,466
Finland	7,959	8,497	8,678	8,744	9,454	9,632	9,802	10,550	11,433	12,079	12,579	12,888	13,253	13,864	14,169	14,796	15,412	16,063	16,964	17,366	17,942	17,812	18,263	19,153	20,082
France	55,973	59,761	60,472	60,305	61,823	62,350	64,283	68,420	72,211	78,630	82,714	85,156	89,466	92,875	94,405	97,875	101,155	103,876	104,819	105,557	106,594	106,626	106,280	105,237	108,305
Germany	76,719	82,073	84,089	83,015	85,465	87,159	89,495	94,584	99,369	109,820	112,818	117,672	121,990	126,947	131,105	135,979	142,936	145,338	148,680	151,019	154,454	156,404	158,667	161,743	166,520
Greece	5,088	5,493	5,758	5,784	6,595	7,018	7,786	8,541	9,972	11,502	13,233	13,975	14,793	15,437	15,413	15,811	16,115	16,135	16,144	16,095	16,254	16,227	16,677	17,666	19,200
Hungary	4,620	5,170	5,662	5,324	5,828	5,683	6,077	6,443	6,703	7,595	7,611	8,018	8,664	8,311	8,275	9,034	9,351	9,118	9,690	9,713	9,886	10,081	10,355	10,949	11,558
Ireland	2,754	2,879	3,085	3,093	3,457	3,584	4,014	4,388	5,334	6,525	6,915	7,739	8,276	9,212	10,048	10,523	10,482	10,723	10,957	10,945	11,649	12,037	12,767	13,651	15,432
Italy	39,681	41,134	40,528	41,098	43,122	44,322	46,933	52,037	55,056	59,626	63,322	68,064	70,869	74,073	75,525	78,656	83,794	88,583	91,642	94,997	96,420	99,131	102,410	107,287	120,946
Latvia	433	546	464	475	431	473	517	450	471	644	575	655	871	915	1,010	1,516	1,430	1,504	1,512	1,813	1,870	2,154	2,084	2,252	2,381
Lithuania	560	613	680	779	795	831	1,221	1,242	1,581	1,879	2,150	2,096	2,938	2,752	2,834	3,011	2,901	2,884	3,204	3,279	3,219	3,430	3,486	3,769	4,257
Luxembourg	81	97	97	88	106	115	138	170	256	287	391	429	599	749	881	1,067	1,164	1,426	1,673	1,641	1,715	1,750	1,927	2,007	2,136
Malta	55	67	67	69	68	76	76	112	90	146	165	161	247	243	293	295	397	459	480	550	612	685	765	772	931
Netherlands	22,812	23,386	23,745	22,760	24,310	23,987	25,447	27,536	29,852	33,193	34,732	35,980	37,641	40,625	42,506	44,161	46,832	48,112	49,294	49,867	50,984	52,031	53,519	54,804	59,156
Poland	13,411	13,424	13,839	14,488	15,705	17,134	18,597	20,474	22,967	24,676	26,682	26,677	28,562	28,808	29,922	31,127	33,711	35,890	37,809	39,975	42,104	42,498	44,416	44,986	48,552
Portugal	2,822	3,332	3,620	4,074	4,348	4,896	5,301	6,268	7,090	8,014	9,733	10,273	11,846	12,900	14,365	16,308	17,893	19,187	19,952	20,772	20,932	21,283	22,475	24,439	26,902
Romania	2,217	2,601	2,721	2,680	2,963	2,986	3,124	3,549	3,795	4,560	4,947	6,435	8,595	10,526	11,850	11,727	12,316	12,340	12,339	13,102	12,372	12,617	12,252	13,627	13,745
Slovakia	2,595	2,395	2,622	2,614	2,697	2,656	2,686	2,924	3,181	3,365	3,603	3,952	4,551	4,348	4,864	5,227	5,768	5,800	6,601	6,806	7,383	7,656	7,276	8,022	8,182
Slovenia	1,376	1,532	1,524	1,764	2,117	2,073	2,266	2,747	2,501	3,068	3,115	3,618	4,032	4,279	4,361	4,958	5,092	5,111	5,066	5,346	5,310	5,378	5,497	5,887	6,251
Spain	24,646	26,713	27,117	28,423	29,608	31,032	33,464	36,214	39,566	44,794	49,560	53,244	56,287	60,565	64,118	68,767	72,637	73,538	76,034	76,185	78,243	79,259	82,211	85,965	96,536

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Sweden	16,796	17,460	17,872	18,366	18,841	18,927	19,049	20,378	21,163	23,023	23,626	24,168	24,381	25,961	26,991	28,249	30,301	31,703	33,570	34,861	35,952	36,673	37,803	38,777	41,087
Other Europe	75,747	77,550	79,875	77,632	79,472	85,976	89,287	95,102	101,382	107,337	105,314	111,623	115,805	123,104	128,333	136,356	142,688	149,723	158,572	170,889	186,450	196,646	209,774	230,699	247,679
Other Europe, 2020 ^b	159,088	163,164	166,389	163,385	170,446	172,743	178,377	188,602	200,596	214,233	217,758	228,474	234,334	245,733	252,502	263,769	274,225	285,485	297,026	313,798	332,454	345,927	363,284	387,788	415,165
Albania	66	46	47	42	36	30	43	46	46	51	60	74	94	112	199	221	250	247	265	307	319	289	358	376	395
Andorra	2	2	4	0	0	4	1	9	4	9	11	17	4	7	7	4	10	15	18	19	22	10	17	30	36
Belarus	1,478	1,605	1,545	1,396	1,492	1,640	1,701	1,733	1,718	1,804	1,619	1,764	1,462	1,595	1,501	1,645	1,709	1,722	1,731	1,691	1,798	1,981	2,216	2,450	2,421
Bosnia and Herzegovina	48	62	58	123	97	89	144	202	257	322	379	436	518	583	696	805	834	745	760	886	913	1,145	1,196	1,256	1,468
Holy See (Vatican City)	1	3	0	0	1	0	1	0	6	2	0	2	1	1	4	7	6	5	5	9	10	11	12	32	15
Iceland	314	346	382	386	355	388	466	473	513	635	666	722	797	935	1,089	1,080	1,205	1,204	1,271	1,336	1,503	1,467	1,574	1,627	1,642
Kosovo	0	0	0	0	0	0	0	0	0	0	0	0	103	158	207	195	225	221	228	266	329	403	469	490	518
Liechtenstein	17	30	11	26	28	15	16	36	45	65	64	54	81	64	85	80	80	80	105	91	98	94	101	92	96
Moldova	270	234	233	226	261	222	246	282	234	352	298	270	299	331	299	342	370	376	387	362	500	443	389	471	503
Monaco	39	38	48	41	27	48	39	45	74	90	74	75	81	101	92	107	88	113	103	125	133	159	147	194	199
Montenegro ^c	0	0	0	0	0	0	0	0	0	0	0	125	129	153	199	237	269	313	343	354	383	458	425	534	640
North Macedonia	107	156	116	120	157	177	182	195	207	259	296	381	413	473	515	641	675	657	701	755	741	797	748	769	819
Norway	5,986	6,514	6,680	6,251	6,547	6,672	6,756	7,383	8,221	9,519	10,321	11,165	11,681	12,945	13,388	14,410	15,613	15,948	16,800	17,117	18,652	19,641	20,597	21,376	23,748
Russia	39,015	38,475	39,586	37,685	38,295	42,054	42,335	42,206	42,780	42,567	36,972	37,873	39,273	40,137	40,421	43,058	43,120	46,168	52,342	60,746	70,542	78,836	88,363	100,778	104,991
San Marino	5	2	7	1	2	2	0	1	3	3	2	4	12	4	6	9	14	21	16	24	25	34	34	39	46
Serbia ^c	0	0	0	0	0	0	0	0	0	0	0	3,648	3,884	4,531	5,066	6,008	7,428	6,681	6,591	6,506	6,697	6,718	6,796	7,203	7,160
Serbia and Montenegro ^d	1,687	1,996	1,881	1,706	1,746	1,659	1,843	1,903	2,257	2,852	3,025	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switzerland	15,772	16,371	16,850	16,998	17,509	16,997	17,750	20,049	21,835	23,875	25,673	27,021	28,046	29,268	31,095	33,307	35,536	36,779	38,270	39,439	40,416	41,754	42,489	42,978	45,817
Turkey	5,617	5,981	6,424	7,468	7,617	9,410	11,998	14,882	17,714	19,561	21,522	23,799	24,352	27,654	29,350	30,377	32,116	34,483	35,315	37,840	40,630	38,837	39,648	44,272	51,452
Ukraine	6,397	6,937	7,251	6,562	6,718	8,036	7,375	7,561	7,618	7,858	6,980	7,080	7,555	7,227	7,669	8,130	8,562	9,360	9,363	9,659	10,248	11,529	12,788	14,939	15,899
Middle East	16,650	17,440	17,609	17,689	19,515	19,916	21,627	24,831	27,289	30,620	35,377	39,745	45,550	51,047	58,506	69,974	74,457	79,184	86,995	93,112	102,303	109,859	119,676	137,873	162,359
Armenia	431	357	371	387	486	477	484	527	544	623	581	643	598	669	770	942	1,043	980	992	1,009	1,052	1,035	1,133	1,243	1,121
Azerbaijan	267	252	212	201	199	205	310	368	459	450	378	505	585	764	773	856	961	707	630	746	950	1,077	1,267	1,352	1,596
Bahrain	114	84	108	110	97	102	88	160	185	212	244	241	240	274	291	285	268	385	357	320	405	422	567	693	886
Gaza Strip ^e	16	17	20	33	30	29	62	49	65	70	76	105	96	92	97	115	128	145	161	134	121	133	164	190	290
Georgia	285	325	326	342	359	339	373	388	472	608	621	532	586	635	591	869	906	859	854	956	1,098	1,040	1,186	1,267	1,328
Iran	853	1,078	1,215	1,408	1,835	2,179	3,124	4,433	5,831	7,993	11,069	14,420	18,600	22,369	27,129	34,188	34,727	36,077	39,368	41,236	46,581	51,052	54,403	60,438	67,450
Iraq	97	104	86	72	102	100	115	140	113	183	317	304	402	480	665	781	1,131	1,404	1,595	1,749	2,321	3,430	5,225	9,071	12,598
Israel	10,595	11,018	10,819	10,843	11,749	11,769	12,166	12,957	13,504	13,758	14,585	14,816	15,152	14,976	15,088	15,744	16,144	16,091	17,023	17,624	17,959	18,247	18,898	19,772	21,311
Jordan	440	516	586	600	654	656	727	835	937	1,026	1,197	1,376	1,612	1,691	1,912	1,968	1,997	1,993	2,051	2,169	2,503	2,909	3,655	4,433	5,462
Kuwait	602	613	684	704	625	635	630	702	758	822	851	942	1,032	1,066	1,028	1,077	1,111	1,217	1,176	1,246	1,293	1,407	1,617	1,956	2,126
Lebanon	278	344	365	419	525	552	538	636	699	806	953	998	1,090	1,179	1,226	1,358	1,627	1,824	1,997	2,127	2,503	2,632	3,013	3,379	3,940

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(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oman	176	171	207	217	288	305	338	414	431	455	516	596	652	753	826	922	966	1,062	1,136	1,323	1,402	1,406	1,605	1,871	2,225
Qatar	69	60	76	60	56	102	119	151	190	236	280	367	505	558	695	844	1,175	1,647	2,402	2,804	3,343	3,235	3,460	3,858	4,817
Saudi Arabia	1,952	2,000	2,007	1,825	1,928	1,871	1,944	2,211	2,189	2,241	2,422	2,635	2,991	3,941	5,640	8,314	10,653	12,980	15,588	17,704	18,740	19,378	20,979	24,946	34,061
Syria	115	129	129	131	150	131	135	171	209	249	233	252	325	281	403	447	510	433	396	407	404	400	453	527	695
United Arab Emirates	387	389	416	352	457	511	545	814	849	1,071	1,268	1,307	1,445	1,681	1,996	2,261	2,590	2,851	3,102	4,000	4,567	5,148	5,790	7,655	8,849
West Bank ^e	42	49	54	59	66	62	73	85	85	100	121	124	145	171	208	232	231	254	304	297	341	499	542	621	730
Yemen	34	45	46	45	42	64	38	49	66	78	99	94	112	165	194	228	252	289	314	284	322	403	469	643	977
Africa	13,629	14,101	14,591	14,915	15,285	16,037	17,211	19,157	21,230	23,083	26,051	28,581	31,397	36,657	39,997	44,354	48,641	52,855	57,996	62,567	70,567	76,321	84,260	95,079	110,749
Algeria	384	406	461	484	542	636	673	882	1,162	1,235	1,732	1,930	2,347	2,866	2,869	3,217	3,893	4,388	4,588	5,228	5,893	6,761	6,962	7,907	7,718
Angola	7	12	10	12	15	15	25	15	22	31	31	30	33	37	39	49	63	64	89	88	104	130	96	118	140
Benin	60	81	81	79	80	77	87	93	120	123	151	186	200	234	230	251	310	371	384	395	385	472	504	543	599
Botswana	102	101	116	125	146	133	161	171	192	199	279	240	263	245	242	301	272	314	374	334	457	498	632	669	735
Burkina Faso	62	92	133	109	85	108	108	171	157	171	232	218	265	284	287	347	414	374	401	485	487	507	564	595	613
Burundi	24	29	10	17	5	7	4	12	11	11	14	20	10	10	31	28	33	34	37	48	47	59	78	78	110
Cabo Verde	2	1	1	3	1	2	1	5	3	2	12	7	9	15	15	6	16	25	35	35	34	42	34	48	65
Cameroon	179	213	214	205	213	243	292	354	381	459	538	544	591	639	663	731	767	892	1,012	1,057	1,191	1,400	1,545	1,607	1,980
Central African Republic	15	24	21	22	14	12	10	25	24	20	26	22	23	30	28	31	37	34	45	38	64	45	64	45	70
Chad	4	7	3	7	5	12	11	13	22	24	35	19	22	28	11	24	19	23	31	30	42	52	52	61	61
Comoros	1	2	1	3	2	2	1	2	2	6	2	9	2	3	6	11	5	15	5	7	18	11	18	18	17
Congo, Democratic Republic of the	32	41	36	44	34	18	26	38	36	56	66	76	89	113	138	150	195	207	223	272	287	354	388	412	511
Congo, Republic of the	41	21	44	35	30	27	41	53	68	82	95	96	88	99	104	113	140	129	191	196	227	189	221	236	244
Côte d'Ivoire	124	186	189	184	152	125	141	179	185	177	190	209	256	261	257	293	328	287	335	351	359	397	515	538	584
Djibouti	6	7	6	1	2	2	2	3	5	7	7	11	8	16	14	15	19	16	23	16	18	21	21	20	34
Egypt	2,908	2,878	2,951	2,888	3,214	3,449	3,604	4,248	4,389	4,574	4,974	5,607	6,233	7,816	8,683	9,861	11,387	12,264	13,396	14,623	16,478	16,897	19,553	23,084	28,871
Equatorial Guinea	2	4	0	6	0	3	2	3	9	4	7	9	4	9	8	7	7	8	12	16	17	11	15	14	10
Eritrea	8	4	18	12	13	16	23	26	24	29	40	32	19	21	19	25	8	25	26	26	23	34	48	51	68
Eswatini	16	20	24	16	14	10	20	14	17	25	22	20	21	30	45	52	41	42	35	56	63	83	104	115	108
Ethiopia	261	248	244	272	246	252	286	346	363	406	487	571	589	659	738	865	1,054	1,266	1,587	1,693	1,937	2,655	3,268	3,998	5,757
Gabon	46	56	68	65	47	52	61	62	83	105	111	86	101	115	108	152	124	156	183	177	168	174	181	187	183
Gambia, The	69	65	67	73	61	67	58	77	80	84	107	96	110	109	113	92	121	142	153	163	166	181	139	185	223
Ghana	180	209	206	215	216	190	213	246	293	332	344	423	456	536	607	717	898	1,012	1,162	1,414	1,757	1,958	2,430	2,819	3,668
Guinea	16	9	12	10	7	26	20	13	24	18	38	30	37	34	34	33	38	38	61	94	119	131	88	114	126
Guinea-Bissau	11	12	8	17	5	7	14	20	22	24	12	29	20	21	20	29	35	37	57	35	48	54	50	57	54
Kenya	635	653	587	597	596	649	714	801	821	849	928	1,070	1,128	1,300	1,438	1,638	1,664	1,813	2,091	2,204	2,433	2,668	2,874	3,212	3,915
Lesotho	15	12	4	13	13	15	17	11	16	18	22	25	30	28	25	32	40	34	31	38	38	43	48	73	88

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(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Liberia	2	0	1	0	1	0	4	2	3	2	6	5	6	3	10	18	19	16	23	45	65	66	81	86	54
Libya	60	68	83	61	80	64	59	81	108	112	137	170	210	332	434	233	294	383	383	395	344	400	424	469	627
Madagascar	77	66	72	100	97	97	81	129	106	123	137	203	192	196	194	224	236	268	255	284	271	327	330	315	394
Malawi	102	96	85	109	114	120	120	134	154	164	186	244	242	244	291	335	368	361	432	474	554	635	700	736	898
Mali	53	54	79	51	37	59	66	79	85	93	135	142	144	166	170	199	226	194	195	242	238	290	266	302	307
Mauritania	10	11	10	15	18	18	19	17	16	36	25	23	20	24	18	31	34	36	38	35	41	38	56	60	68
Mauritius	24	25	41	63	69	65	81	64	81	97	84	75	91	106	128	102	164	184	179	189	228	270	271	408	404
Morocco	833	924	1,069	1,191	1,252	1,326	1,307	1,308	1,414	1,336	1,408	1,525	1,768	2,002	2,197	2,578	2,942	3,017	3,351	3,469	4,756	5,210	6,006	7,009	8,286
Mozambique	24	36	39	44	39	55	41	57	71	79	100	108	126	148	134	200	192	202	232	310	350	408	445	488	589
Namibia	42	50	75	49	37	65	57	72	64	115	105	103	85	98	88	133	162	203	228	268	279	303	377	381	472
Niger	46	76	69	54	49	39	39	52	46	53	64	59	83	107	129	103	99	93	128	163	149	149	176	186	194
Nigeria	1,141	1,122	1,085	1,137	1,219	1,199	1,375	1,514	1,671	1,993	2,233	2,428	2,674	3,344	3,742	4,101	3,840	3,940	4,599	4,676	5,421	6,195	7,619	9,389	11,632
Rwanda	21	19	21	9	7	10	8	15	23	19	44	55	67	82	113	131	148	210	240	277	323	349	431	485	697
São Tomé and Príncipe	4	1	1	0	2	3	4	5	3	1	3	4	0	4	4	0	2	2	4	3	3	8	6	10	9
Senegal	235	220	246	268	216	212	234	341	284	347	295	353	370	371	366	502	530	542	573	647	652	711	771	764	851
Seychelles	5	5	9	3	14	7	11	14	13	13	23	37	31	24	32	35	34	46	41	59	46	53	50	53	108
Sierra Leone	21	27	17	8	10	9	8	5	10	8	13	13	17	19	31	29	40	41	63	100	139	140	140	152	201
Somalia	3	6	2	3	1	0	2	3	2	0	4	0	4	4	10	6	6	11	13	15	11	29	24	56	81
South Africa	4,647	4,696	4,839	4,909	4,842	4,996	5,404	5,640	6,408	6,903	7,693	8,009	8,612	9,671	10,381	11,504	12,738	13,781	15,094	16,291	18,059	19,484	20,771	23,073	25,143
South Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	17	17	15	11	26	33	29	49
Sudan	100	113	147	109	106	94	108	137	162	172	179	243	244	325	396	464	449	571	525	567	753	715	870	954	1,088
Tanzania	239	256	229	248	250	231	275	352	382	443	552	607	591	676	777	821	859	931	1,168	1,206	1,299	1,399	1,500	1,805	2,071
Togo	34	34	60	59	46	37	32	48	47	45	50	55	69	78	81	91	81	102	140	134	138	129	181	192	209
Tunisia	485	624	710	770	852	1,018	1,243	1,363	1,715	2,150	2,504	2,912	3,475	4,038	4,403	4,742	4,924	5,449	5,878	6,451	7,282	7,553	7,501	7,212	7,714
Uganda	135	145	174	192	207	216	200	271	356	398	428	525	522	650	815	869	956	1,000	1,127	1,284	1,361	1,553	1,590	1,798	2,132
Zambia	83	111	107	97	77	103	97	101	95	129	156	173	203	195	231	264	298	326	378	426	488	569	555	598	753
Zimbabwe	342	361	326	370	333	304	273	318	247	259	294	333	277	258	288	309	381	410	502	517	639	706	822	851	1,012
Asia	180,980	193,578	202,997	211,525	227,101	249,314	263,565	293,463	342,758	414,981	462,626	494,373	545,111	602,865	651,435	694,556	712,992	753,616	795,727	829,850	883,000	937,193	1,039,627	1,153,511	1,260,473
Afghanistan	1	0	5	2	4	1	7	11	16	14	27	25	34	47	67	78	77	62	93	72	134	183	206	287	258
Bangladesh	517	533	533	564	600	583	590	808	816	915	1,097	1,270	1,525	1,690	2,068	2,128	2,830	2,729	3,357	3,296	3,902	4,681	4,761	7,197	7,785
Bhutan	4	5	5	2	3	1	10	5	17	14	36	19	18	24	46	45	38	64	71	77	87	104	106	123	188
Brunei	50	45	59	53	52	49	36	56	64	57	78	77	91	92	94	125	187	212	294	347	413	386	483	462	610
Burma	15	16	19	22	30	23	22	34	46	88	64	79	102	129	100	150	100	86	120	194	257	364	511	657	942
Cambodia	10	13	14	25	23	28	45	51	84	81	102	137	127	160	168	183	217	231	264	321	376	390	439	458	501
China	37,177	41,406	48,032	49,435	58,092	75,598	81,127	96,093	130,792	177,483	206,382	229,322	266,041	307,060	334,358	351,918	359,435	390,856	422,048	446,508	481,710	518,889	588,254	675,182	742,431
India	20,828	21,252	21,762	22,834	23,516	24,586	26,586	29,898	32,144	36,707	42,572	47,321	53,457	59,462	67,299	79,585	86,148	91,951	101,288	108,438	118,919	124,981	141,782	145,457	168,803

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(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Indonesia	567	598	601	612	727	626	693	761	914	1,098	1,289	1,221	1,382	1,872	2,391	2,942	3,307	4,202	4,590	6,085	8,763	14,739	24,299	34,150	36,874
Japan	95,396	99,071	99,738	101,909	104,683	104,136	107,079	111,751	115,085	124,666	126,819	122,612	121,201	123,205	123,584	126,246	125,317	124,934	121,506	118,903	120,580	121,000	123,521	123,853	126,011
Kazakhstan	274	206	264	217	246	258	300	369	351	371	330	356	354	418	449	513	647	943	1,316	1,658	2,121	2,587	3,049	3,823	4,434
Kyrgyzstan	40	31	41	40	41	45	44	34	50	82	80	73	85	65	71	96	101	139	116	132	198	234	263	341	456
Laos	11	11	13	11	18	15	23	38	69	69	90	74	104	104	117	148	195	188	186	225	254	218	273	309	309
Malaysia	1,018	1,159	1,199	1,344	1,636	1,458	1,806	2,266	2,642	3,211	4,079	4,761	7,001	9,411	13,141	16,423	17,728	18,949	20,616	22,648	23,593	25,006	25,469	28,071	30,110
Maldives	11	1	4	3	1	10	1	9	4	11	6	14	8	6	9	17	20	15	18	24	19	28	28	33	85
Mongolia	41	49	49	48	58	54	55	90	94	100	124	213	211	240	252	238	292	369	306	297	342	399	440	562	628
Nepal	97	113	146	143	163	189	190	329	340	436	523	570	523	587	655	713	711	814	899	974	1,110	1,303	1,483	1,763	2,487
North Korea	4	4	2	3	4	1	2	2	9	25	14	29	28	28	27	28	79	34	44	86	97	112	144	215	234
Pakistan	911	984	1,159	1,174	1,221	1,400	1,555	1,751	2,017	2,707	3,281	3,977	4,905	5,887	6,781	7,676	8,387	9,476	9,921	11,245	12,949	15,612	17,682	21,682	26,261
Papua New Guinea	134	110	106	111	97	108	77	98	81	72	92	114	132	101	109	111	137	129	155	158	168	159	189	212	207
Philippines	456	491	492	482	573	454	612	651	665	801	816	867	932	1,019	1,118	1,420	1,393	1,585	1,684	2,104	2,520	2,976	3,184	4,637	4,639
Singapore	2,932	3,753	3,873	4,752	5,668	5,807	6,525	7,581	9,164	10,055	10,771	10,785	11,709	12,404	13,845	14,496	15,704	16,545	17,271	18,051	18,912	19,662	20,059	20,673	22,387
South Korea	10,475	13,032	14,136	16,730	18,040	20,811	22,852	27,556	31,955	37,160	42,804	47,366	50,289	52,770	58,177	62,385	65,692	67,375	70,393	73,325	73,778	75,306	78,966	82,665	88,196
Sri Lanka	238	292	273	279	278	287	319	403	415	516	582	666	739	743	752	831	954	1,102	1,106	1,232	1,711	1,798	2,052	2,393	2,674
Taiwan	10,944	11,970	12,389	12,662	13,468	15,071	16,008	17,855	20,963	24,899	28,118	30,728	32,980	35,443	37,381	39,250	38,454	38,279	37,383	35,379	34,412	33,465	33,239	35,167	37,664
Tajikistan	70	57	41	59	43	39	54	40	50	54	48	55	63	46	80	75	85	101	77	115	99	125	132	217	287
Thailand	1,197	1,408	1,610	1,755	2,215	2,284	2,829	3,264	3,792	4,863	5,859	6,317	7,189	7,862	8,743	9,422	9,989	10,072	10,905	11,524	12,954	14,570	16,631	17,735	19,186
Timor-Leste	0	0	0	0	0	0	0	3	1	4	10	7	4	7	4	7	17	16	30	25	30	39	46	41	39
Turkmenistan	12	12	10	5	14	12	11	8	7	10	12	9	4	7	14	31	45	16	44	20	11	17	10	9	12
Uzbekistan	431	485	418	430	449	509	449	454	491	489	464	485	455	517	550	559	473	508	511	438	554	533	576	1,046	1,802
Vietnam	292	336	306	354	389	423	430	613	676	815	929	1,037	1,426	1,601	1,986	2,179	2,857	3,371	3,547	4,031	5,254	5,873	7,547	10,575	15,178
Australia and Oceania	29,127	30,706	31,393	31,880	33,251	33,793	35,031	38,057	41,768	47,229	50,867	54,371	57,363	60,229	65,155	70,878	74,301	80,879	85,078	88,301	92,085	94,230	99,132	103,982	112,943
Australia	24,731	26,021	26,538	26,814	28,246	28,650	29,870	32,548	35,706	40,458	43,613	46,716	49,344	51,955	56,356	61,194	64,499	70,797	74,740	78,014	81,152	83,183	87,619	92,030	100,059
Cook Islands	0	1	2	0	2	0	1	0	0	1	1	4	0	3	2	8	7	5	9	7	7	8	5	9	3
Fiji	30	43	39	42	46	52	52	76	95	100	134	151	122	122	125	137	146	176	223	217	304	282	333	351	410
Kiribati	1	1	0	0	0	1	0	1	0	0	2	5	0	1	1	0	1	5	7	6	6	7	3	12	14
Marshall Islands	2	7	2	1	3	4	1	5	4	6	11	6	2	5	4	5	4	2	6	8	5	4	10	7	7
Micronesia, Federated States of	4	1	9	5	6	3	0	9	9	17	11	20	10	13	28	8	12	12	14	16	19	29	26	12	31
Nauru	0	1	1	0	0	1	0	0	1	1	1	0	0	1	0	3	1	2	3	2	2	0	0	1	3
New Zealand	4,746	5,045	5,252	5,476	5,408	5,455	5,562	6,093	6,735	7,557	8,032	8,549	8,986	9,415	9,970	11,038	11,300	11,742	12,109	12,170	12,753	13,149	13,703	14,338	15,477
Niue	0	0	0	0	0	0	0	0	0	2	1	3	0	1	0	0	0	0	3	0	1	2	1	3	0
Palau	3	3	2	0	3	7	5	5	7	15	13	16	9	8	8	7	7	13	11	17	12	22	19	27	21
Samoa	4	8	8	10	7	11	10	8	8	9	19	9	13	21	15	19	11	15	22	22	20	30	33	33	67
Solomon Islands	12	16	12	18	14	7	3	12	8	9	12	15	10	9	26	22	13	18	27	45	51	45	54	50	61

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S&E articles in all S&E fields, whole count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tonga	0	3	3	3	4	2	3	8	7	3	9	6	4	9	6	10	6	6	6	13	10	18	19	14	30
Tuvalu	0	0	0	0	0	1	0	1	2	0	3	2	1	1	0	0	1	1	6	2	3	3	2	2	2
Vanuatu	3	8	3	11	9	4	7	11	16	23	13	8	12	21	18	24	22	27	28	36	43	33	24	32	46
Unassigned	22,231	18,228	19,065	22,125	17,213	13,948	13,676	24,527	20,648	23,760	25,197	27,973	27,308	19,142	21,439	20,807	18,470	14,094	10,012	9,592	13,570	17,510	18,838	26,921	35,592

EU = European Union; UK = United Kingdom.

^a The UK was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the UK was no longer a member of the EU.^c Beginning in 2006, Serbia and Montenegro represented individual countries.^d Serbia and Montenegro represented a single country for data purposes from 1992 to 2006.^e West Bank and Gaza Strip are separate entities in this list but are grouped in the World Bank Lending Groups classification list. Here, the economic status of the group is applied to both individual regions.**Note(s):**

Article counts refer to publications from selected journals and conference papers in S&E from Scopus. Articles are classified by their year of publication and are assigned to a region, country, or economy on the basis of the institutional address(es) of author(s) listed in the article. Articles are credited on a whole count basis. In whole counting, each region, country, or economy with a collaborating author on an article is credited with one count. The sum of the whole count for regions, countries, or economies does not add to the world total because of multiple counts of coauthored publications. Some publications have incomplete address information for coauthored publications in the Scopus database. The Unassigned category count is the sum of whole counts for publications that cannot be assigned to a region, country, or economy.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; Elsevier, Scopus abstract and citation database, accessed May 2021.

Science and Engineering Indicators