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COMPARATIVE WORLD ATLAS

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1990 EDITION

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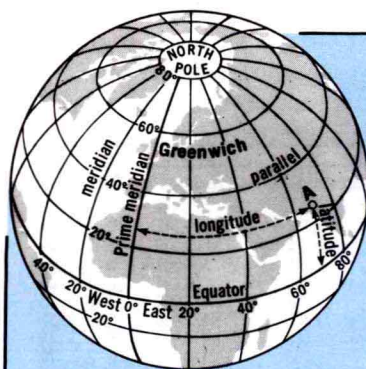
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Country	Area (Sq. Miles)	Area (Sq. Km.)	Population	Index Ref.	Page No.	Country	Area (Sq. Miles)	Area (Sq. Km.)	Population	Index Ref.	Page No.
*Afghanistan	250,775	649,507	16,363,000	A 2	69	Faeroe Islands, Denmark	540	1,399	44,000	F 3	60
Africa	11,707,000	30,321,130	484,000,000		50, 51	Falkland Islands & Dependencies	6,198	16,053	1,813	J 14	49
Alabama, U.S.A.	51,705	133,916	3,893,978	M 6	41	*Fiji	7,055	18,272	645,000	H 7	76
Alaska, U.S.A.	591,004	1,530,700	401,851	F 8	40	*Finland	130,128	337,032	4,812,150	G 2	57
*Albania	11,100	28,749	2,590,600	D 6	61	Florida, U.S.A.	58,664	151,940	9,746,421	N 7	41
Alberta, Canada	255,285	661,185	2,237,724	E 5	42	*France	210,038	543,998	54,338,871	H 6	60
*Algeria	919,591	2,381,740	18,666,000	G 6	54	French Guiana	35,135	91,000	73,022	K 3	48
American Samoa	77	199	32,297	K 7	76	French Polynesia	1,544	4,000	110,000	L 8	76
Andorra	188	487	39,940	H 7	60						
*Angola	481,351	1,246,700	7,262,000	K 14	55						
Anguilla	35	91	6,519	F 3	43	*Gabon	103,346	267,666	555,000	J 12	55
Antarctica	5,500,000	14,245,000		A-J 10	77	*Gambia	4,127	10,689	601,000	C 9	54
*Antigua and Barbuda	171	443	75,000	F 3	43	Gaza Strip	139	360	400,000	J 7	68
*Argentina	1,072,070	2,776,661	28,438,000	H 10	49	Georgia, U.S.A.	58,910	152,577	5,463,087	N 6	41
Arizona, U.S.A.	114,000	295,260	2,718,425	E 6	40	Georgian S.S.R., U.S.S.R.	26,911	69,700	5,015,000	F 6	62
Arkansas, U.S.A.	53,187	137,754	2,286,419	K 6	41	*Germany, East (German Democratic Republic)	41,768	108,179	16,732,486	K 5	60
Armenian S.S.R., U.S.S.R.	11,506	29,800	3,031,000	F 6	62	*Germany, West (Federal Republic)	95,985	248,601	61,546,101	J 5	60
Aruba	75	193	66,790	F 3	43	*Ghana	92,099	238,536	11,450,000	F 10	54
Ascension Isl., St. Helena	34	88	719	D 13	55	Gibraltar	2.28	5.91	29,648	F 8	60
Asia	17,128,500	44,362,815	2,688,000,000		64, 65	*Great Britain & Northern Ireland (United Kingdom)	94,399	244,493	55,638,495	F, G 5	60
*Australia	2,966,136	7,682,300	14,576,330	D 4	73	*Greece	50,944	131,945	9,740,417	E 7	61
Australian Capital Terr.	927	2,400	221,609	K 6	60	Greenland (Kalaallit Nunaat)	840,000	2,175,600	49,773	P 2	35
*Austria	32,375	83,851	7,555,338	G 6	62	*Grenada	133	344	103,103	F 3	43
Azerbaidzhan S.S.R., U.S.S.R.	33,436	86,600	6,028,000	G 6	62	Guadeloupe & Dependencies	687	1,779	328,400	F 3	43
Azores, Port.	902	2,335	264,400	B 4	54	Guam	209	541	105,979	E 4	76
						*Guatemala	42,042	108,889	6,043,559	C 3	43
*Bahamas	5,382	13,939	209,505	E 2	43	*Guinea	94,925	245,856	5,143,284	D 9	54
*Bahrain	240	622	358,857	F 4	68	*Guinea-Bissau	13,948	36,125	810,000	C 9	54
Balearic Islands, Spain	1,936	5,014	558,287	H 8	60	*Guyana	83,000	214,970	793,000	J 2	48
*Bangladesh	55,126	142,776	87,052,024	F 4	69						
*Barbados	166	430	248,983	F 3	43	*Haiti	10,694	27,697	5,053,792	E 3	43
*Belgium	11,781	30,513	9,848,647	H 5	60	Hawaii, U.S.A.	6,471	16,760	964,691	H 8	40
*Belize	8,867	22,966	145,353	D 3	43	Heard & McDonald Is., Australia	113	293		J 5	43
*Benin	43,483	112,620	3,338,240	G 10	54	*Honduras	43,277	112,087	3,955,000	D 3	11
Bermuda	21	54	67,761	F 1	43	Hong Kong	403	1,044	4,986,560	H 7	70
*Bhutan	18,147	47,000	1,301,000	G 3	69	*Hungary	35,919	93,030	10,702,000	D 5	61
*Bolivia	424,163	1,098,582	5,755,000	G 7	48						
Bonaire, Neth. Antilles	112	291	8,087	F 3	43	*Iceland	39,768	103,000	231,000	C 2	57
Bophuthatswana, S. Africa	15,570	40,326	1,200,000	L 17	55	Idaho, U.S.A.	83,564	216,431	944,038	E 3	40
*Botswana	224,764	582,139	936,600	L 16	55	Illinois, U.S.A.	56,345	145,934	11,427,414	L 4	41
Bouvet Island	22	57		G 5	10	*India	1,269,339	3,287,588	685,184,692		69
*Brazil	3,284,426	8,506,663	119,098,992	K 6	48	Indiana, U.S.A.	36,185	93,719	5,490,260	M 5	41
British Columbia, Canada	366,253	948,596	2,744,467	C 5	42	*Indonesia	788,430	2,042,034	147,490,298	D 7	72
British Indian Ocean Terr.	29	75	2,000	J 10	65	Iowa, U.S.A.	56,275	145,752	2,913,808	K 4	41
*Brunei	2,226	5,765	192,832	E 4	72	*Iran	636,293	1,648,000	37,447,000	F 3	68
*Bulgaria	42,823	110,912	8,890,000	E 6	61	*Iraq	172,476	446,713	12,767,000	D 3	68
*Burkina Faso	105,869	274,200	7,094,000	F 9	54	Ireland	70,282	3,443,405	F 5	60	
*Burma	261,789	678,034	33,640,000	A 2	71	Ireland, Northern, U.K.	5,452	14,121	1,507,065	F 5	60
*Burundi	10,747	27,835	4,028,420	M 12	55	Isle of Man	227	588	66,000	G 5	60
*Byelorussian S.S.R. (White Russian S.S.R.), U.S.S.R.	80,154	207,600	9,560,543	C 4	62	*Israel	7,847	20,324	3,980,000	J 6	68
						*Italy	116,303	301,225	56,243,935	K 7	60
California, U.S.A.	158,706	411,049	23,667,837	C 5	40	Ivory Coast	124,504	322,465	7,920,000	E 10	54
*Cambodia (Kampuchea)	69,898	181,036	5,756,141	D 4	71						
*Cameroon	183,568	475,441	8,503,000	J 11	54	*Jamaica	4,411	11,424	2,184,000	E 3	43
*Canada	3,851,787	9,976,139	24,343,181		42	Jan Mayen	144	373		D 1	57
Canary Is., Spain	2,808	7,273	1,170,224	C 6	54	*Japan	145,730	377,441	117,060,396		71
Cape Province, South Africa	261,705	677,816	5,543,506	L 18	55	Java, Indonesia	48,842	126,500	73,712,411	D 7	72
*Cape Verde	1,557	4,033	296,093	F 3	10	Johnston Atoll, U.S.A.	91	24	327	K 4	76
Cayman Islands	100	259	18,000	D 3	43	*Jordan	35,000	90,650	2,152,273	K 6	68
*Central African Republic	242,000	626,780	2,284,000	K 10	54						
Central America	197,480	511,475	22,000,000		43						
*Chad	495,752	1,283,998	4,309,000	K 8	54						
Channel Islands	75	194	129,000	G 6	60						
*Chile	292,257	756,946	11,275,440	F 10	49						
*China, People's Rep. of	3,691,000	9,559,690	1,008,175,288		70	Kalaallit Nunaat (Greenland)	840,000	2,175,600	49,773	P 2	35
China, Republic of (Taiwan)	13,971	36,185	18,029,798	K 7	70	*Kampuchea (Cambodia)	69,898	181,036	5,756,141	D 4	71
Christmas I., Australia	52	135	3,184	O 11	65	Kansas, U.S.A.	82,277	213,097	2,364,236	H 5	40
Ciskei, S. Africa	2,988	7,740	635,631	M 18	55	Kazakh S.S.R., U.S.S.R.	1,048,300	2,715,100	14,684,000	G 5	62
Clipperton Island	2	5.2		B 3	43	Kentucky, U.S.A.	40,409	104,659	3,660,257	M 5	41
Cocos (Keeling) Is., Australia	5.4	14	555	N 11	65	*Kenya	224,960	582,646	15,327,061	O 11	55
*Colombia	439,513	1,138,339	28,776,000	F 3	48	Kermadec Islands	13	33	5	J 8	76
Colorado, U.S.A.	104,091	269,596	2,889,735	G 5	40	Kirgiz S.S.R., U.S.S.R.	76,641	198,500	3,529,000	H 5	62
*Comoros	719	1,862	345,000	P 14	55	Kiribati	291	754	56,213	H 6	76
*Congo	132,046	342,000	1,537,000	J 12	55	Korea, North	46,540	120,539	18,317,000	C 3	71
Connecticut, U.S.A.	5,018	12,997	3,107,576	P 4	41	Korea, South	38,175	98,873	37,448,836	C 3	71
Cook Islands	91	236	17,754	K 7	76	*Kuwait	6,532	16,918	1,355,827	E 4	68
Corsica, France	3,332	8,682	289,842	J 7	60						
*Costa Rica	19,575	50,700	2,271,000	D 3	43	*Laos	91,428	236,800	3,811,000	D 3	71
Crete, Greece	3,218	8,335	456,642	E 7	61	Latvian S.S.R., U.S.S.R.	24,595	63,700	2,521,000	D 4	62
*Cuba	44,206	114,494	9,706,369	D 2	43	*Lebanon	4,015	10,399	2,688,000	K 5	68
Curaçao, Netherlands Antilles	178	462	145,430	F 3	43	*Lesotho	11,720	30,355	1,339,000	M 17	55
*Cyprus	3,473	8,995	637,000	B 3	68	*Liberia	43,000	111,370	1,873,000	D 10	54
*Czechoslovakia	49,373	127,876	15,364,000	B 5	61	*Libya	679,358	1,759,357	3,096,000	K 6	54
						Liechtenstein	61	158	25,220	J 6	60
Delaware, U.S.A.	2,044	5,294	594,317	P 5	41	Lithuanian S.S.R., U.S.S.R.	25,174	65,200	3,398,000	B 3	62
*Denmark	16,629	43,069	5,118,000	J 4	60	Louisiana, U.S.A.	47,752	123,678	4,206,098	K 7	41
District of Columbia, U.S.A.	69	179	638,432	L 6	41	Luxembourg	999	2,587	364,606	J 6	60
*Djibouti	8,880	23,000	386,000	P 9	54						
*Dominica	290	751	74,089	F 3	43	Macau	6	16	261,680	H 7	70
*Dominican Republic	18,704	48,443	5,647,977	E 3	43	*Madagascar	226,657	587,041	8,955,000	R 15	55
						Madeira Is., Portugal		796	262,800	C 5	54
*East Germany	41,768	108,179	16,732,486	A 4	61	Maine, U.S.A.	33,265	86,156	1,125,030	K 3	41
*Ecuador	109,483	283,561	8,644,000	E 4	48	*Malawi	45,747	118,485	6,123,000	N 14	55
*Egypt	386,659	1,001,447	43,465,000	M 6	54	Malaya, Malaysia	50,806	131,588	11,138,227	C 7	71
*El Salvador	8,260	21,393	4,748,000	D 3	43	*Malaysia	128,308	332,318	13,435,588	D 4	72
England, U.K.	50,516	130,836	46,220,995	G 5	60	*Maldives	115	298	157,000	C 8	69
*Equatorial Guinea	10,831	28,052	244,000	H 11	55	*Mali	464,873	1,204,021	7,160,000	E 9	54
Estonian S.S.R., U.S.S.R.	17,413	45,100	1,466,000	C 3	62	*Malta	122	316	366,000	K 8	60
*Ethiopia	471,776	1,221,900	31,065,000	O 9	54	Man, Isle of	227	588	66,000	G 5	60
Europe	4,057,000	10,507,630	690,000,000		56, 57	Manitoba, Canada	250,999	650,087	1,026,241	G 5	42
						Marquesas Is., Fr. Polynesia	492	1,274	5,419	N 6	76

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Marshall Is.	70	181	30,873	G 4	76	Scotland, U.K.	30,414	78,772	5,117,146	G 4	60
Martinique	425	1,101	328,566	F 3	43	*Senegal	75,954	196,720	5,703,000	C 9	54
Maryland, U.S.A.	10,460	27,091	4,216,941	D 5	41	*Seychelles	145	375	64,332	G 10	65
Massachusetts, U.S.A.	8,284	21,456	5,737,081	P 4	41	Shetland Is., Scotland	552	1,430	18,494	G 3	60
*Mauritania	419,229	1,085,803	1,681,000	D 8	54	Sicily, Italy	9,926	25,708	4,628,918	K 8	60
*Mauritius	790	2,046	971,000	S 19	55	*Sierra Leone	27,925	72,325	3,571,000	D 10	54
Mayotte	144	373	47,300	R 14	55	*Singapore	226	585	2,413,945	E 6	71
*Mexico	761,601	1,972,546	67,395,826	B 2	43	Society Is., Fr. Polynesia	677	1,753	117,703	L 7	76
Michigan, U.S.A.	58,527	151,585	9,262,070	M 4	41	*Solomon Islands	11,500	29,785	221,000	F 6	76
Micronesia, Fed. States of			73,160	E 5	76	*Somalia	246,200	637,658	4,895,000	R 10	54
Midway Islands	1.9	4.9	468	G 8	40	*South Africa	455,318	1,179,274	23,771,970	L 18	55
Minnesota, U.S.A.	84,402	218,601	4,075,970	K 3	41	South America	6,875,000	17,806,250	246,000,000		44, 45
Mississippi, U.S.A.	47,689	123,515	2,520,631	L 6	41	South Australia, Australia	379,922	984,000	1,285,033	C 3	73
Missouri, U.S.A.	69,697	180,515	4,916,759	K 5	41	South Carolina, U.S.A.	31,113	80,583	3,122,814	N 6	41
Moldavian S.S.R., U.S.S.R.	13,012	33,700	3,947,000	C 5	62	South Dakota, U.S.A.	77,116	199,730	690,768	H 3	40
Monaco	368 acres	149 ha.	26,000	J 7	60	South Korea	38,175	98,873	37,448,836	C 3	71
*Mongolia	606,163	1,569,962	1,732,000	F 2	70	South-West Africa (Namibia)	317,827	823,172	1,009,000	K 16	55
*Montana, U.S.A.	147,046	380,849	786,690	F 3	40	*Spain	194,881	504,742	37,746,260	G 7	60
Montserrat	40	104	12,073	F 3	43	*Sri Lanka	25,332	65,610	14,850,001	E 7	69
*Morocco	172,414	446,550	20,646,000	E 5	54	*Sudan	967,494	2,505,809	18,681,000	N 8	54
*Mozambique	303,769	786,762	12,130,000	N 16	55	Sumatra, Indonesia	164,000	424,760	19,360,400	B 5	72
Namibia (South-West Africa)	317,827	823,172	1,009,000	K 16	55	*Suriname	55,144	142,823	354,860	J 3	48
Natal, South Africa	33,578	86,967	5,722,215	N 17	55	Svalbard, Norway	23,957	62,049	3,431	B 9	77
Nauru	20	7,254	7,254	G 6	76	*Swaziland	6,705	17,366	585,000	N 17	55
Nebraska, U.S.A.	77,355	200,349	1,569,825	H 4	40	*Sweden	173,665	449,792	8,328,000	F 2	57
*Nepal	54,663	141,577	15,020,451	E 3	69	Switzerland	15,943	41,292	6,365,960	J 6	60
*Netherlands	15,892	41,160	14,306,000	H 5	60	*Syria	71,498	185,180	9,172,000	C 3	68
Netherlands Antilles	390	1,010	246,000	F 3	43	Tadzhik S.S.R., U.S.S.R.	55,251	143,100	3,801,000	H 6	62
Nevada, U.S.A.	110,561	286,353	800,493	D 5	40	Tahiti, Fr. Polynesia	402	1,041	95,604	M 7	76
New Brunswick, Canada	28,354	73,437	696,403	K 7	42	Taiwan (China)	13,971	36,185	18,029,798	K 7	70
New Caledonia & Dependencies	7,335	18,998	143,000	G 8	76	*Tanzania	363,708	942,003	17,982,000	O 13	55
Newfoundland, Canada	156,184	404,517	567,681	L 5	42	Tasmania, Australia	26,178	67,800	418,957	D 5	73
New Hampshire, U.S.A.	9,279	24,033	920,610	R 3	41	Tennessee, U.S.A.	42,144	109,153	4,591,120	L 6	41
New Jersey, U.S.A.	7,787	20,168	7,365,011	P 4	41	Texas, U.S.A.	266,807	691,030	14,227,574	H 7	40
New Mexico, U.S.A.	121,593	314,926	1,303,445	G 6	40	*Thailand	198,455	513,998	44,278,000	C 3	71
New South Wales, Australia	309,498	801,600	5,126,217	D 4	73	Tibet, China	463,320	1,200,000	1,790,000	C 5	70
New York, U.S.A.	49,108	127,190	17,558,072	O 4	41	Togo	21,622	56,000	2,702,945	G 10	54
*New Zealand	103,736	268,676	3,175,737	F 4	73	Tokelau	3.9	10	1,625	J 6	76
*Nicaragua	45,698	118,358	2,732,000	D 3	43	Tonga	270	699	99,000	J 7	76
*Niger	489,189	1,267,000	4,994,000	G 9	54	Transkei, South Africa	16,910	43,797	2,000,000	M 18	55
*Nigeria	357,000	924,630	82,643,000	H 10	54	Transvaal, South Africa	109,621	283,918	10,673,033	M 16	55
Niue	100	259	2,531	K 7	76	Trinidad and Tobago	1,980	5,128	1,067,108	F 3	43
Norfolk I., Australia	13.4	34.6	2,175	G 8	76	Tristan da Cunha, St. Helena	38	98	323	F 5	10
North America	9,363,000	24,250,170	376,000,000		34, 35	Tuamotu Arch., Fr. Polynesia	341	883	9,052	M 7	76
North Carolina, U.S.A.	52,669	136,413	5,881,385	N 6	41	*Tunisia	63,378	164,149	6,392,000	H 5	54
North Dakota, U.S.A.	70,702	183,118	652,717	H 3	40	*Turkey	300,946	779,450	46,312,000	B 2	68
Northern Ireland, U.K.	5,452	14,121	1,507,065	F 5	60	Turkmen S.S.R., U.S.S.R.	188,455	488,100	2,759,000	F 6	62
Northern Marianas, U.S.A.	184	477	16,780	E 4	76	Turks and Caicos Islands	166	430	7,436	E 2	43
Northern Territory, Australia	519,768	1,346,200	123,324	C 2	73	Tuvalu	9.78	25.33	7,349	H 6	76
North Korea	46,540	120,539	18,317,000	C 2	71	*Uganda	91,076	235,887	12,630,076	N 11	55
Northwest Territories, Canada	1,304,896	3,379,683	45,741	E 3	42	*Ukrainian S.S.R., U.S.S.R.	233,089	603,700	49,754,642	D 5	62
*Norway	125,053	323,887	4,111,000	F 2	57	*Union of Soviet Socialist Republics	8,649,490	22,402,179	268,800,000		62, 63
Nova Scotia, Canada	21,425	55,491	847,442	K 7	42	*United Arab Emirates	32,278	83,600	1,043,225	F 5	68
Ohio, U.S.A.	41,330	107,045	10,797,624	N 4	41	*United Kingdom	94,399	244,493	55,638,495	F, G 5	60
Oklahoma, U.S.A.	69,956	181,186	3,025,495	J 6	40	*United States of America	3,623,420	9,384,658	226,549,448		40, 41
*Oman	120,000	310,800	919,000	G 5	68	*Upper Volta (Burkina Faso)	105,869	274,200	7,094,000	F 9	54
Ontario, Canada	412,580	1,068,582	8,625,107	H 5	52	*Uruguay	72,172	186,925	2,947,000	J 10	49
Orange Free State, S. Africa	49,866	129,153	1,833,216	M 17	55	Utah, U.S.A.	84,899	219,888	1,461,037	E 5	40
Oregon, U.S.A.	97,073	251,419	2,633,149	C 4	40	Uzbek S.S.R., U.S.S.R.	173,591	449,600	15,391,000	G 5	62
Orkney Is., Scotland	376	974	17,675	G 4	60	*Vanuatu	5,700	14,763	111,251	G 7	76
*Pakistan	310,403	803,944	83,782,000	B 3	69	Vatican City	108.7 acres	44 ha	733	K 7	60
Palau	188	487	12,116	D 5	76	Venda, South Africa	2,510	6,501	450,000	N 16	55
*Panama	29,761	77,082	1,830,175	E 4	43	*Venezuela	352,143	912,050	14,570,285	G 2	48
*Papua New Guinea	183,540	475,369	3,010,727	E 6	76	Vermont, U.S.A.	9,614	24,900	511,456	P 4	41
*Paraguay	157,047	406,752	3,026,165	J 8	49	Victoria, Australia	87,876	227,600	3,832,443	D 4	73
Pennsylvania, U.S.A.	45,308	117,348	11,864,751	O 4	41	*Vietnam	128,405	332,569	52,741,766	D 3	71
*Peru	496,222	1,285,215	17,031,221	E 6	48	Virginia, U.S.A.	40,767	105,587	5,346,797	N 5	41
*Philippines	115,707	299,681	48,098,460	H 3	72	Virgin Islands, British	59	153	12,000	F 3	43
Pitcairn Islands	18	47	54	O 8	76	Virgin Islands, U.S.A.	132	342	96,569	F 3	43
*Poland	120,725	312,678	36,062,309	C 4	61	Wake Island	2.5	6.5	302	G 4	76
*Portugal	35,549	92,072	9,784,200	F 8	60	Wales, U.K.	8,017	20,764	2,790,462	G 5	60
Prince Edward Island, Canada	2,184	5,657	122,506	K 5	42	Wallis and Futuna	106	275	11,000	J 7	76
Puerto Rico	3,515	9,104	3,196,520	F 3	43	Washington, U.S.A.	68,139	176,480	4,132,204	C 3	40
*Qatar	4,247	11,000	248,000	F 4	68	West Bank	2,100	5,439	800,000	K 6	68
Québec, Canada	594,857	1,540,680	6,438,403	J 5	42	Western Australia, Australia	975,096	2,525,500	1,273,624	A 3	73
Queensland, Australia	666,872	1,727,200	2,295,123	D 3	73	Western Sahara	102,703	266,000	165,000	D 6	54
Réunion	969	2,510	515,814	R 20	55	*Western Samoa	1,133	2,934	158,130	J 7	76
Rhode Island, U.S.A.	1,212	3,139	947,154	R 4	41	*West Germany (Federal Republic)	95,985	248,601	61,546,101	J 5	60
*Romania	91,699	237,500	22,400,000	E 5	61	West Virginia, U.S.A.	24,231	62,758	1,950,258	N 5	41
Russian S.F.S.R., U.S.S.R.	6,592,812	17,075,400	137,551,000	L 4	62, 63	*White Russian S.S.R. (Byelo-russian S.S.R.), U.S.S.R.	80,154	207,600	9,560,543	C 4	62
*Rwanda	10,169	26,337	5,046,000	N 12	55	Wisconsin, U.S.A.	56,153	145,436	4,705,642	L 3	41
Sabah, Malaysia	29,300	75,887	1,002,608	F 4	72	World	57,970,000	150,142,300	4,508,000,000		8-11
Saint Helena & Dependencies	162	420	5,147	E 15	55	Wyoming, U.S.A.	97,809	253,325	469,557	F 4	40
Saint Kitts and Nevis	104	269	44,404	F 3	43	*Yemen, People's Democratic Republic of	111,101	287,752	2,030,000	E 7	68
*Saint Lucia	238	616	115,783	F 3	43	*Yemen Arab Republic	77,220	200,000	6,456,189	D 7	68
Saint Pierre & Miquelon	93.5	242	6,041	L 7	42	*Yugoslavia	98,766	255,804	22,690,000	D 6	61
*Saint Vincent & the Grenadines	150	388	124,000	F 3	43	Yukon Territory, Canada	207,075	536,324	23,153	C 3	42
San Marino	23.4	60.6	21,000	K 7	60	*Zaire	905,063	2,344,113	26,377,000	L 12	55
*São Tomé and Príncipe	372	963	86,000	H 11	55	*Zambia	290,586	752,618	5,679,808	M 14	55
Sarawak, Malaysia	48,202	124,843	1,294,753	E 5	72	*Zimbabwe	150,803	390,580	7,539,000	M 15	55
Sardinia, Italy	9,301	24,090	1,450,483	J 7	60	*Member of the United Nations					
Saskatchewan, Canada	251,699	651,900	968,313	F 5	42						
*Saudi Arabia	829,995	2,149,687	9,319,000	D 4	68						



OUR EARTH

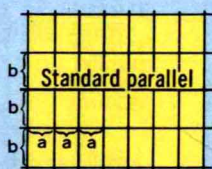
Our earth is rotating around its **axis** once a day. The two end points of its axis are the **poles**; the line circling the earth midway between the poles is the **equator**. The arc from either of the poles to the equator is divided into 90 degrees. The distance, expressed in degrees, from the equator north or south to any point is its **latitude** and circles of equal latitude are called **parallels**. On maps it is customary to show parallels of evenly-spaced degrees such as every fifth or every tenth.

The equator is divided into 360 degrees. Lines circling from pole to pole through the degree points on the equator are called **meridians**. They are all equal in length but by international agreement the meridian passing through the Greenwich Observatory in London has been chosen as **prime meridian**. The distance, expressed in degrees, from the prime meridian east or west to any point is its **longitude**. While meridians are all equal in length, parallels become shorter and shorter as they approach the poles. Whereas one degree of latitude represents everywhere approximately 69 miles, one degree of longitude varies from 69 miles at the equator to nothing at the poles.

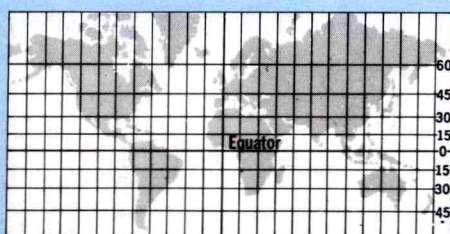
Each degree is divided into 60 minutes and each minute into 60 seconds. One minute of latitude equals a nautical mile.

A map is flat but the earth is nearly spherical. Neither a sphere nor any part of a sphere may be flattened without stretching or tearing unless the part is very small. To present the curved surface of the earth on a flat map is not difficult as long as the areas under consideration are small, but the mapping of countries, continents, or the whole earth requires some kind of projection. Any regular set of parallels and meridians upon which a map can be drawn makes a **map projection**. Many systems are used.

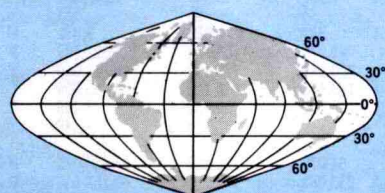
In any projection only the parallels or the meridians or some other set of lines can be **true** (the same length as on the globe of corresponding scale); all other lines are too long or too short. Only on a globe is it possible to have both the parallels and the meridians true. The scale given on a flat map cannot be true everywhere. The construction of the various projections begins usually with laying out those parallels or meridians which have true lengths.



1. RECTANGULAR PROJECTION



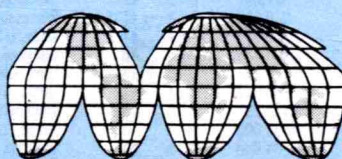
2. MERCATOR PROJECTION



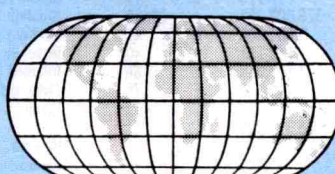
3. SINUSOIDAL PROJECTION



4. MOLLWEIDE PROJECTION

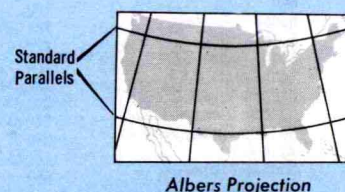
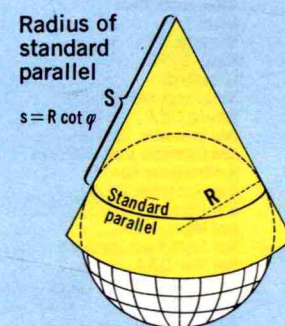


5. GOODE'S INTERRUPTED PROJECTION



6. ECKERT PROJECTION

7. CONIC PROJECTION



Albers Projection

1. RECTANGULAR PROJECTION—This is a set of evenly-placed, vertical meridians and horizontal parallels. The central or **standard parallel** and all meridians are true. All other parallels are either too long or too short. The projection is used for simple maps of small areas, as city plans, etc.

2. MERCATOR PROJECTION—In this projection the meridians are evenly-spaced vertical lines. The parallels are horizontal, spaced so that their length has the same relation to the meridians as on a globe. As the meridians converge at higher latitudes on the globe, while on the map they do not, the parallels have to be drawn also farther and farther apart to maintain the correct relationship. When every very small area has the same shape as on a globe we call the projection **conformal**. The most interesting quality of this projection is that all **compass directions** appear as straight lines. For this reason it is generally used for marine charts. It is also frequently used for world maps in spite of the fact that the high latitudes are very much exaggerated in size. Only the equator is true to scale; all other parallels and meridians are too long. The Mercator projection did not derive from projecting a globe upon a cylinder.

3. SINUSOIDAL PROJECTION—The parallels are truly-spaced horizontal lines. They are divided truly and the connecting curves make the meridians. It does not make a good world map because the outer regions are distorted, but the central portion is good and this part is often used for maps of Africa and

South America. Since every part of the map has the same area as the corresponding area on the globe, it is called an **equal-area** projection.

4. MOLLWEIDE PROJECTION—The meridians are equally-spaced ellipses; the parallels are horizontal lines spaced so that every belt of latitude should have the same area as on a globe. This projection is popular for world maps, especially in European atlases.

5. GOODE'S INTERRUPTED PROJECTIONS—Only the good central part of the Mollweide or sinusoidal (or both) projection is used and the oceans are cut. This makes an equal-area map with little distortion of shape. It is commonly used for world maps.

6. ECKERT PROJECTIONS—These are similar to the sinusoidal or the Mollweide projections, but the poles are shown as lines half the length of the equator. There are several variants; the meridians are either sine curves or ellipses; the parallels are horizontal and spaced either evenly or so as to make the projection equal area. Their use for world maps is increasing. The figure shows the elliptical equal-area variant.

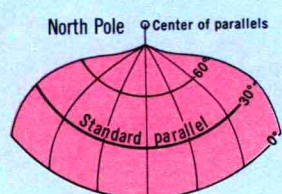
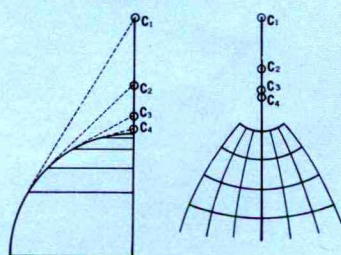
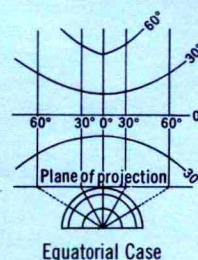
7. CONIC PROJECTION—The original idea of the conic projection is that of capping the globe by a cone upon which both the parallels and meridians are projected from the center of the globe. The cone is

then cut open and laid flat. A cone can be made tangent to any chosen **standard parallel**.

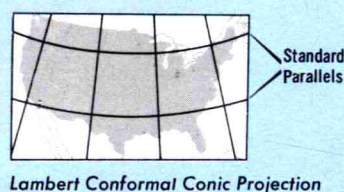
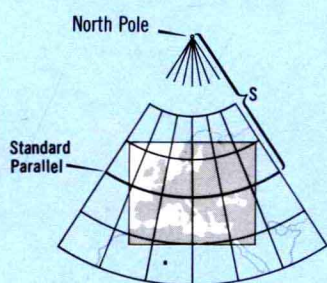
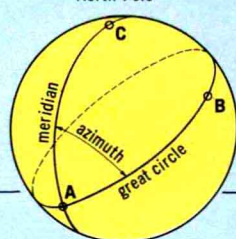
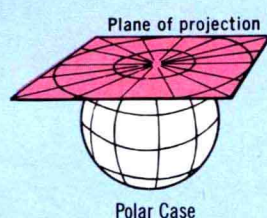
The actually-used conic projection is a modification of this idea. The radius of the standard parallel is obtained as above. The meridians are straight radiating lines spaced truly on the standard parallel. The parallels are concentric circles spaced at true distances. All parallels except the standard are too long. The projection is used for maps of countries in middle latitudes, as it presents good shapes with small scale error.

There are several variants: The use of **two standard parallels**, one near the top, the other near the bottom of the map, reduces the scale error. In the **Albers projection** the parallels are spaced unevenly, to make the projection equal-area. This is a good projection for the United States. In the **Lambert conformal conic projection** the parallels are spaced so that any small quadrangle of the grid should have the same shape as on the globe. This is the best projection for air-navigation charts as it has relatively straight azimuths.

An **azimuth** is a great-circle direction reckoned clockwise from north. A **great-circle direction** points to a place along the shortest line on the earth's surface. This is not the same as compass direction. The center of a great circle is the center of the globe.

8. BONNE PROJECTION**9. POLYCONIC PROJECTION****11. GNOMONIC PROJECTION**

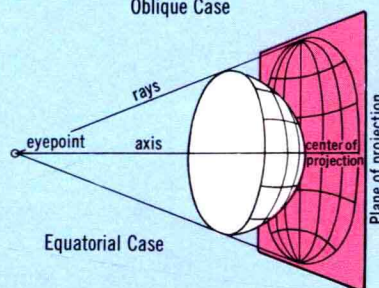
North Pole

**10. AZIMUTHAL PROJECTIONS**

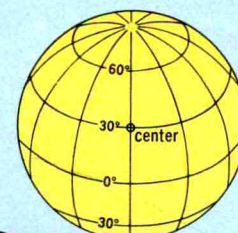
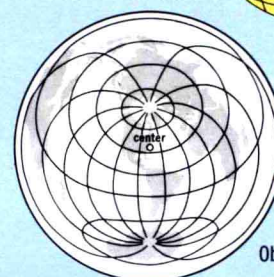
Polar Case



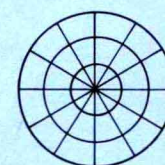
Oblique Case



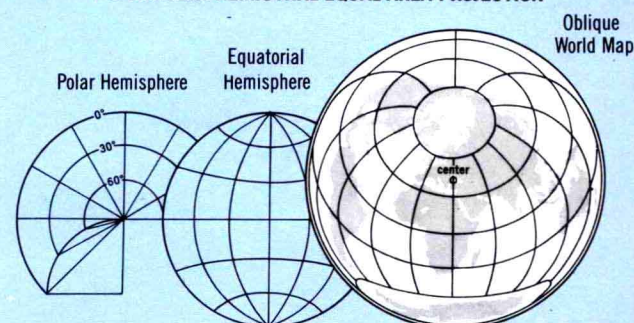
Equatorial Case

12. ORTHOGRAPHIC PROJECTION**13. AZIMUTHAL EQUIDISTANT PROJECTION**

Oblique



Polar Case

14. LAMBERT AZIMUTHAL EQUAL-AREA PROJECTION

8. BONNE PROJECTION—The parallels are laid out exactly as in the conic projection. All parallels are divided truly and the connecting curves make the meridians. It is an equal-area projection. It is used for maps of the northern continents, as Asia, Europe, and North America.

9. POLYCONIC PROJECTION—The central meridian is divided truly. The parallels are non-concentric circles, the radii of which are obtained by drawing tangents to the globe as though the globe were covered by several cones rather than by only one. Each parallel is divided truly and the connecting curves make the meridians. All meridians except the central one are too long. This projection is used for large-scale topographic sheets—less often for countries or continents.

10. AZIMUTHAL PROJECTIONS—In this group a part of the globe is projected from an eyepoint onto a plane. The eyepoint can be at different distances, making different projections. The plane of projection can be tangent at the equator, at a pole, or at any other point on which we want to focus attention. The most important quality of all azimuthal projections is that they show every point at its true direction (azimuth) from the center point, and all points equally distant from the center point will be equally distant on the map also.

11. GNOMONIC PROJECTION—This projection has the eyepoint at the center of the globe. Only the central

part is good; the outer regions are badly distorted. Yet the projection has one important quality, all great circles being shown as straight lines. For this reason it is used for laying out the routes for long range flying or trans-oceanic navigation.

12. ORTHOGRAPHIC PROJECTION—This projection has the eyepoint at infinite distance and the projecting rays are parallel. The polar or equatorial varieties are rare but the oblique case became very popular on account of its visual quality. It looks like a picture of a globe. Although the distortion on the peripheries is extreme, we see it correctly because the eye perceives it not as a map but as a picture of a three-dimensional globe. Obviously only a **hemisphere** (half globe) can be shown.

Some azimuthal projections do not derive from the actual process of projecting from an eyepoint, but are arrived at by other means:

13. AZIMUTHAL EQUIDISTANT PROJECTION—This is the only projection in which every point is shown both at true great-circle direction and at true distance from the center point, but all other directions and distances are distorted. The principle of the projection can best be understood from the polar case. Most polar maps are in this projection. The oblique case is used for radio direction finding, for earthquake research, and in long-distance flying. A separate map has to be constructed for each central point selected.

14. LAMBERT AZIMUTHAL EQUAL-AREA PROJECTION—The construction of this projection can best be understood from the polar case. All three cases are widely used. It makes a good polar map and it is often extended to include the southern continents. It is the most common projection used for maps of the Eastern and Western Hemispheres, and it is a good projection for continents as it shows correct areas with relatively little distortion of shape. Most of the continent maps in this atlas are in this projection.

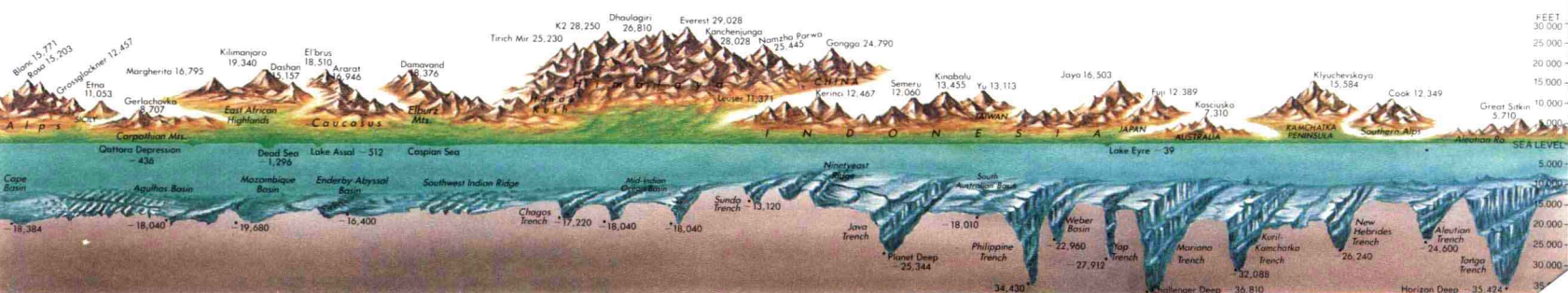
IN THIS ATLAS, on almost all maps, parallels and meridians have been marked because they are useful for the following:

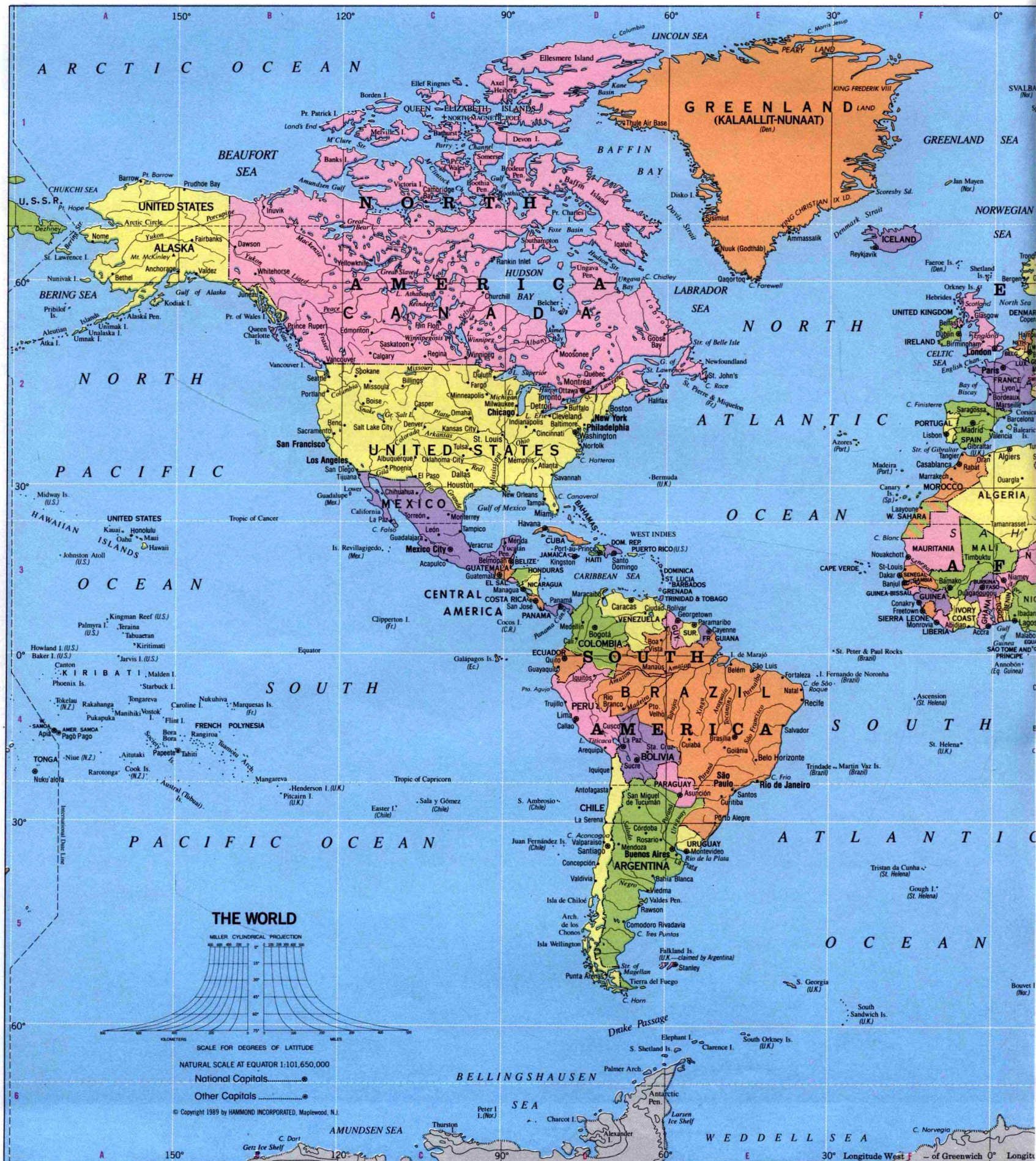
(a) *They show the north-south and east-west directions which appear on many maps at oblique angles especially near the margins.*

(b) *With the help of parallels and meridians every place can be exactly located; for instance, New York City is at 41° N and 74° W on any map.*

(c) *They help to measure distances even in the distorted parts of the map. The scale given on each map is true only along certain lines which are specified in the foregoing discussion for each projection. One degree of latitude equals nearly 69 statute miles or 60 nautical miles. The length of one degree of longitude varies ($1^\circ \text{ long.} = 1^\circ \text{ lat.} \times \cos \text{ lat.}$).*







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Cambodia
Cameroon
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Chile

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Colombia
Comoros
Congo
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Cuba
Cyprus
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Denmark
Djibouti
Dominica

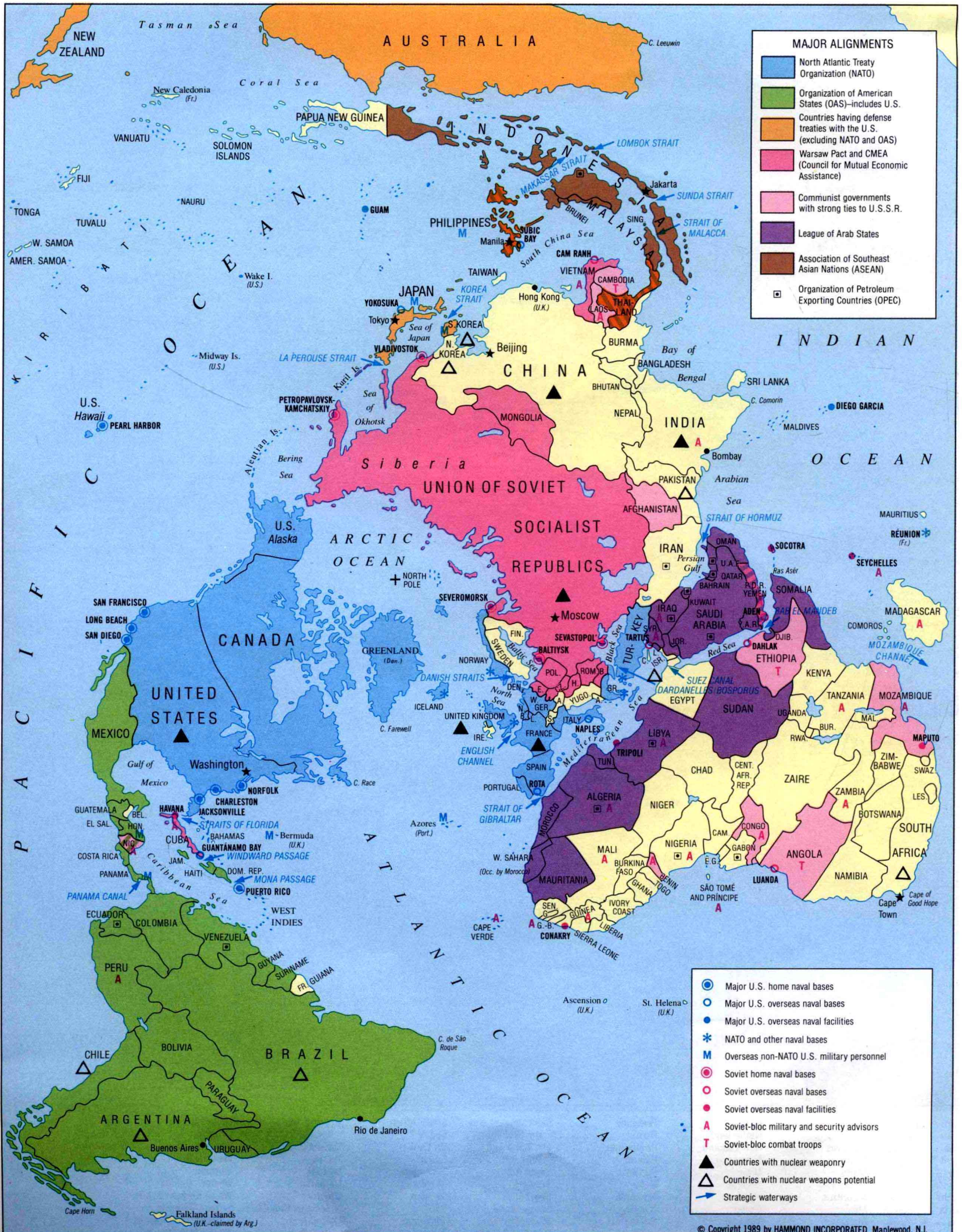
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Finland
France
Gabon
Gambia

Germany, East
Germany, West
Ghana
Greece
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras

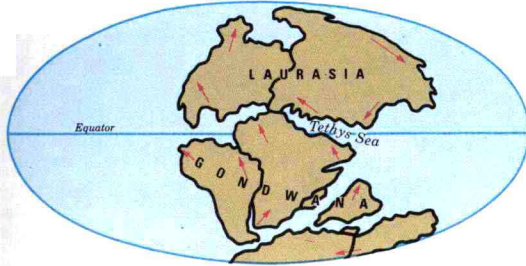
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Ivory Coast
Jamaica



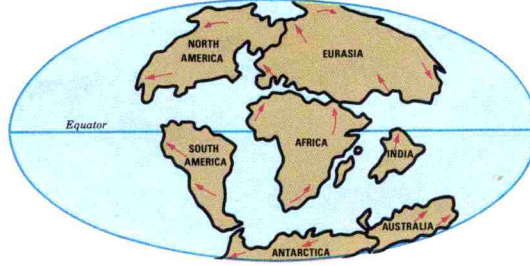
Japan	Malawi	Nepal	Paraguay	Saint Vincent and the Grenadines	South Africa	Trinidad and Tobago	United States	Zaire
Jordan	Malaysia	Netherlands	Peru	São Tomé and Príncipe	Spain	Tunisia	Uruguay	Zambia
Kenya	Maldives	New Zealand	Philippines	Sri Lanka	Sri Lanka	Turkey	Vanuatu	Zimbabwe
Kuwait	Mali	Nicaragua	Poland	Sudan	Sudan	Uganda	Venezuela	
Laos	Malta	Nigeria	Portugal	Suriname	Swaziland	Ukrainian S.S.R.	Vietnam	
Lebanon	Mauritania	Norway	Qatar	Sweden	Swaziland	Union of Soviet Socialist Republics	Western Samoa	
Lesotho	Mauritius	Oman	Romania	Seychelles	Sweden	United Arab Emirates	White Russian S.S.R.	
Liberia	Mexico	Pakistan	Rwanda	Sierra Leone	Syria	United Kingdom	Yemen, People's Democratic Rep. of	
Libya	Mongolia	Panama	Saint Kitts and Nevis	Singapore	Tanzania		Yemen Arab Republic	
Luxembourg	Morocco	Papua New Guinea	Saint Lucia	Solomon Islands	Thailand		Yugoslavia	
Madagascar	Mozambique			Somalia	Togo			



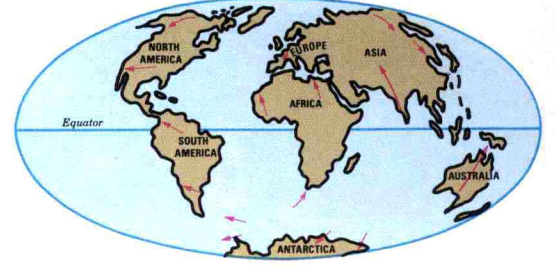
Continental Drift



180 Million Years Ago



70 Million Years Ago



Present Time

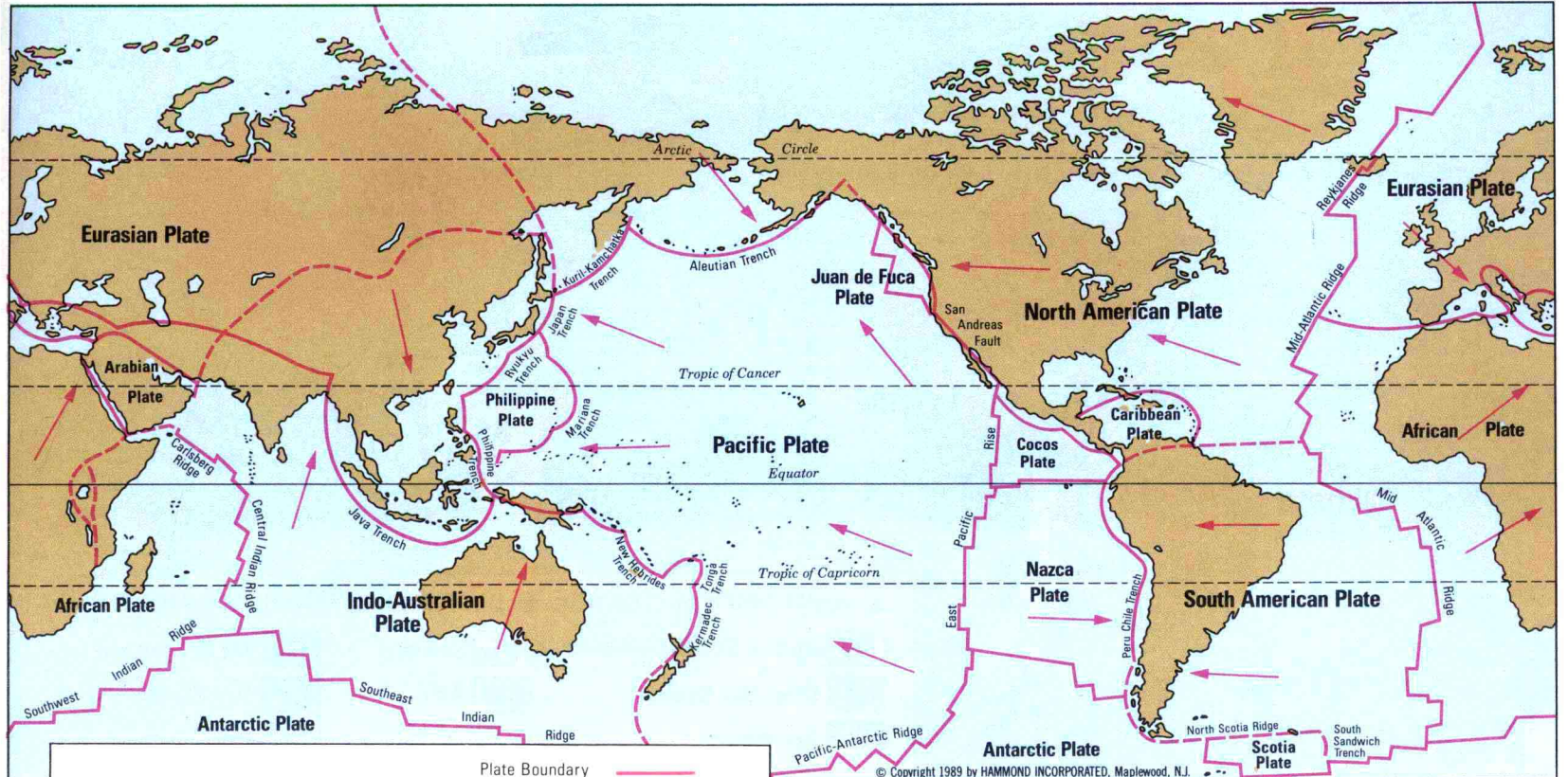
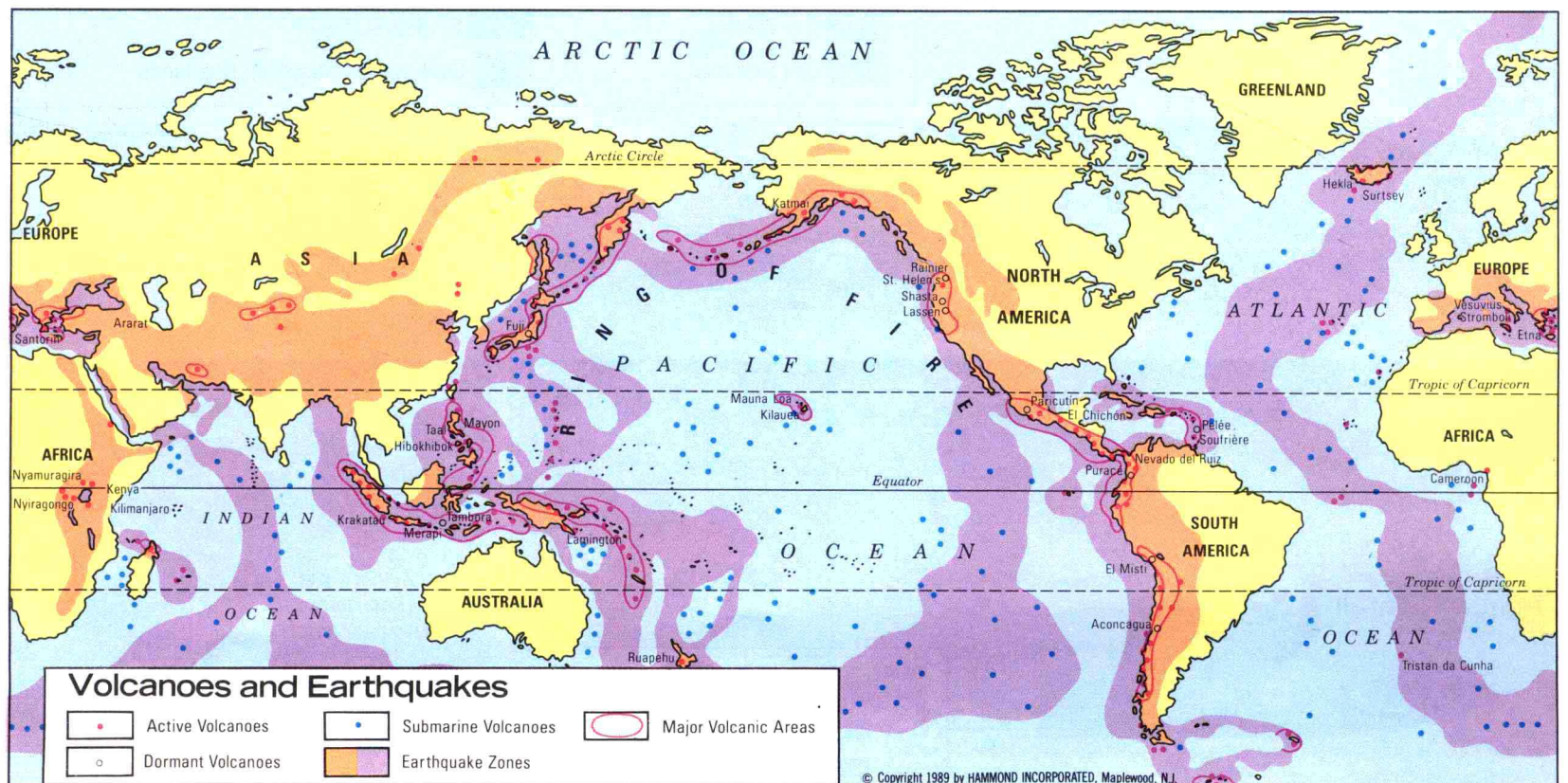


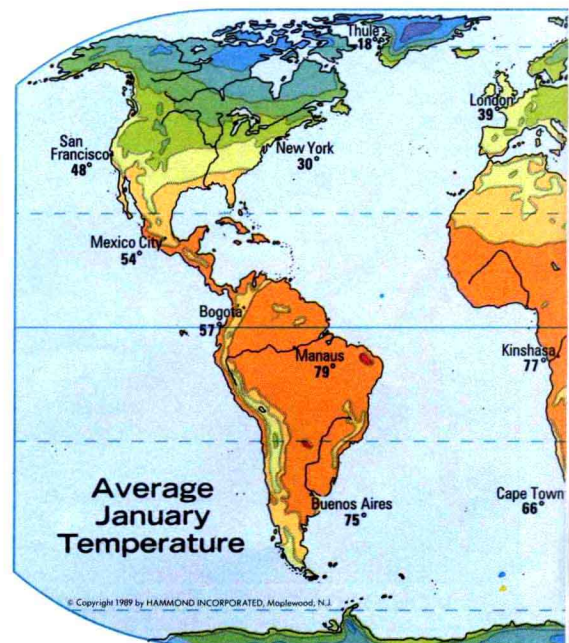
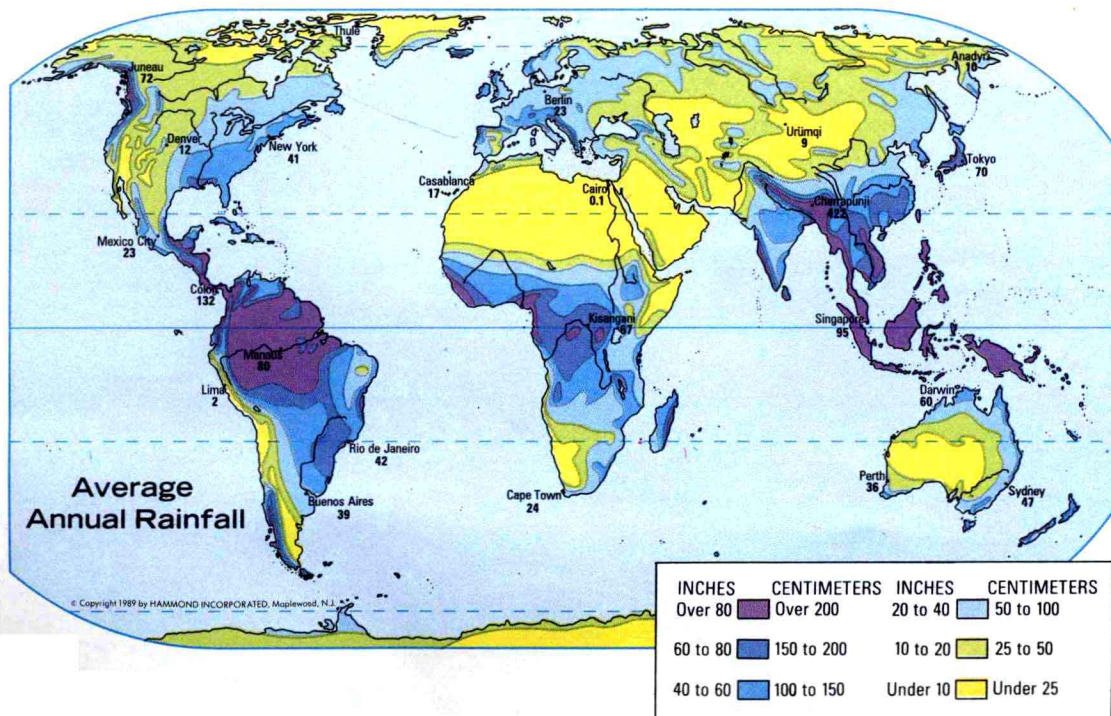
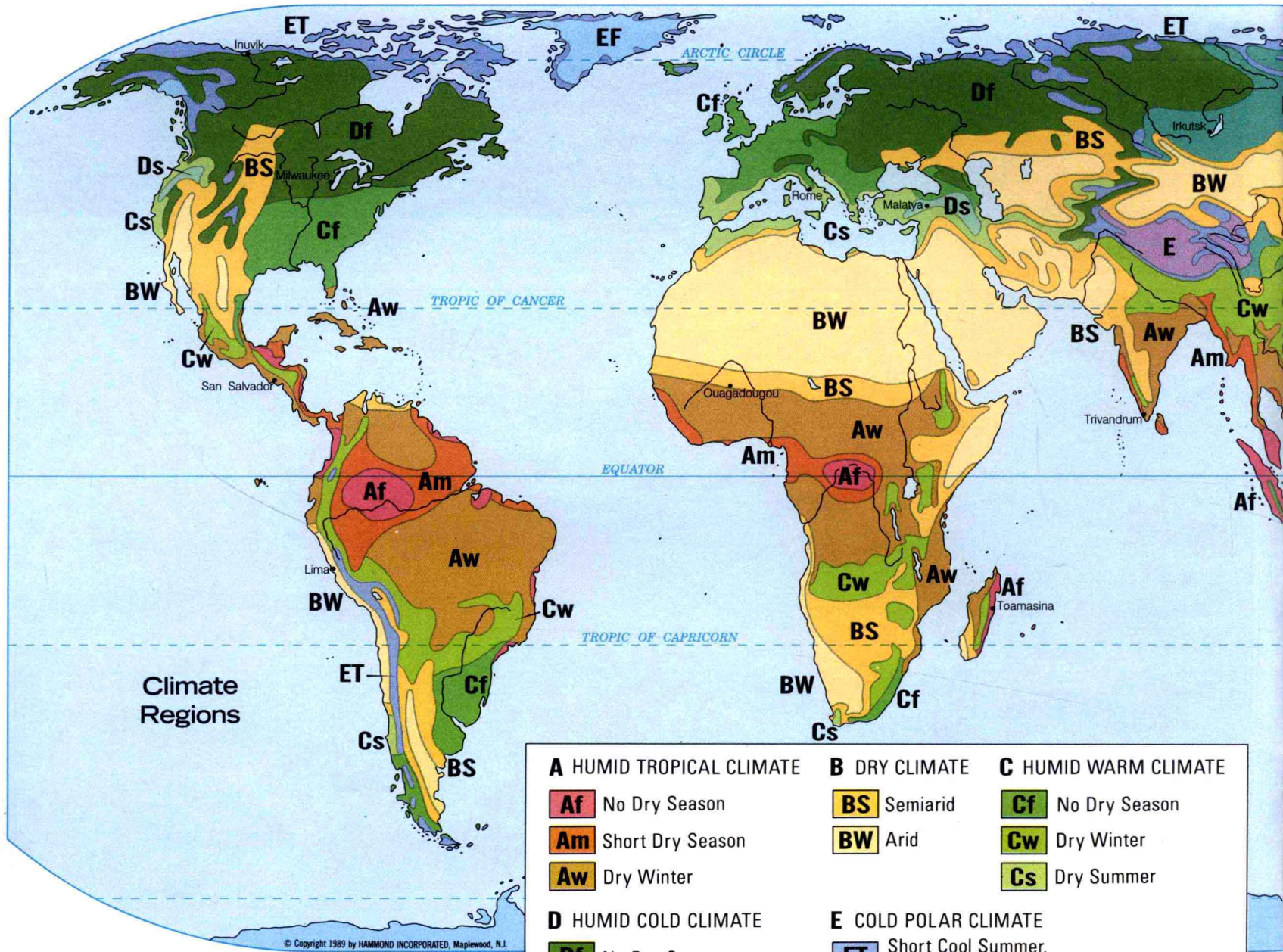
Plate Tectonics

Plate Boundary	
Uncertain Boundary	
Direction of Plate Movement	

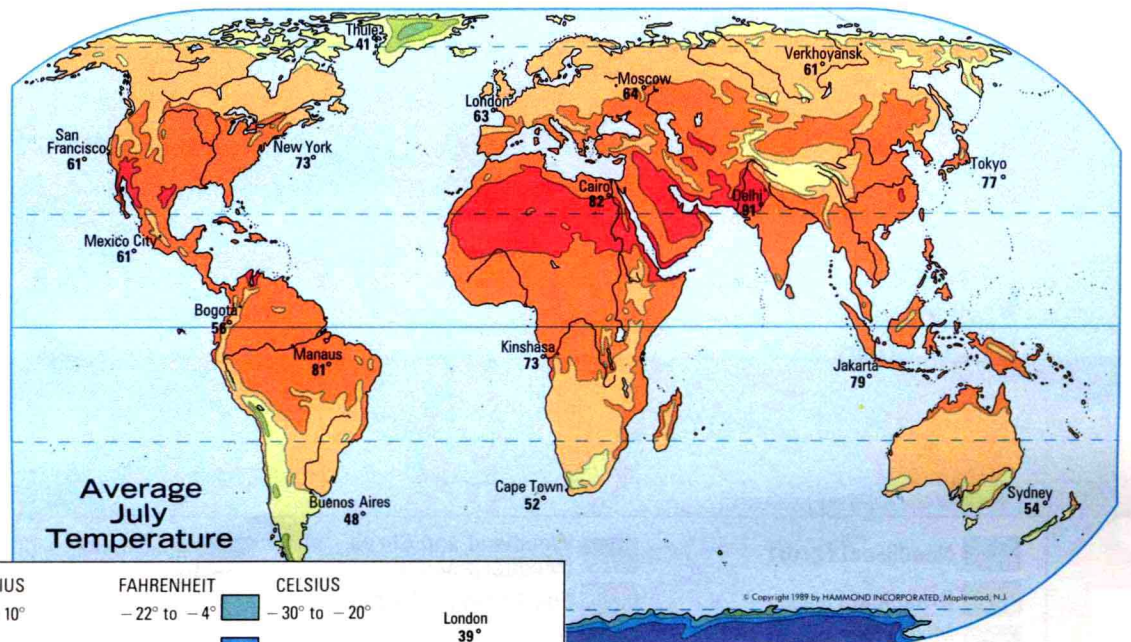
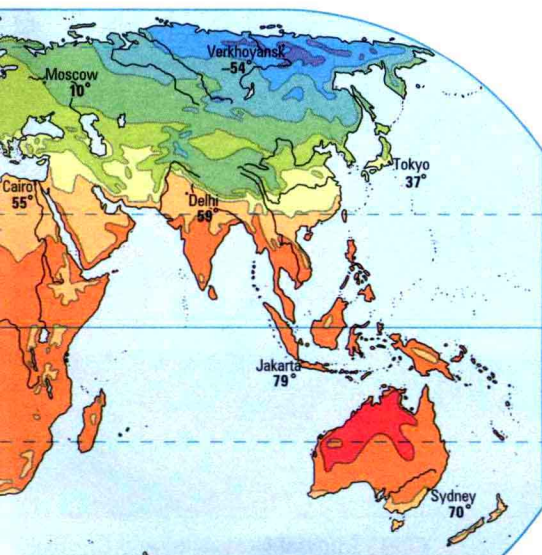
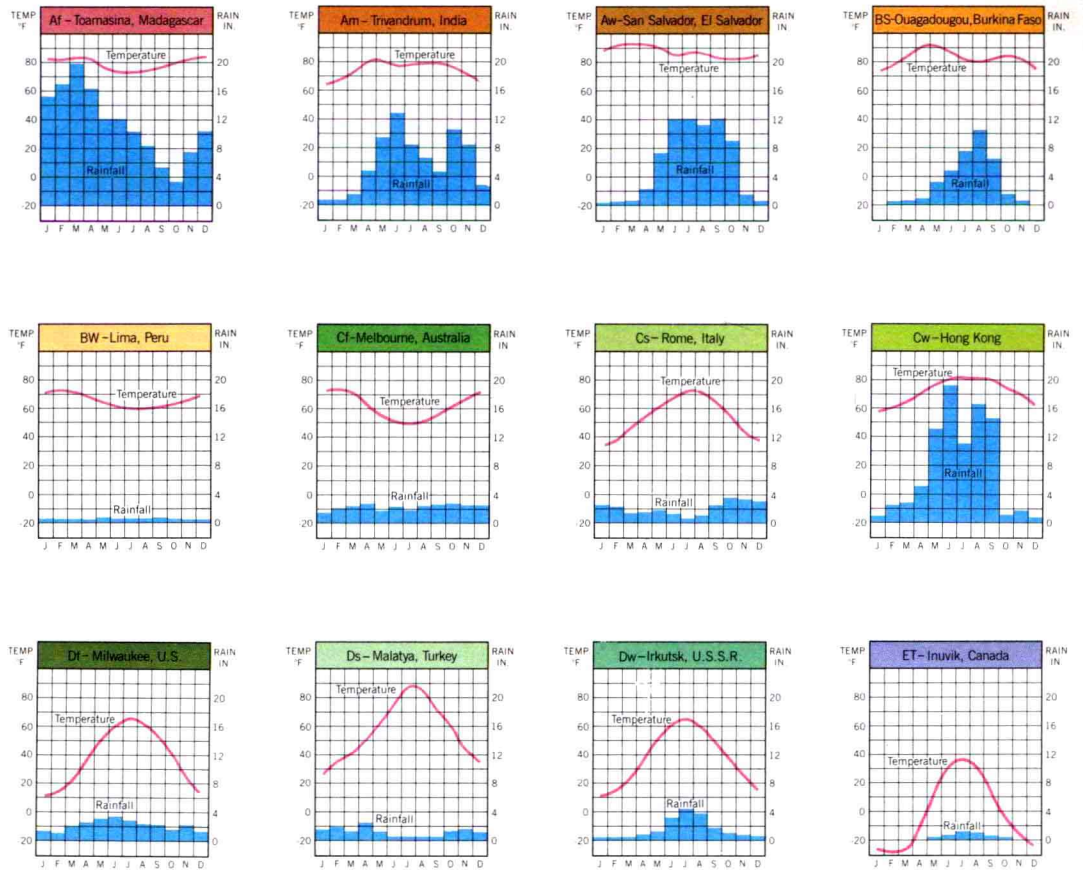
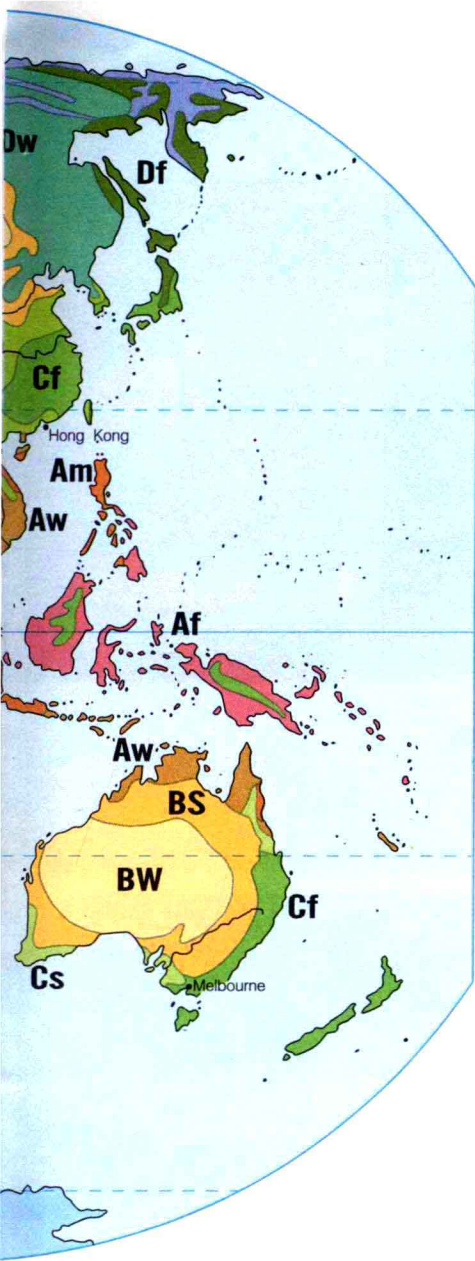


Volcanoes and Earthquakes

Active Volcanoes	Submarine Volcanoes	Major Volcanic Areas
Dormant Volcanoes	Earthquake Zones	

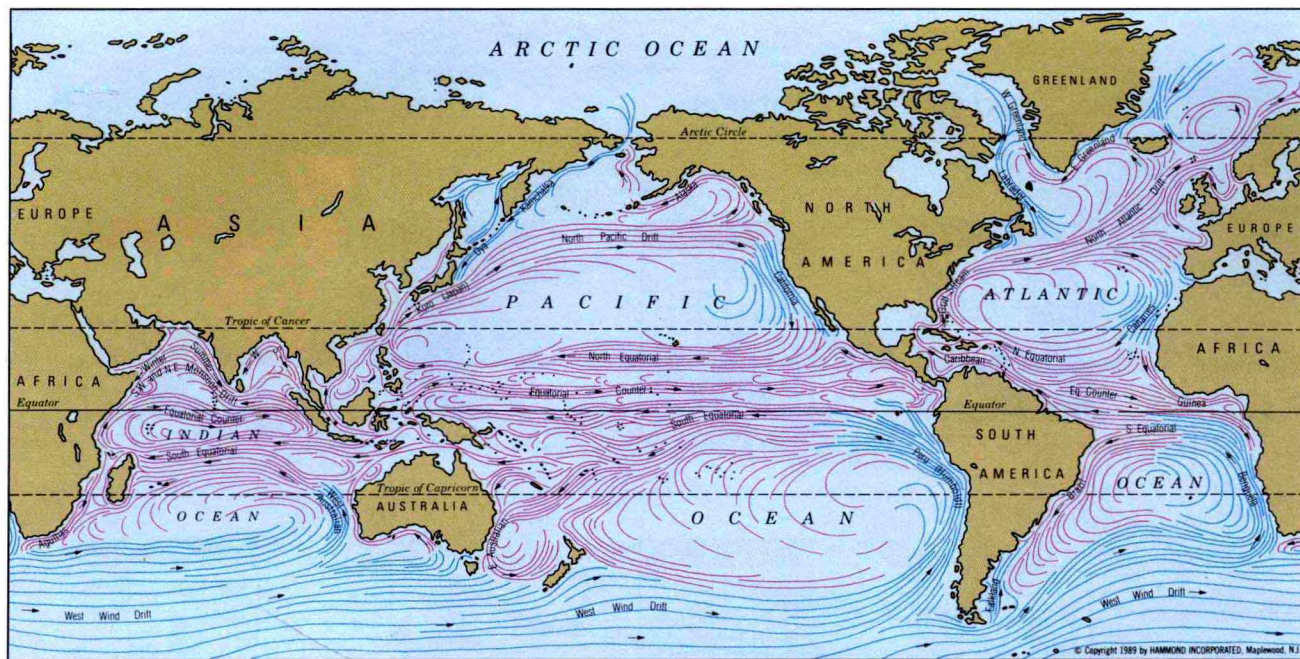


Selected Climate Stations



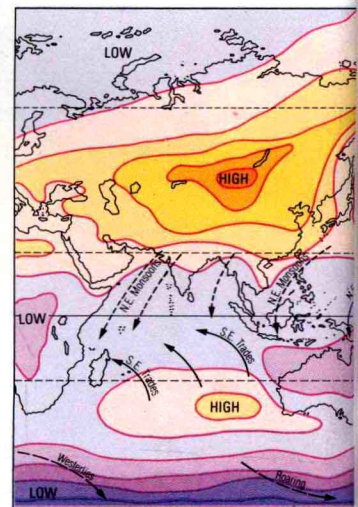
FAHRENHEIT	CELSIUS	FAHRENHEIT	CELSIUS	FAHRENHEIT	CELSIUS
Over 86°	Over 30°	32° to 50°	0° to 10°	-22° to -4°	-30° to -20°
68° to 86°	20° to 30°	14° to 32°	-10° to 0°	-40° to -22°	-40° to -30°
50° to 68°	10° to 20°	-4° to 14°	-20° to -10°	Under -40°	Under -40°

London
39°
Average temperature
at selected stations

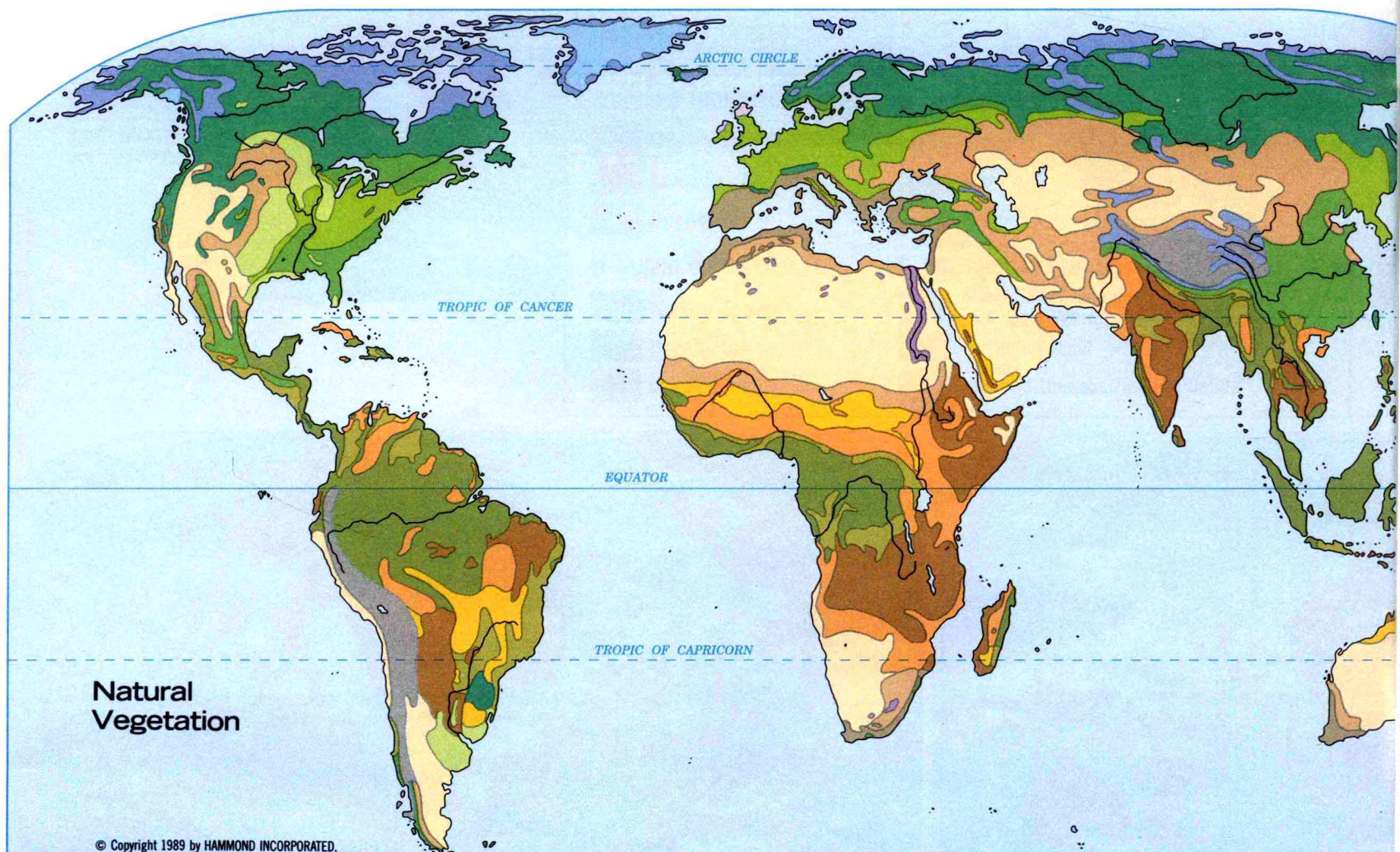


Ocean Currents

— Warm Currents
— Cold Currents
→ Direction of Flow



WORLD—Vegetation, Soils



Natural Vegetation

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- | | | | |
|---------------------------------------|------------------------------------|-------------------------|--|
| Needleleaf Forest | Woodland and Shrub (Mediterranean) | River Valley and Oasis | Tropical Grassland and Shrub (Savanna) |
| Broadleaf Forest | Short Grass (Steppe) | Desert and Desert Shrub | Tropical Woodland and Shrub |
| Mixed Needleleaf and Broadleaf Forest | Tall Grass (Prairie) | Wooded Savanna | Light Tropical Forest |
| | Unclassified Highlands | | Permanent Ice Cover |