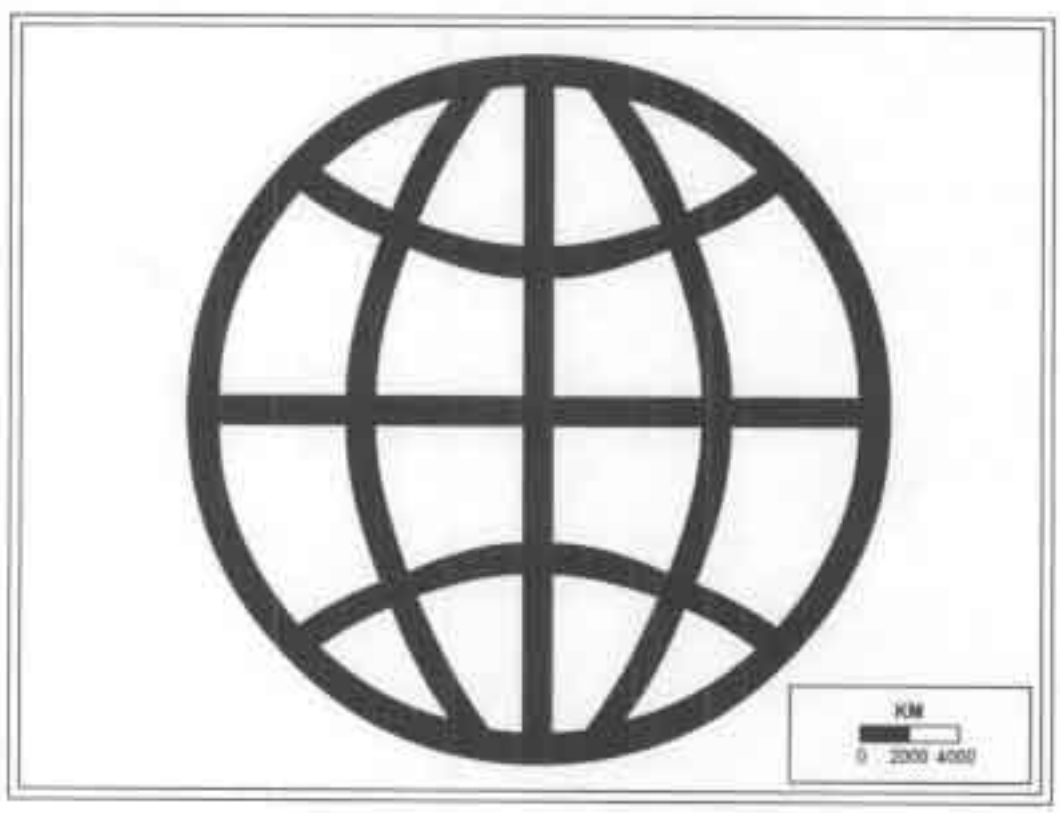
MAP-PACK

A HANDS-ON GUIDE TO DIGITAL MAPPING USING ATLAS GIS (v. 3.0) FOR WINDOWS



MAPPING IN THE CONTEXT OF PROJECT DEVELOPMENT

Sandra L. Arlinghaus

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DIGITAL MAPPING
USING
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MAPPING IN THE CONTEXT OF
PROJECT DEVELOPMENT

THIS PACK INCLUDES:

PROJECT DEVELOPMENT BY
COMMUNITY SYSTEMS FOUNDATION
(W. Drake and S. Arlinghaus)

ORIGINAL MAPS AND MAP-PACK BY
S. Arlinghaus

SOLD AT ULRICH'S

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SAMPLE #1.
OPENING ATLAS GIS

There are a number of computing sites that are available on the campus of The University of Michigan at which Atlas GIS is available: the basement of the Dana Building is one site; office 2044 in the Dana Building is another site which is available on a limited basis to students electing specific courses in the School of Natural Resources and Environment.

Atlas GIS is a program that runs through Windows on Pcs. Once an installation has been located, proceed as follows.

1. Turn on the computer; in some installations, it may also be necessary to turn on the monitor. In 2044, try turning on the switch on the surge protector (power strip on the bottom shelf of the computer cart) first. On that machine, it is recommended that you just use the single switch on the surge protector, to turn the entire apparatus on and off, in order to save wear and tear on the switches on the computer and monitor (surge protectors are cheaper to replace than are computers).

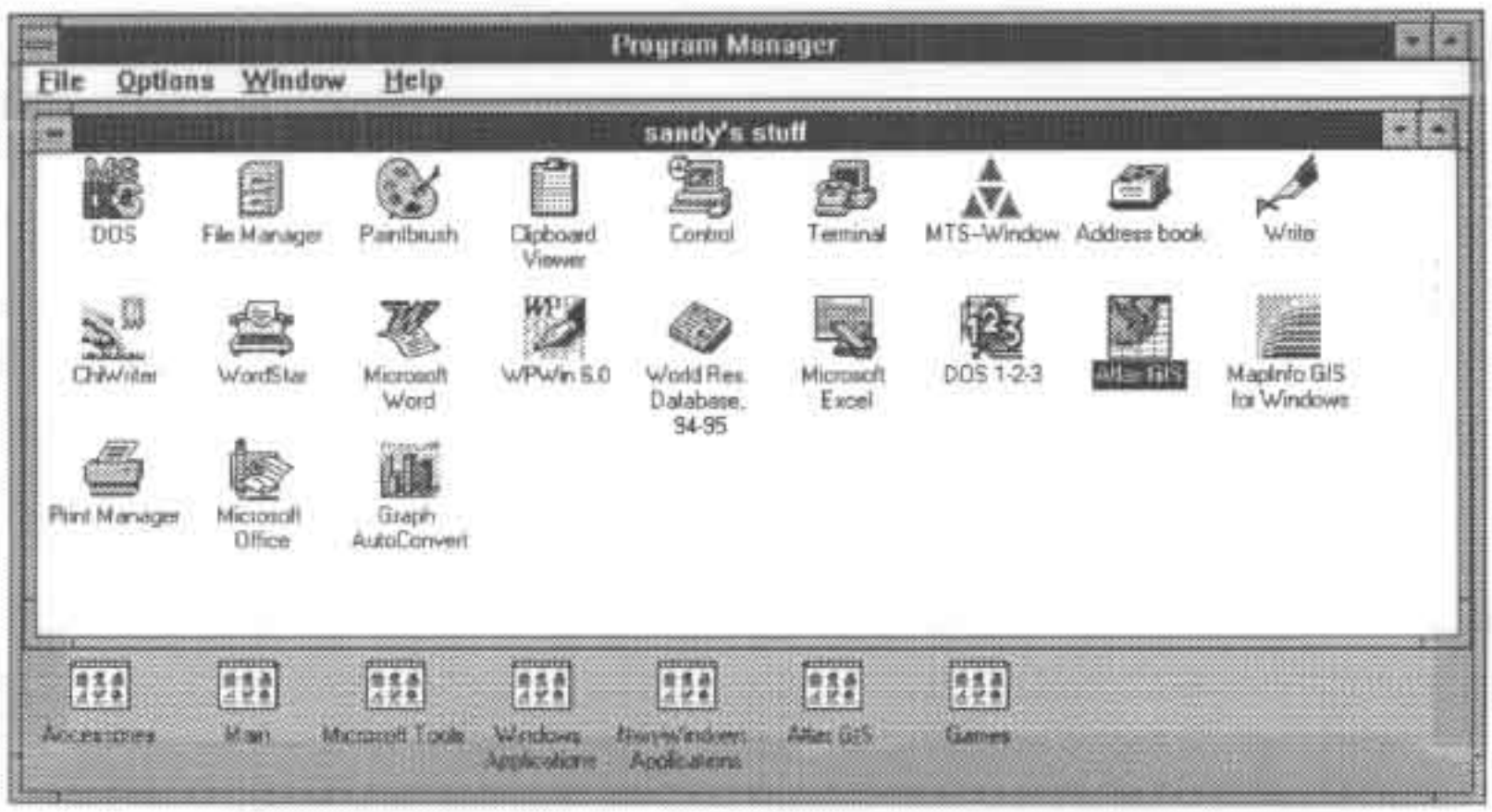
2. On some machines, once you have turned the machine on, you will next see a dark screen with only a "c-prompt" (c:\ ). In order to enter the Windows environment, you need to do some typing. At the c-prompt type in from the keyboard the following sequence:

cd\windows -- then hit the enter key.

At the next c-prompt, type

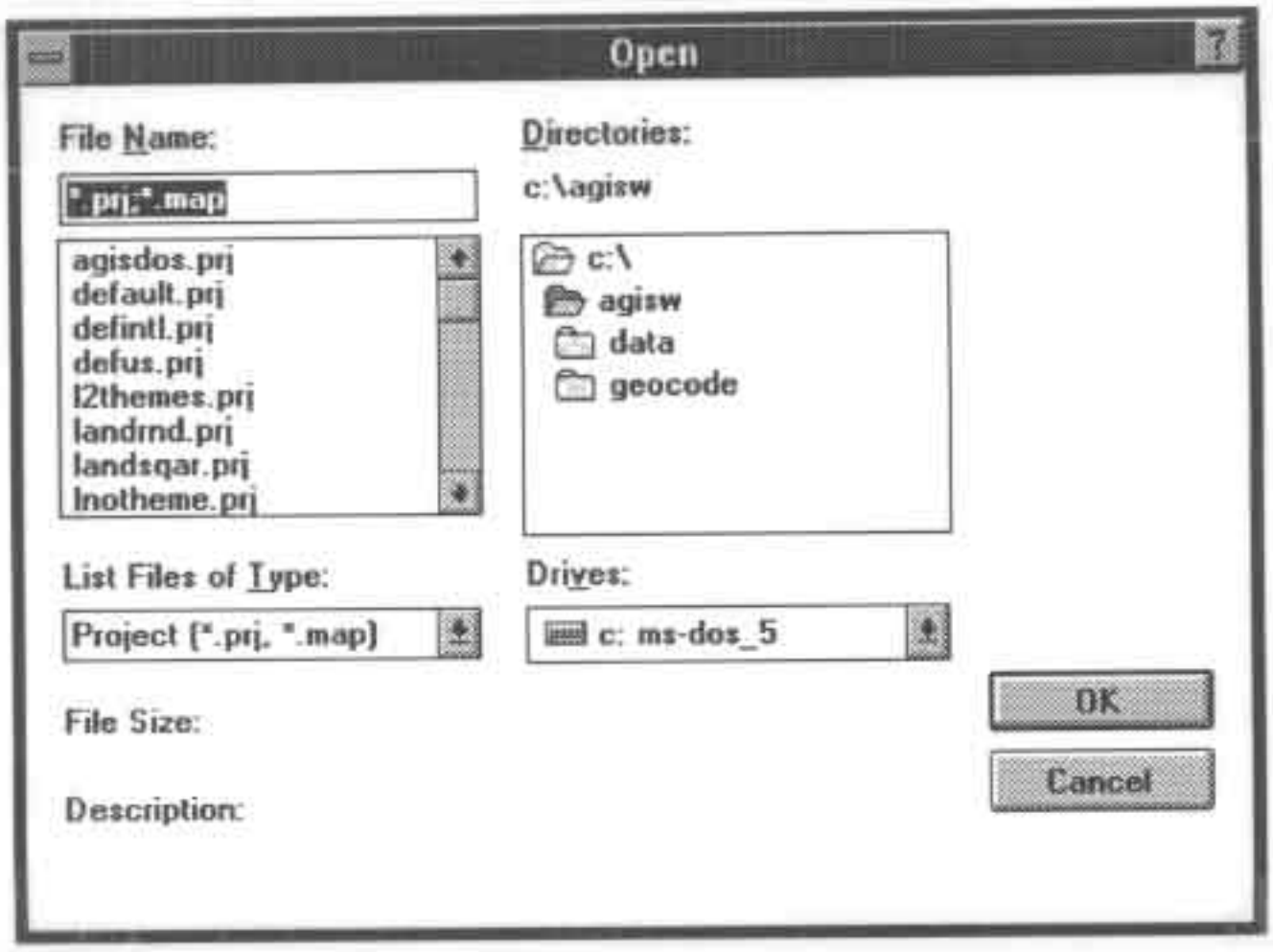
win -- then hit the enter key.

3. The Windows Program Manager should now appear on the screen. It looks something like the sample below; the individual icons represent different software packages. The icon for Atlas GIS is highlighted in the sample below. Double-click using the left mouse button on an icon to open the software.

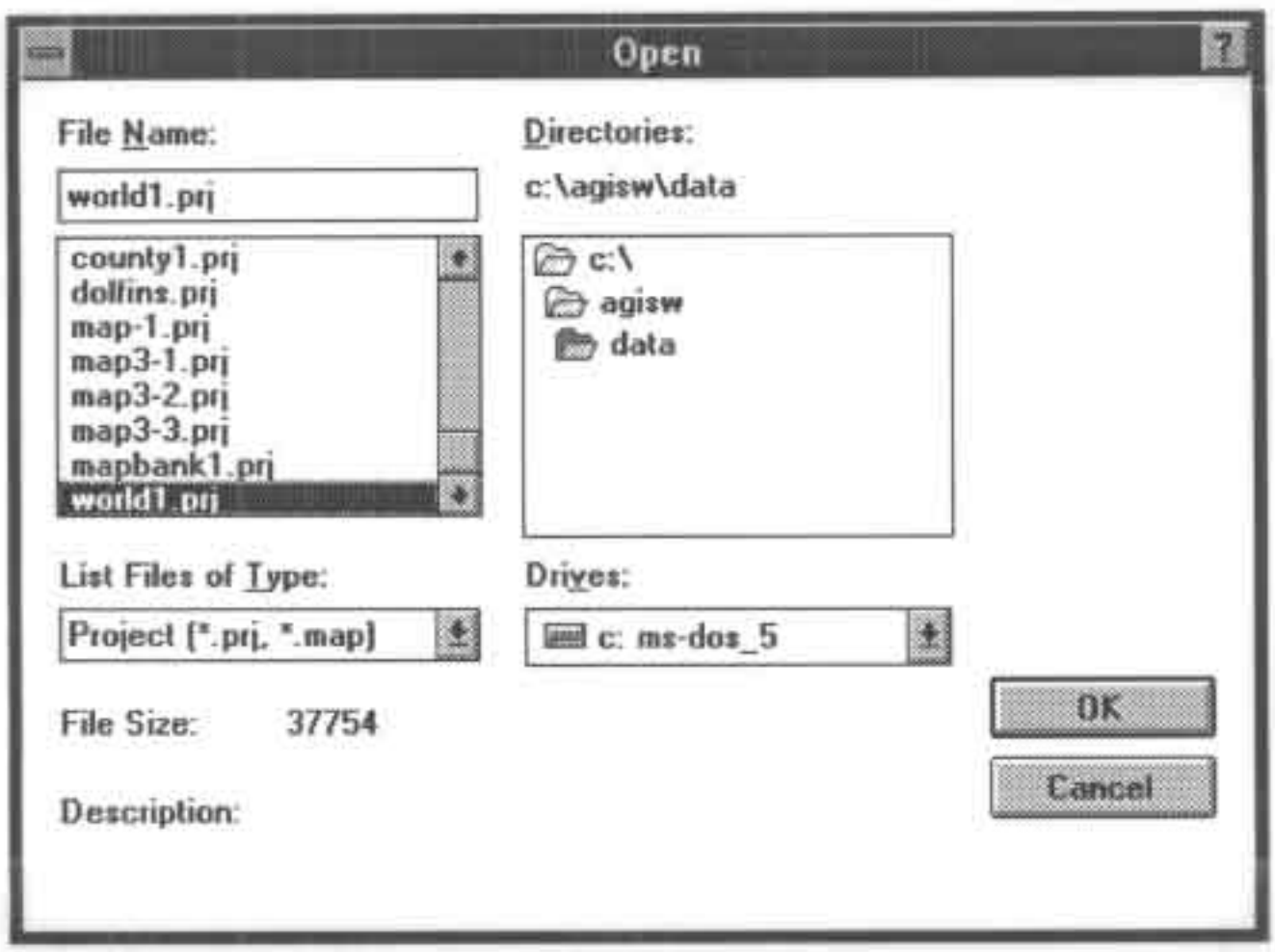


4. Open up the Atlas GIS program by double-clicking the left mouse button on the icon. The default window that will appear any time you open the program is shown below.

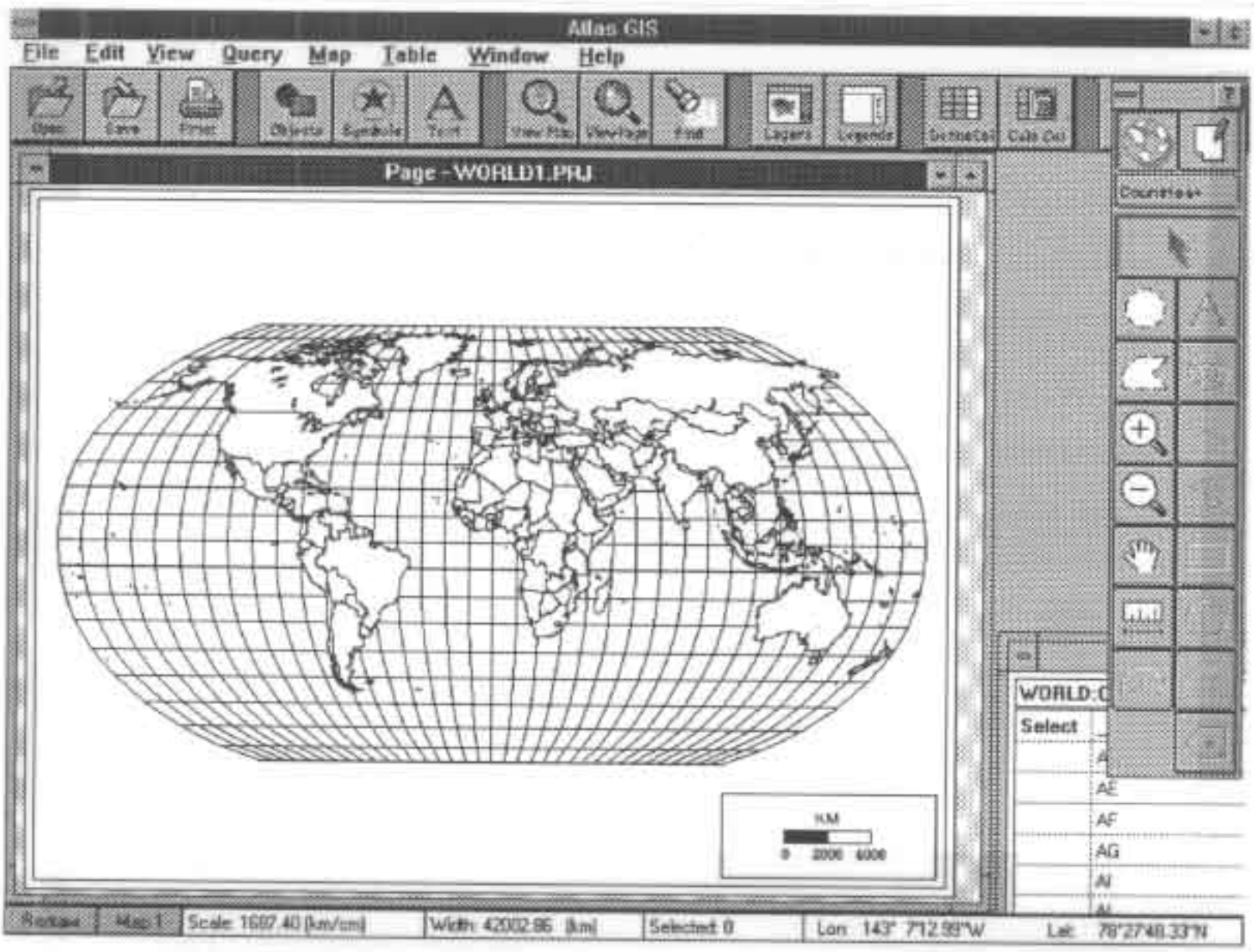
5. Using the mouse, move the cursor to "File" at the left edge of the bar near the top (containing words, "File," "Edit," "View," and so forth). Click once on the word "File"--use the left mouse button--that is, "left-click." From the pull-down menu, choose "open"--left-click on it. A new window will appear; a copy of it is shown below.



6. In the "open" window in step 5, notice the following parts--the "File Name" part; the "List Files of Type" part; the "Directories" part; and the "Drives" part. This basic pattern will appear in a number of other windows, too. Now, notice the Directories part. In the figure in step 5, the agisw folder is highlighted. This is the subdirectory that contains *A*tlas ***GIS*** for *W*indows--hence, ***AGISW***. Under AGISW there are other file folders. Left-click on the one next to the word "data"--but, before doing so, notice the set of words that appears in the box just to the left of the Directories category--the files in that box all have names that end in (have file extension of) *.prj. Now Left-click on data. The window should change to appear somewhat as below. Now the files in the left box are also of the general form *.prj, but there is a different set of files. Files of the form *.prj can be stored in either location.



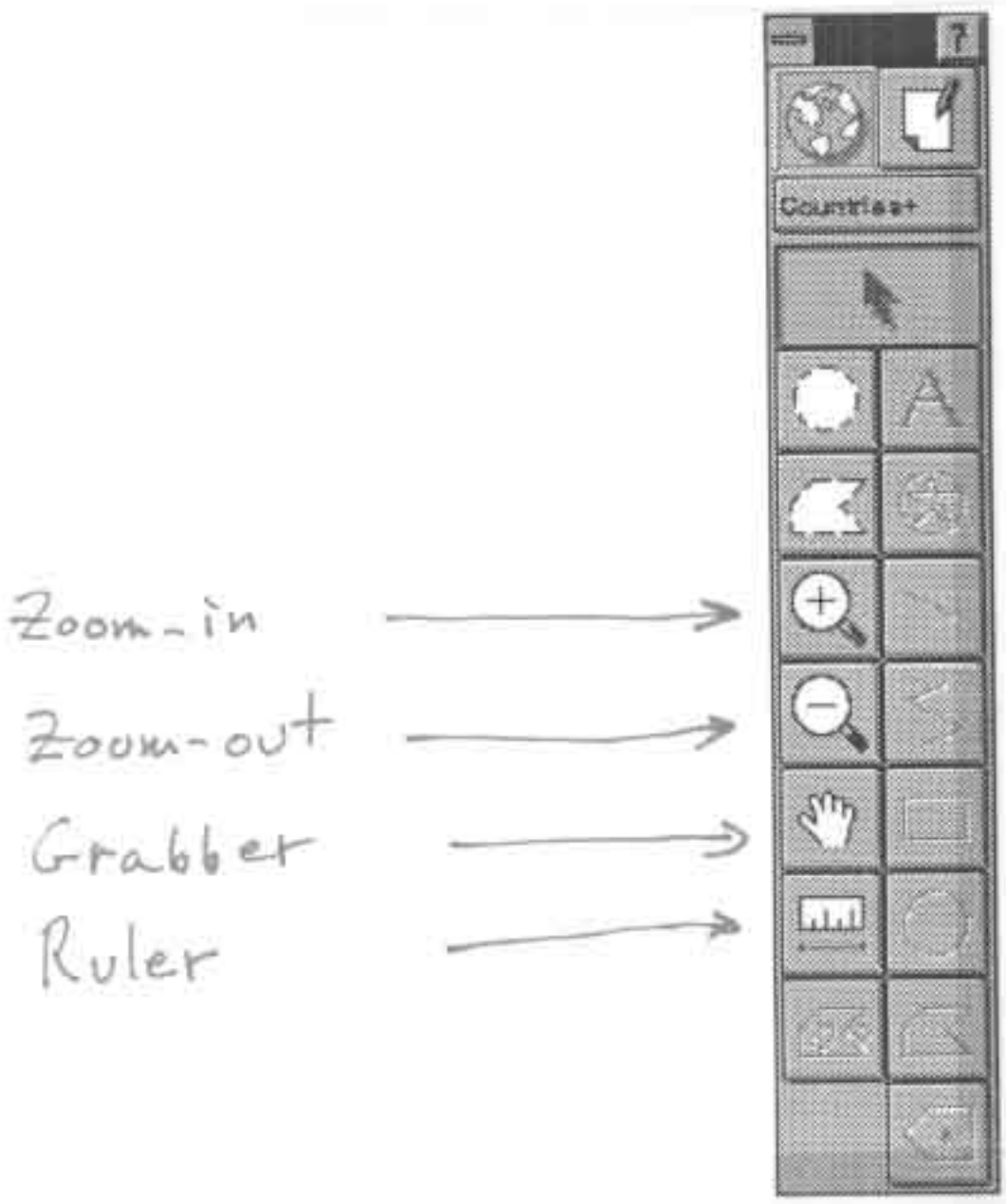
7. Left-click on the file named "World1.prj." That file should now be highlighted. Then left-click on the ok button near the lower right-hand corner of the window. A map of the world should now appear--see below. The projection is the Robinson projection. It is a compromise projection--neither a true equal-area projection nor a conformal projection (shape maintained in local areas). It does "look" good, however, that is, the shapes and relative sizes of the landmasses look close to what they might on a globe.



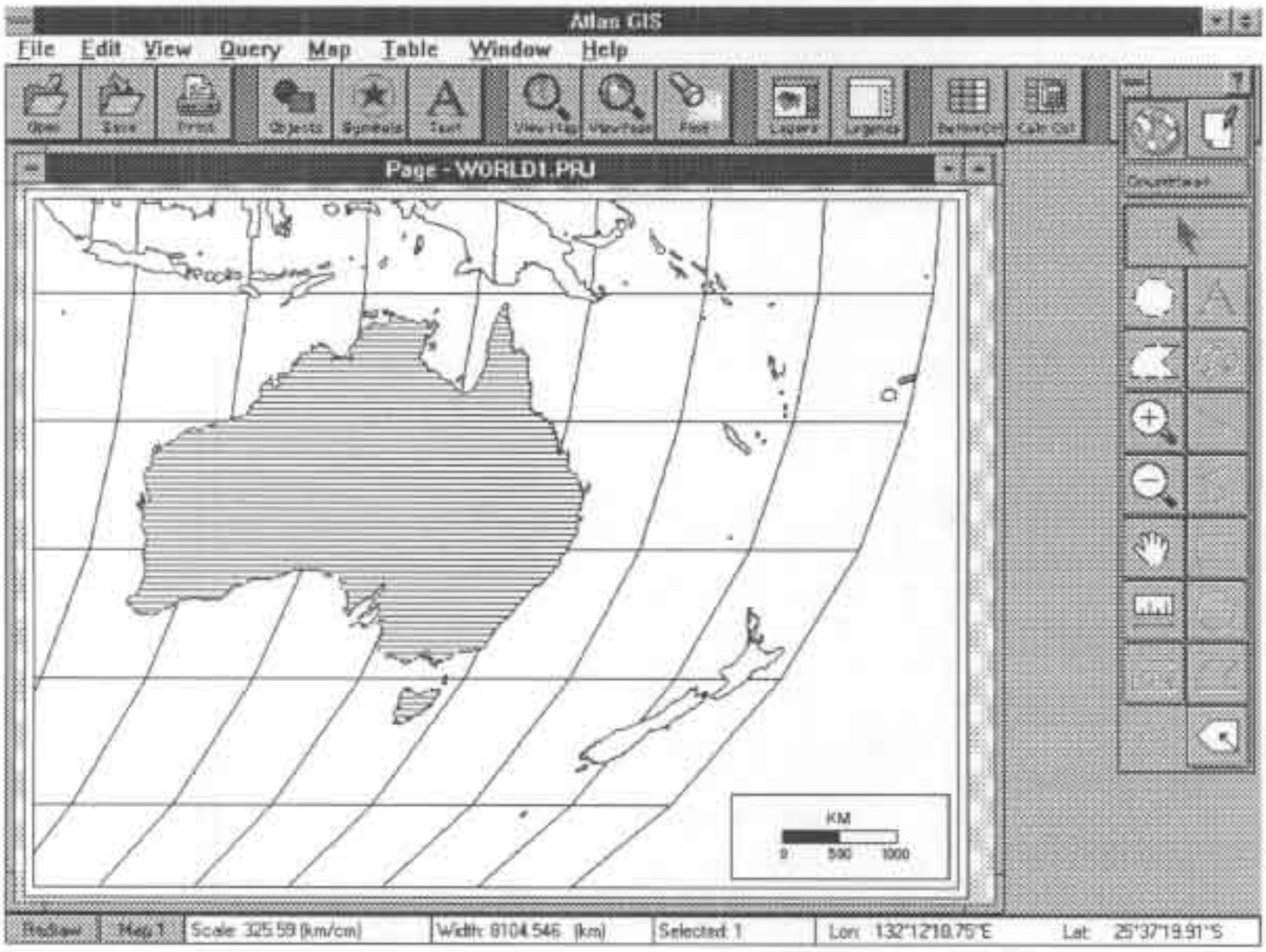
8. Look at the window in step 7 that contains this outline map of the world (a so-called base map from which other maps can be built). There is a window containing the map--the window says Page-WORLD1.PRJ in the top bar of that window--the top bar is likely colored blue. There are other windows, too. There is tool bar window to the right. It is long and thin. Click (if not specified, "click"="left-click") on the top bar of the tool bar window. Now it should turn blue and the top bar of the Page window should not be blue. There is a third window also--a window containing the database that comes with Atlas--a corner of the data base is showing in the lower right corner of the figure above. Click on the top bar of that window--it should turn blue. Whichever window has the top bar blue is the "active" window. When a window is active, you can alter, move it around, save it, or move its contents to another software application. Practice making the various windows become active.

SAMPLE 2
THE TOOL-BOX WINDOW

1. The tool-box window is depicted in the figure below. The buttons that are clearly visible are the ones that are active and may be selected--they are the top six buttons in the left column. This sample will illustrate simple ways to use four of these buttons on the map in World1.prj. Play around with them and get comfortable with using them.



2. The Zoom-In button. Click on the zoom-in button. Now move the cursor over onto the map. Notice that its shape is now that of a little magnifying glass with a plus shape inside. Move to northwest of Australia--click and drag a box around Australia, from upper left to lower right corner. When you let go, the map will be zoomed in on and the result should look something like the map below.



3. Notice that the interior of Australia in the figure above is striped; on your screen, it probably is not. Place the cursor in the interior of Australia--click once--now the interior should be striped. This is called "selecting" a region for further analysis. Selected regions are striped. To remove the selection, click on the water--try it.

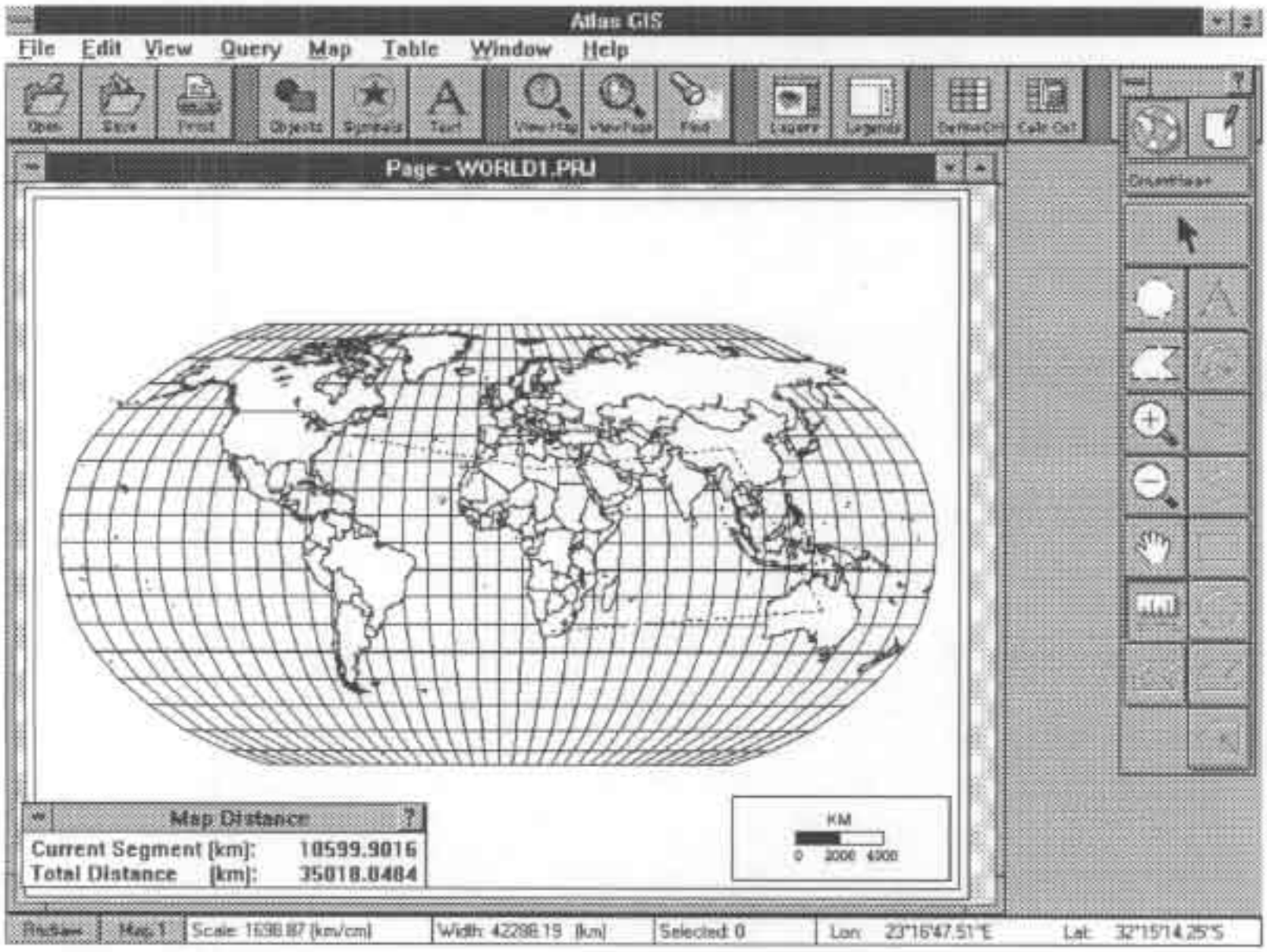
4. Notice that there is latitude and longitude read-out in the lower right-hand corner. Place the cursor on the map--click and look at the Lon/Lat read-out. Now move the cursor somewhere else on the map--click again, and notice the change in the Lon/Lat read-out--try this in a number of locations to get a feel for this feature.

5. To return to the previous map, pull down the menu from the top bar that says "View"--click on "previous map view" and you will return to the global view.

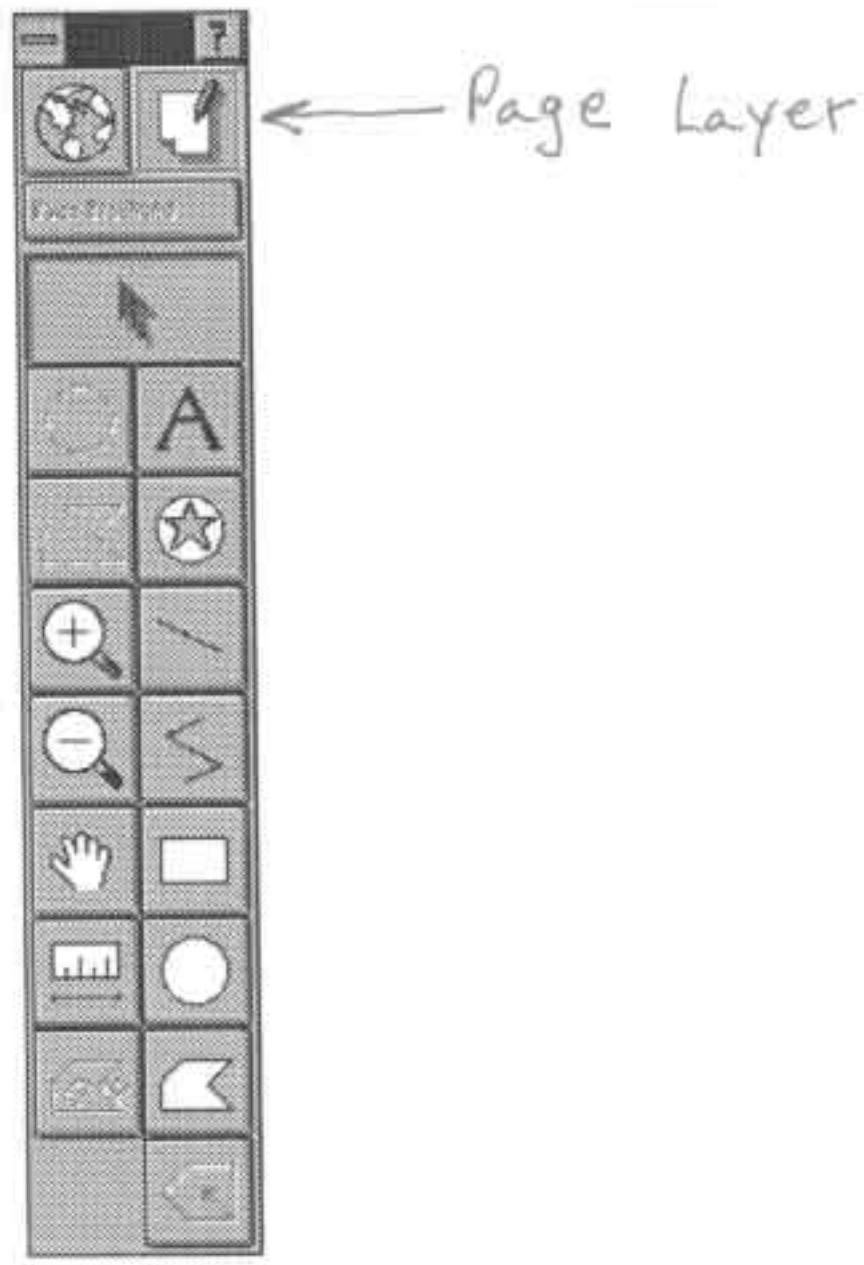
6. The zoom-out tool. Zoom-in again on Australia. This time, instead of returning to the previous view using the "View" menu, try using the zoom-out tool--the magnifying glass with the minus sign in it. Click on it, and then move it over to the map--experiment with clicking on it and learn how to return to the previous view this way, as well.

7. The grabber tool. Click on the grabber tool. Now move the cursor into the map area. The cursor is shaped like a hand. Click and drag--the map will move around--try to move a zoomed-in on map of Australia to become a map of China--challenge a friend to name the next country to west (and so forth).

8. The ruler tool--finding distances between locations. Click on the ruler tool. Move the cursor into the map--the cursor has become a crosshair. Click on Ann Arbor--then click on Libya--notice that the distance of this segment of your trip, and a running total, is being tallied in the window in the lower left. Now click on China, then on Australia, then on South Africa--keep your eye on the distance window as you do so. To end this feature, double click.



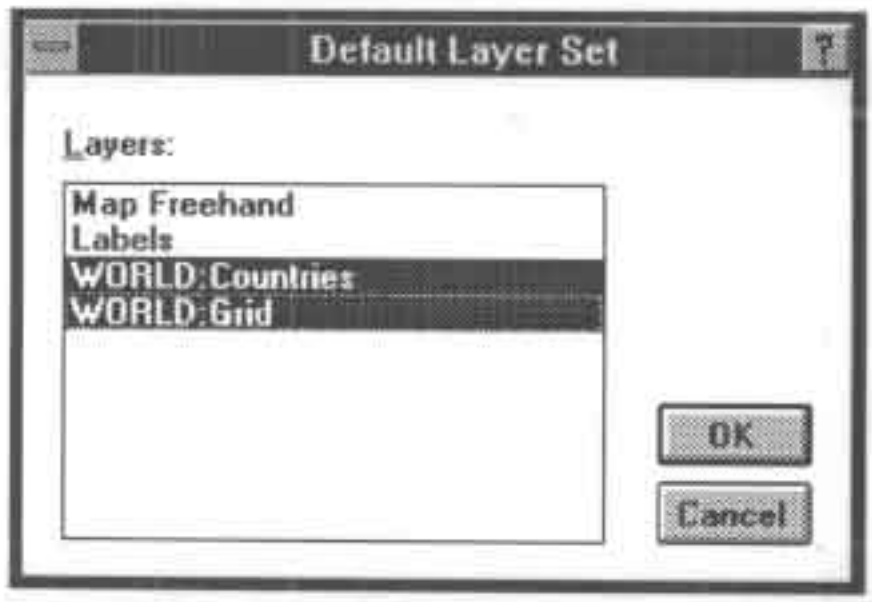
9. The Page Layer. The map has various elements. If this were a paper map, you might imagine having various pieces of paper to layout on a table and glue together to make a nice presentation--one piece would be the map itself; another might be a box with a title in it, another might be a box with a legend in it, and another might be a box with the scale in it. These separate pieces are viewed, in Atlas, as elements of the "page" (as opposed to "map") layer. The map layer is the default layer and is the layer in which almost all of your work will take place. To turn on the page layer (and turn off the map layer) click on the upper right button (with a page on it) on the tool bar--indicated in the figure below.

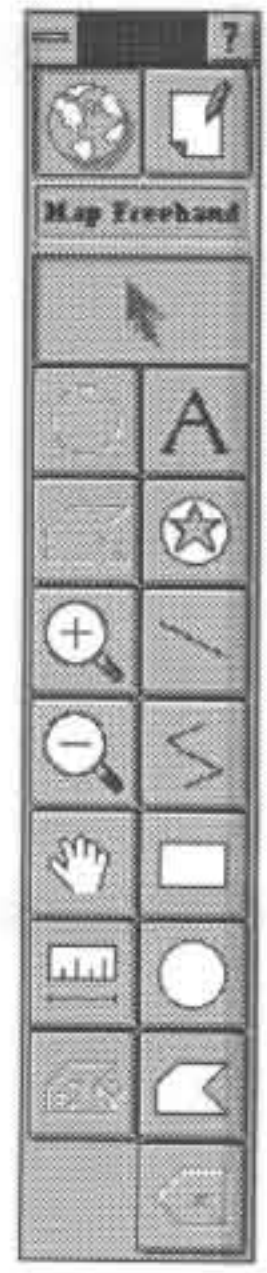


10. Notice that new buttons on the tool bar become active. Try some of them.

11. Click on the scale bar; the box now has handles on it; drag the box and move it to a new location; stretch and shrink the box.

12. Return to the map layer. Click on the long bar below the page and map layer buttons. The is the layer bar. A window will pop up. The default is highlighted, as below. Move the highlighting so that the Map Freehand layer is the one that is highlighted. The tool bar will once again change and appear as below. In the Map Freehand Layer it is possible to draw on top of the map, as if a layer of transparent material were placed on top of the map. Try some of the buttons on the active tool bar.



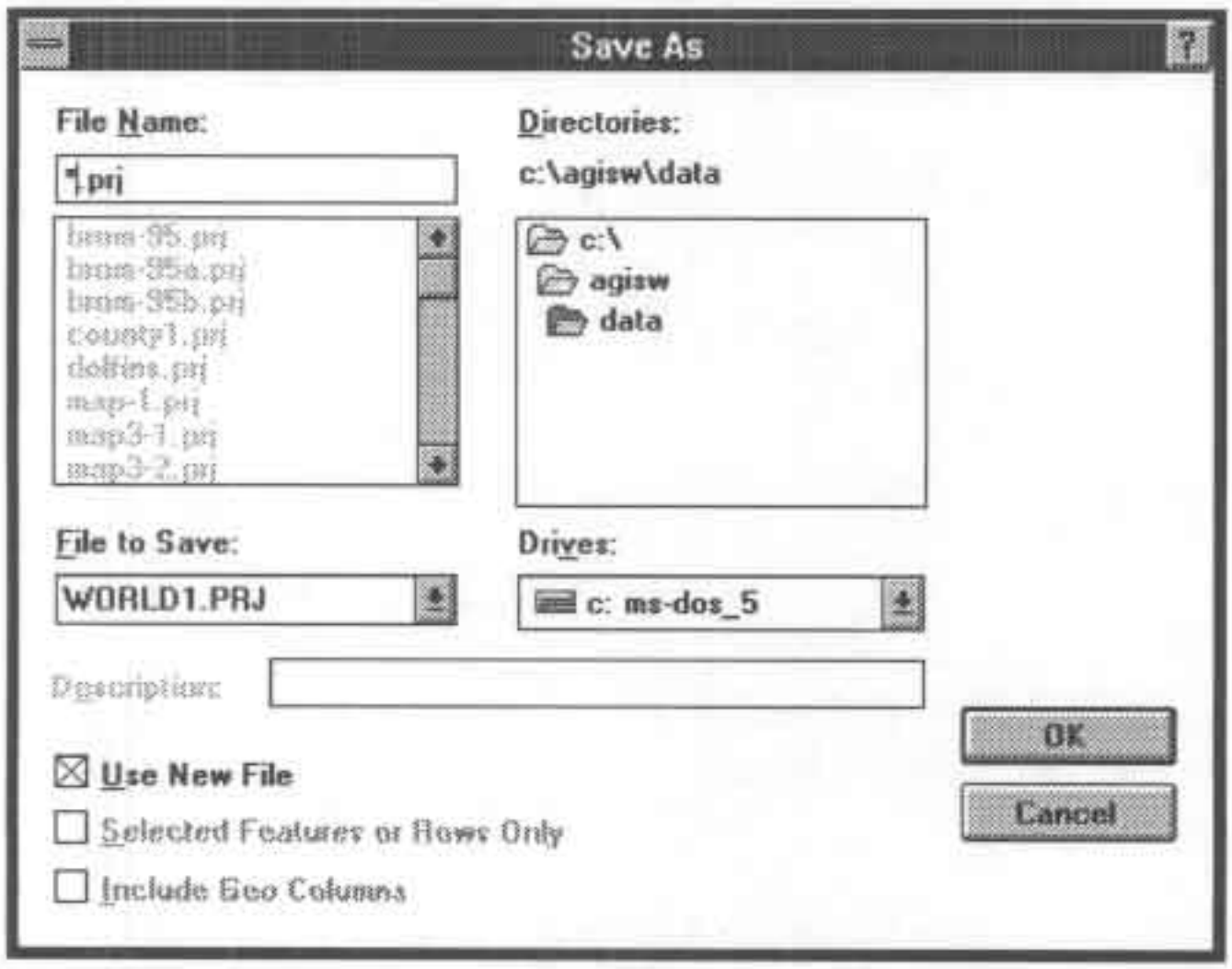


13. If you have a map you wish to trace into the computer, use a copier to make an 8.5 by 11 inch transparency of it. Then tape the transparency to the monitor and copy the map in the Map Freehand Layer using the zig-zag or other tools. Consult with the instructor for more detail and to develop a strategy tailored to your own project.

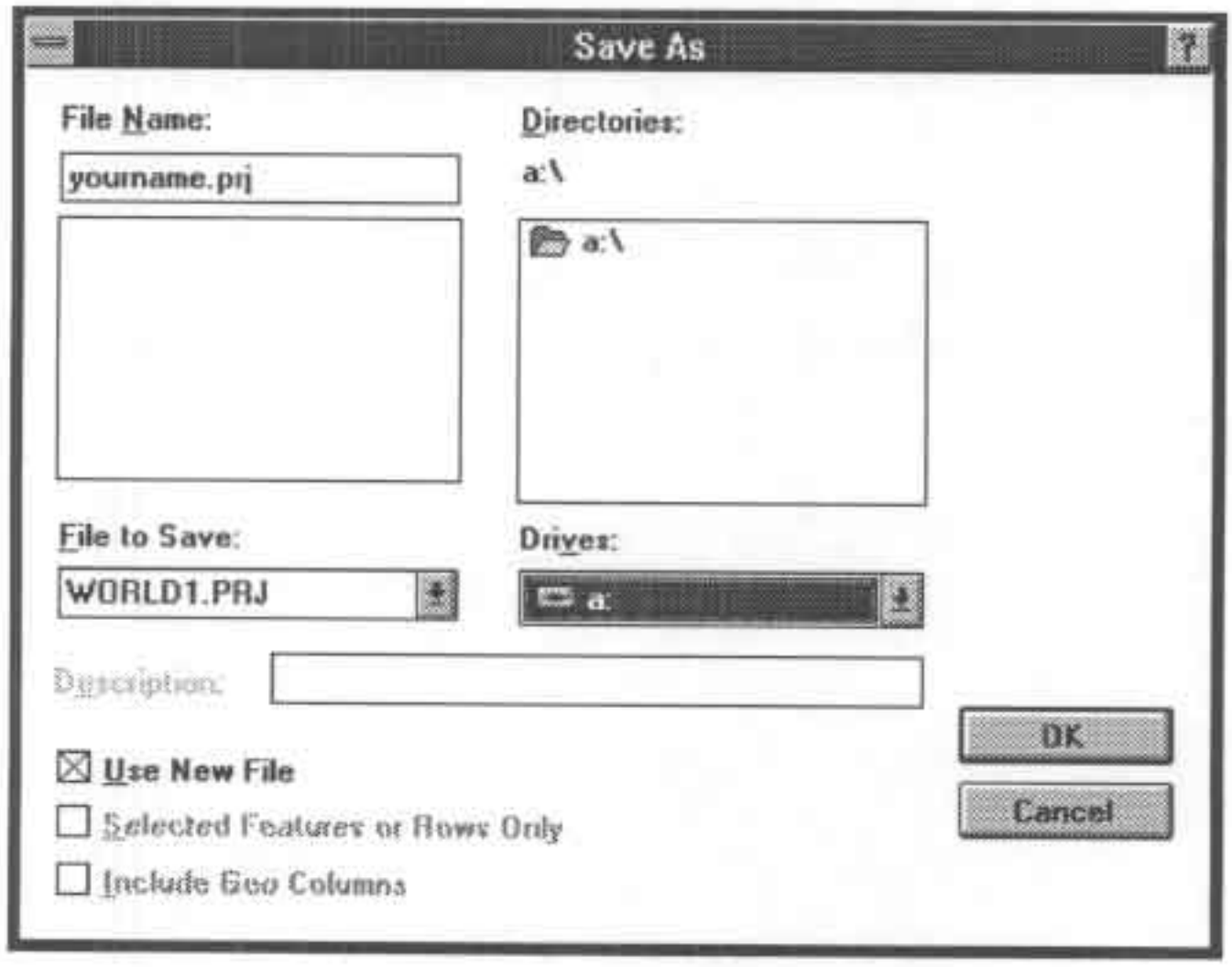
SAMPLE 3
SAVING WORK

1. Atlas files are called *.prj files. The prj file extension is short for "project." It is an easy matter to save a file on a computer to which you will return to do future work on that file. A project file is composed of a number of different files--of a map and a database. For the most part, you will not see the components from which the project file is composed. The map file has the file extension .agf (Atlas Graphics File). The database file has the extension .dbf--for database file (of the sort made by many other pieces of software).

2. To save a file to the hard drive of the computer you are using. Pull down the window that says file, and click on "Save As." A new window will come up. Click on the space with *.prj--here, the cursor has been placed between the asterisk and the period just before prj. Backspace to erase the asterisk and replace it with your name or some other name of eight or fewer letters and no blank spaces. Then say ok. The file will now be saved on the c-drive in the data folder of agisw--the path is given to you just under the word "Directories" as c:\agisw\data.



3. If instead you wish to save a file on a diskette, in drive a, proceed as above, but under the "Drives" box, pull down the menu to select drive a and then say ok (after naming the file as above). See the figure below.



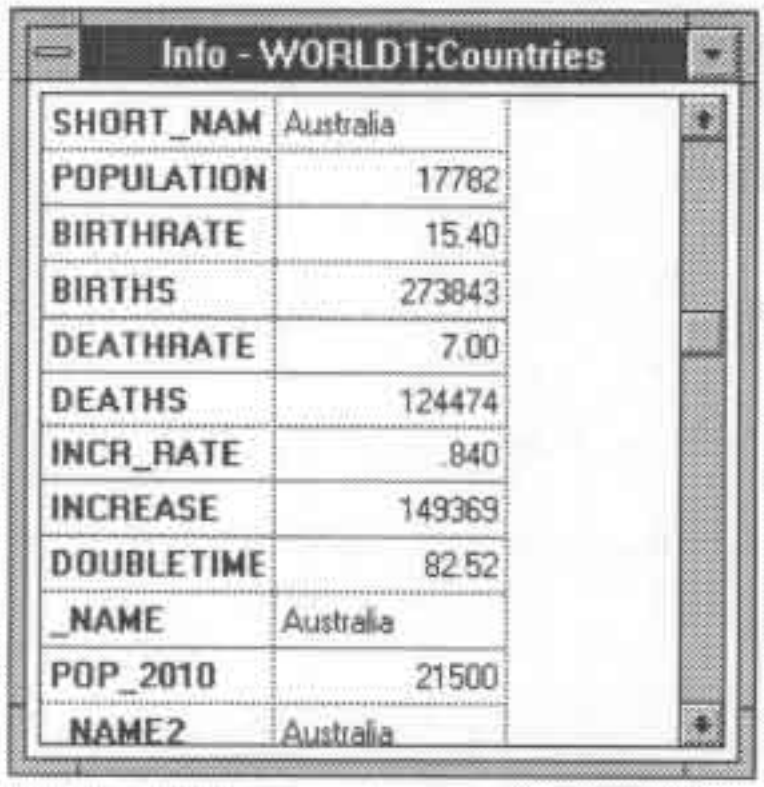
4. To move your work to a different computer requires a bit more effort. Ask for help to do this--it's not hard, but instructions for doing so require knowing the level of computer literacy of the reader. Just generally, go to the Windows file manager and copy every file of the form "Yourname.*" on one or more diskettes. Notice the path in which they appear. Then load all of them on to the new computer and your .prj file should open--it may prompt you to name the path, if the path taken on the two computers are not identical.

SAMPLE 4

FINDING DATA AND NAMES IN ATLAS

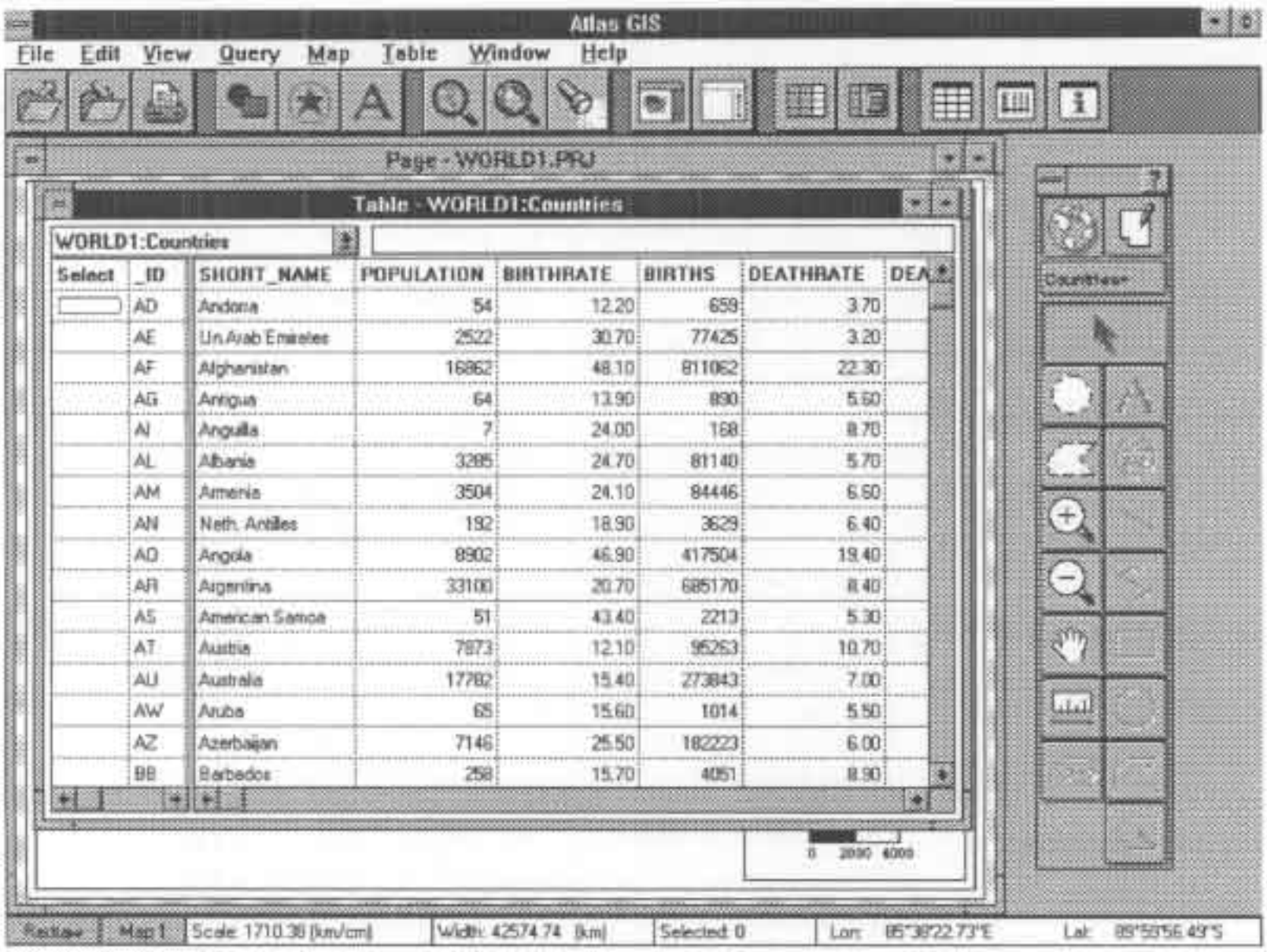
1. You may wish to find out data about a particular location. If so, "select" the country by clicking on it. A selected region is striped.

2. Then click on the "I" (for information) button on the right end of the horizontal tool bar. An information window will pop-up displaying whatever is available in the Atlas database about that region. In the figure below, assume Australia has been selected--if you have trouble selecting it at the global scale, zoom in on it. Notice the information window--scroll down in it to see what else is available.



3. This set of data is selected from the underlying data base. To view the data base as a table, pull down the window menu from the top bar and select "table". Then, another window pops up. There is likely to be only one choice that is reasonable (not grid). Highlight it and say ok. Then a window similar to the one below will appear, displaying data for every country in the data base. Scroll through it, both horizontally and vertically to get a full view of what is available. Notice that the table is arranged, by default, according to alphabetical order on the column "ID" and not on the column of country names.

4. To move this window out of the way, or to move any other, make sure the window you wish to move is active, and then click on the top blue bar and drag the window to where you want it. It is not easy to display the entire content of the Atlas GIS database as it appears on the screen; thus, it is downloaded into a spreadsheet and printed out for you in the next sample.



5. To find out where a particular country is on the map, whose name you know but whose location you do not know, click in the "select" column of the Table next to its name. Then drag the table out of the way and look for the "selected" (lined) country on the map.

SAMPLE 5

ATLAS GIS DATABASE

1. The Atlas database is quite extensive; it deals mainly with population variables. To display it all as on-screen shots is not practical. In this sample, it was downloaded to a spreadsheet--Excel for Windows, v. 5.0--and printed out from there. The data base begins on the next page. It is often helpful to consider the kinds of variables that are already available within Atlas, as one considers a project. International projects are particularly useful; not only do they serve to broaden the horizons of those who share in them (such as students) but they also serve to do so for those who create them (instructors/research scholars). Global thinking is often easy to "zoom-in" on--it is easier to specialize from the general than it is to generalize from the particular. If one masters doing an international study, the concepts learned will generally serve very well to guide a more local project. Please consider this database both for what it does offer and what it does not offer that might be supplemented with data from elsewhere.

ATLAS GIS DATA BASE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	_ID	_NAME	_NAME2	SHORT_	_AREA	_LENGTH	POPULAT	BIRTHRA	BIRTHS	DEATHRA	DEATHS	INCR_RA	INCREAS	DOUBLET	POP_201	POP_202	INF_DTH	INF_DEA	FERTILIT	YOUNG_	YOUNG_
2	AD	Andorra	Andorra	Andorra	408.542	94.8633	54	12.2	659	3.7	200	0.85	459	81.55	72	78	3.2	2	1.28	17.5	9
3	AE	United Ara	Al Ittihad a	Un.Arab E	134518	2197.077	2522	30.7	77425	3.2	8070	2.75	69355	25.21	4873	6587	25	1936	4.9	34.6	873
4	AF	Afghanista	Afghanest	Afghanista	823605	5025.47	16862	48.1	811062	22.3	376023	2.58	435040	26.87	34454	48546	172	139503	6.9	46.1	7773
5	AG	Antigua an	Antigua an	Antigua	218.642	56.792	64	13.9	890	5.6	358	0.83	531	83.51	74	81	24.4	22	1.66	26.9	17
6	AI	Anguilla	Anguilla	Anguilla	7.26942	12.9891	7	24	168	8.7	61	1.53	107	45.3	8	8	18.2	3	3.15	32	2
7	AL	Albania	Shqiperi	Albania	40596.9	949.103	3285	24.7	81140	5.7	18725	1.9	62415	36.48	3904	4461	30.8	2499	2.96	32.8	1077
8	AM	Armenia	Hayastan	Armenia	38577.3	1241.47	3504	24.1	84446	6.6	23126	1.75	61320	39.61	4471	5027	35	2956	2.913	30.4	1065
9	AN	Netherlan	Nederland	Neth. Antil	613.966	202.54	192	18.9	3629	5.4	1239	1.25	2400	55.45	215	229	6.3	23	2.07	26.1	50
10	AO	Angola	Angola	Angola	1.42E+06	6684.098	8902	46.9	417504	19.4	172699	2.75	244805	25.21	14904	21557	132	55111	6.35	44.8	3988
11	AR	Argentina	Argentina	Argentina	3.60E+06	13906.6	33100	20.7	685170	8.4	278040	1.23	407130	56.35	40193	45505	25.7	17609	2.74	30.3	10029
12	AS	American	American	American	505.49	122.302	51	43.4	2213	5.3	270	3.81	1943	18.19	85	86	10.5	23	5.1	41.1	21
13	AT	Austria	Osterreich	Austria	120282	2009.61	7873	12.1	95263	10.7	84241	0.14	11022	495.11	8201	8199	7.4	705	1.49	17.4	1370
14	AU	Australia	Australia	Australia	9.31E+06	23950.8	17782	15.4	273843	7	124474	0.84	149369	82.52	21500	23900	8	2191	1.91	21.9	3894
15	AW	Aruba	Aruba	Aruba	136.873	62.3243	65	15.6	1014	5.5	358	1.01	657	68.63	72	74	9	9	1.84	23.7	15
16	AZ	Azerbaijan	Azarbayja	Azerbaijan	124553	2772.2	7146	25.5	182223	6	42876	1.95	139347	35.55	9504	11420	45	8200	2.667	32.8	2344
17	BB	Barbados	Barbados	Barbados	446.181	87.9028	258	15.7	4051	8.9	2296	0.68	1754	101.93	275	291	9	36	1.79	24.7	64
18	BD	Banglades	Banglades	Banglades	170946	3174.2	111445	36.5	4067743	12.9	1437641	2.36	2630102	29.37	165099	211625	120	488129	4.9	43.8	48813
19	BE	Belgium	Belgie	Belgium	39868.4	980.387	10041	12.6	126517	10.6	106435	0.2	20082	346.57	9713	9281	7.9	999	1.62	18.1	1817
20	BF	Burkina F	Burkina F	Burkina F	283593	2742.88	9567	50.1	479307	16.7	159769	3.34	319538	20.75	17003	28006	121.4	58188	7.18	47.5	4544
21	BG	Bulgaria	Bulgarija	Bulgaria	153812	1968.36	8866	11.7	103732	12.1	107279	-0.04	546	-1732.87	8757	8559	14.8	1535	1.74	20.2	1791
22	BH	Bahrain	Al Bahray	Bahrain	436.898	95.5406	531	26.6	14125	3.1	1646	2.35	12479	29.5	817	1048	20	287	3.91	35.4	188
23	BI	Burundi	Burundi	Burundi	29755.2	814.0292	5821	47.3	275333	14.9	86733	3.24	188600	21.39	10075	14910	111	30562	6.95	46.3	2695
24	BJ	Benin	Benin	Benin	129001	1948.37	4995	49.2	245754	18.5	92408	3.07	153347	22.58	8864	12758	87.5	21503	7.1	46.3	2313
25	BK	Bosnia an	Bosna i H	Bosnia	51505.3	1128.02	4213	14.1	59403	6.4	26963	0.77	32440	90.02	4384	4335	15.2	903	1.7	27.9	1175
26	BM	Bermuda	Bermuda	Bermuda	111.84	56.5998	61	15.2	927	7.7	470	0.75	458	92.42	70	78	6.6	6	1.79	20.1	12
27	BN	Brunei	Brunei Dar	Brunei	7746.16	531.809	275	27.8	7645	3.3	908	2.45	6738	28.29	402	522	9	69	3.52	36	99
28	BO	Bolivia	Bolivia	Bolivia	1.26E+06	5918.86	7802	36.1	281652	9.6	74899	2.65	206753	26.16	11264	14208	89	25067	4.9	41.1	3207
29	BR	Brazil	Brasil	Brazil	9.67E+06	21059.2	150794	26.2	3950803	7.49	1129447	1.871	2821356	37.05	200165	237172	69	272605	3.13	35.2	53079
30	BS	Bahamas	The Baha	Bahamas	13854.7	2163.41	264	19.2	5069	4.5	1188	1.47	3881	47.15	323	354	26.3	133	2.16	30.4	80
31	BT	Bhutan	Druk Yul	Bhutan	48964.3	947.196	683	39.1	26705	19.3	13182	1.98	13523	35.01	1018	1375	142	3792	5.9	39.2	268
32	BU	Burma	Myanmar	Burma	665219	6471.78	42502	29.9	1270810	10.7	454771	1.92	816038	36.1	57720	69861	71.8	91244	3.88	37.3	15853
33	BW	Botswana	Botswana	Botswana	680774	3720.01	1360	39.9	54264	9.18	12485	3.072	41779	22.56	2383	3302	44.6	2420	4.8	44.8	609
34	BY	Byelorussi	Belarus	Byelorussi	308637	2874.8	10263	13.9	142656	10.7	109814	0.32	32842	216.61	11131	11517	20	2853	1.878	23	2360
35	BZ	Belize	Belize	Belize	24277	778.239	229	36.8	8427	5.4	1237	3.14	7191	22.07	337	414	31.7	267	4.49	44.6	102
36	CA	Canada	Canada	Canada	1.64E+07	116144	27352	15.1	413015	7.3	199670	0.78	213346	88.87	32125	35000	7.1	2932	1.77	20.98	5738
37	CC	Cocos (Ke	Cocos (Ke	Cocos (Ke	36.5984	53.8651	1	19.8	20	3.3	3	1.65	17	42.01	1	1			0	33.6	0
38	CF	Central Afr	Republiqu	Cen. Afr.	703379	4471.31	3154	44.1	139091	18.3	57718	2.58	81373	26.87	4906	6897	140.5	19542	5.63	42.1	1328
39	CG	Congo	Congo	Congo	403861	3955.67	2377	43.1	102449	13.6	32803	2.93	69646	23.66	3884	5476	113.6	11638	5.81	44.5	1058
40	CH	Switzerlan	Schweiz	Switzerlan	58520.2	1293.82	6868	12.5	85850	9.5	65246	0.3	20604	231.05	6850	6881	6.8	584	1.59	15.8	1085
41	CI	Ivory Coas	Cote D'Ivoi	Ivory Coas	374110	3198.6	12951	50	647550	13.9	180019	3.61	467531	19.2	25503	39334	91.5	59251	7.41	47.7	6178
42	CK	Cook Islan	Cook Islan	Cook Islan	232.565	93.1348	18	24.3	437	5.3	95	1.9	342	36.48	20	21	9.3	4	3.23	36.9	7
43	CL	Chile	Chile	Chile	929461	23350.5	13600	23.4	318240	5.8	78880	1.76	239360	39.38	17182	19774	17.1	5442	2.7	30.6	4162
44	CM	Cameroon	Cameroon	Cameroon	525511	4385.6	12658	44	556952	11.8	149364	3.22	407588	21.53	23112	36331	85	47341	6.38	46.3	5861
45	CN	China	Zhongguo	China	1.22E+07	25931.9	1165771	19.68	22942373	6.7	7810666	1.298	15131708	53.4	1420312	1590783	34	780041	2.16	27.7	322919
46	CO	Colombia	Colombia	Colombia	1.29E+06	7336.57	34252	26	890552	6	205512	2	685040	34.66	45645	54196	37	32950	2.9	36.1	12365
47	CR	Costa Ric	Costa Ric	Costa Ric	58925.7	1379.61	3187	27.4	87324	3.8	12111	2.36	75213	29.37	4537	5594	15.3	1336	3.25	36.3	1157
48	CU	Cuba	Cuba	Cuba	135044	3520.073	10846	17.6	190890	6.4	69414	1.12	121475	61.89	12274	12875	11.1	2119	1.86	22.7	2462
49	CV	Cape Verd	Cabo Verd	Cape Verd	3555.5	591.319	403	40.6	16362	7.5	3023	3.31	13339	20.94	651	912	40.5	663	5.43	44.5	179
50	CX	Christmas	Christmas	Christmas	49.1803	38.8721	2	15.8	32	0.9	2	1.49	30	46.52	2	2			0		
51	CY	Cyprus	Kypros (Ki	Cyprus	13544.8	596.932	716	19	13604	8.5	6086	1.05	7518	66.01	829	902	11	150	2.43	26	186
52	DE	Germany	Deutschla	Germany	352074	3612	80556	10.6	853894	11.2	902227	-0.06	334	-1155.25	78197	73701	7.5	6404	1.36	16	12889
53	DJ	Djibouti	Djibouti	Djibouti	23041.2	821.929	433	46.2	20005	17	7361	2.92	12644	23.74	748	1094	117	2341	6.55	45.3	196
54	DK	Denmark	Danmark	Denmark	64026.8	2811.27	5168	12.52	64703	11.6	59949	0.092	4755	753.42	5080	4786	7.5	485	1.67	17.1	884
55	DM	Dominica	Dominica	Dominica	645.369	108.167	87	19.9	1731	7.4	644	1.25	1088	55.45	112	130	18.4	32	2.47	32.7	28
56	DO	Dominican	Republica	Dominican	56509.2	1285.11	7471	29.8	222636	6.5	48562	2.33	174074	29.75	9903	11447	61	13581	3.55	38.8	2899
57	DZ	Algeria	Al Djazair	Algeria	2.82E+06	7848.68	26041	34.9	908831	7	182287	2.79	726544	24.84	37925	47124	61	55439	4.86	43.5	11328
58	EC	Ecuador	Ecuador	Ecuador	284033	3429.83	9996	30.9	308876	6.9	68972	2.4	239904	28.88	14450	17900	57	17606	3.8	40.8	4078
59	EE	Estonia	Eesti	Estonia	59424.2	1729.084	1581	14.2	22450	12.3	19446	0.19	3004	364.81	1701	1790	25	561	2.043	22.3	353

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	_ID	_NAME	_NAME2	SHORT_	_AREA	_LENGTH	POPULAT	BIRTHRA	BIRTHS	DEATHRA	DEATHS	INCR_RA	INCREAS	DOUBLET	POP_201	POP_202	INF_DTH	INF_DEA	FERTILIT	YOUNG_	YOUNG_
60	EG	Egypt	Misr	Egypt	1.21E+06	5908.73	55680	31.5	1753920	7.1	395328	2.44	1358592	28.41	81288	103115	73.1	128212	4.38	41.3	22996
61	EH	Western S	Al Sahra a	Western S	323077	3131.98	201	48.6	9769	21.19	4259	2.741	5509	25.29	301	387			0		
62	ES	Spain	Espana	Spain	665990	5492.67	38554	10.2	393251	8.6	331564	0.16	61686	433.22	40095	39261	7.6	2989	1.33	19.7	7595
63	ET	Ethiopia	Yeitop'iya	Ethiopia	1.42E+06	6249.81	54270	47.3	2566971	19.5	1058265	2.78	1508706	24.93	93970	140172	139	356809	7.5	45.8	24856
64	EZ	Czech Re	Ceske Ze	Czech Re	79931.8	1405.6	10299	12.6	129767	12.1	129156	0.1	10299	693	10900	11100	10.4	1350	1.89	21.2	2183
65	FI	Finland	Suomi	Finland	584810	4897.44	5028	13.2	66370	10.1	50783	0.31	15587	223.6	5023	4817	5.8	385	1.79	19.3	970
66	FJ	Fiji	Fiji	Fiji	18846.7	1009.094	750	26.7	20025	7	5250	1.97	14775	35.19	933	1085	20	401	3.14	38.2	287
67	FK	Falkland I	Falkland I	Falkland I	22395.4	2039.51	2	7.5	15	11.7	23	-0.42	0	-165	2	2			0		
68	FM	Micronesi	Micronesi	Micronesi	331.836	131.194	115	29.48	3390	6.8	782	2.268	2608	30.56	141	143	41	139	4.2		
69	FO	Faroe Isla	Foroyar	Faroe Isla	1852.06	472.455	49	19.7	965	7.8	382	1.19	583	58.25	55	60	16.1	16	2.74	24.7	12
70	FR	France	France	France	757377	5645.091	56876	13.4	762138	9.3	528947	0.41	233192	169.06	58766	58613	7.3	5564	1.8	20.1	11432
71	GA	Gabon	Gabon	Gabon	268782	2756.54	1106	41.4	45788	16.4	18138	2.5	27650	27.73	1445	1800	98.5	4510	5.17	33.3	368
72	GB	Britain	Britain	Britain	358357	8571.41	57763	13.9	802906	11.2	646946	0.27	155960	256.72	59910	60974	7.9	6343	1.84	19	10975
73	GD	Grenada	Grenada	Grenada	160.295	60.07111	84	33	2772	8.1	680	2.49	2092	27.84	96	129	15.9	44	4.86	43.3	36
74	GE	Georgia	Sakart'vel	Georgia	95365.3	1910.37	5476	17.3	94735	8.6	47094	0.87	47641	79.67	6117	6523	33	3126	2.213	24.8	1358
75	GF	French Gu	Guiane Fr	French Gu	92047.5	1271.56	105	27.9	2930	5.7	599	2.22	2331	31.22	163	208	22.2	65	3.7	34	36
76	GH	Ghana	Ghana	Ghana	259658	4517.21	16009	44	704396	12.5	200113	3.15	504284	22	26931	35442	85.5	60226	6.4	45.4	7268
77	GI	Gibraltar	Gibraltar	Gibraltar	2.51989	7.86485	30	17.2	516	9	270	0.82	246	84.53	30	30			2.4	23.8	7
78	GL	Greenland	Kalaallit N	Greenland	4.68E+06	32739.9	57	21.8	1243	8.2	467	1.36	775	50.97	66	72	21.5	27	2.22	26	15
79	GM	Gambia	The Gamb	Gambia	13209	850.906	909	46.2	41996	20.5	18635	2.57	23361	26.97	1573	2382	137.5	5774	6.34	43.8	398
80	GN	Guinea	Guinee	Guinea	282001	3526.64	7784	47	365848	21.8	169691	2.52	196157	27.51	11615	16081	147.6	53999	6.07	44	3425
81	GO	Golan Hei	Har Golan	Golan Hei	2565.84	238.522															
82	GP	Guadelou	Guadelou	Guadelou	1485.056	195.598	389	20	7780	6.1	2373	1.39	5407	49.87	426	445	9.9	77	2.35	27.3	106
83	GQ	Equatorial	Guinea Ec	Equat. Gui	28821	928.968	367	42.5	15598	16.2	5945	2.63	9652	26.36	580	826	111.9	1745	5.49	42.6	156
84	GR	Greece	Ellas	Greece	170272	6448.73	10304	9.9	102010	9.2	94797	0.07	7213	990.21	10407	9975	10	1020	1.45	19.2	1978
85	GT	Guatemal	Guatemal	Guatemal	125294	1826.043	9710	38.6	374806	7.2	69912	3.14	304894	22.07	15770	21590	60.7	22751	5.2	45.4	4408
86	GU	Guam	Guam	Guam	403.872	90.8242	142	26.5	3763	3.8	540	2.27	3223	30.54	202	296	11.9	45	2.5	34.9	50
87	GW	Guinea-Bi	Guinea-Bi	Guinea-Bi	39980.07	1265.78	1003	42.9	43029	23	23069	1.99	19960	34.83	1488	1914	151	6497	5.79	40.9	410
88	GY	Guyana	Guyana	Guyana	232899	2622.16	805	25.4	20447	7.45	5997	1.795	14450	38.62	1005	1156	52	1063	2.6	33.4	269
89	GZ	Gaza Strip	Al Qeta' al	Gaza Strip	662.371	113.198	694	54.6	37892	9	6246	4.56	31646	15.2	1256	1889	45	1705	0		
90	HK	Hong Kon	Hong Kon	Hong Kon	841.113	216.703	5748	11.9	68401	4.88	28050	0.702	40351	98.74	6267	6220	6.7	458	1.22	21	1207
91	HN	Honduras	Honduras	Honduras	130644	1827.91	5462	39.8	217388	8.1	44242	3.17	173145	21.87	8668	11510	69	15000	5.6	45.6	2491
92	HR	Croatia	Hrvatska	Croatia	53698.5	2313.33	4550	11.9	54145	11.4	51870	0.05	2275	1386.29	4817	4835	10	541	1.67	21	956
93	HT	Haiti	Haiti	Haiti	33346.6	1428.079	6432	44.6	286867	15.6	100339	2.9	186528	23.9	9421	12278	105.7	30322	6	44.5	2862
94	HU	Hungary	Magyarors	Hungary	129928	1695.98	10331	12.2	126038	13.8	142568	-0.16	530	-433.22	10477	10418	15.4	1941	1.8	19.9	2056
95	ID	Indonesia	Indonesia	Indonesia	2.10E+06	36636.7	184475	25.7	4741008	8.4	1549590	1.73	3191418	40.07	238830	278190	70.2	332819	3.02	37	68256
96	IE	Ireland	Eire	Ireland	101350	2422.98	3532	14.9	52627	9.2	32494	0.57	20132	121.6	3413	3316	8	421	2.17	27.4	968
97	IL	Israel	Yisra'el	Israel	29012.9	1318.58	5233	21.4	111986	6.1	31921	1.53	80065	45.3	6879	7994	8.7	974	2.91	31	1622
98	IN	India	Bharat	India	3.79E+06	16891.5	882575	30.4	26830280	10.2	9002265	2.02	17828015	34.31	1172101	1383115	91	2441555	3.86	35.8	315962
99	IQ	Iraq	Al 'Iraq	Iraq	436773	3174.64	18223	45	820035	8.4	153073	3.66	666962	18.94	34096	51931	67	54942	7	44.5	8109
100	IR	Iran	Iran	Iran	2.08E+06	7932.7	59651	41.4	2469551	8	477208	3.34	1992343	20.75	104980	159173	43	106191	6.12	45.5	27141
101	IS	Iceland	Island	Iceland	176563	4358.44	260	18.7	4862	6.7	1742	1.2	3120	57.76	272	275	5.9	29	2.31	26.2	68
102	IT	Italy	Italia	Italy	409444	6575.56	58026	9.8	568655	9.3	539642	0.05	29013	1386.29	56411	51926	8.6	4890	1.31	16.7	9690
103	JM	Jamaica	Jamaica	Jamaica	12836.7	531.623	2507	24.6	61672	5	12535	1.96	49137	35.36	3110	3588	17	1048	2.63	33.9	850
104	JO	Jordan	Al Urdun	Jordan	113509	1845.88	3557	39.3	139790	5.4	19208	3.39	120582	20.45	6395	9194	39	5452	5.6	48.1	1711
105	JP	Japan	Nippon	Japan	496093	11273.8	124366	9.9	1231223	6.7	833252	0.32	397971	216.61	129447	124137	4.6	5664	1.53	17.7	22013
106	KE	Kenya	Kenya	Kenya	644706	3831.04	26164	45.2	1182613	8.7	227627	3.65	954986	18.99	44820	62275	62	73322	6.7	49.3	12899
107	KG	Kirghizia	Kyrgyzsta	Kirghizia	280837	3658.76	4506	29.3	132026	7	31542	2.23	100484	31.08	6607	8707	35	4621	3.67	37.4	1685
108	KH	Cambodia	Kampuche	Cambodia	206193	2181.94	9054	38.3	346768	16.3	147580	2.2	199188	31.51	10467	13435	127	44040	4.5	35.7	3232
109	KI	Kiribati	Kiribati	Kiribati	711.711	247.941	75	33.6	2520	12.5	938	2.11	1583	32.85	95	99	100	252	4	41.1	31
110	KM	Comoros	Al Qumur	Comoros	1859.89	344.992	494	47.6	23514	12.4	6126	3.52	17389	19.69	919	1432	88.5	2081	7.05	47.6	235
111	KN	Saint Chri	Saint Kitts	St. Kitts	172.509	52.5029	40	22.5	900	11	440	1.15	460	60.27	48	56	22.2	20	2.53	32.1	13
112	KP	North Kor	Puk'an (C	North Kor	159420	2468.52	22227	24.1	535671	5.6	124471	1.85	411200	37.47	28491	32089	31.3	16766	2.5	29.4	6535
113	KR	South Kor	Namhan (	South Kor	122717	2203.71	44284	16.4	726258	5.8	256847	1.06	469410	65.39	51727	54832	15	10894	1.6	25.9	11470
114	KW	Kuwait	Al Kuwait	Kuwait	19133.4	698.435	1379	32.1	44266	2.3	3172	2.98	41094	23.26	3220	4574	16	708	4.4	45.1	622
115	KY	Cayman Is	Cayman Is	Cayman Is	352.698	115.438	31	17.9	555	4	124	1.39	431	49.87	65	113	6	3	3.8	29	9
116	KZ	Kazakhsta	Qazaqsta	Kazakhsta	3.89E+06	16548.6	16947	21.7	367750	7.7	130492	1.4	237258	49.51	21898	26805	44	16181	2.653	31.9	5406
117	LA	Laos	Laos	Laos	268968	3700.57	4440	45.7	202908	16.7	74148	2.9	128760	23.9	7168	9805	112	22726	6.8	44.2	1962

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	ID	NAME	NAME2	SHORT_	AREA	LENGTH	POPULAT	BIRTHRA	BIRTHS	DEATHRA	DEATHS	INCR_RA	INCREAS	DOUBLET	POP_201	POP_202	INF_DTH	INF_DEA	FERTILIT	YOUNG_	YOUNG_
118	LB	Lebanon	Al Lubnan	Lebanon	15664.3	726.303	3439	27.8	95604	7	24073	2.08	71531	33.32	4904	6056	46	4398	3.7	40.2	1382
119	LC	Saint Luci	Saint Luci	Saint Luci	340.46	85.3333	156	23.2	3619	5.8	905	1.74	2714	39.84	213	263	20.8	75	3.3	44.4	69
120	LI	Liechtenst	Liechtenst	Liechtenst	772.845	111.833	30	13.1	393	6.8	204	0.63	189	110.02	31	31	2.7	1	1.44	19.8	6
121	LK	Sri Lanka	Sri Lanka	Sri Lanka	75784.05	1231.24	17632	21.3	375562	6.2	109318	1.51	266243	45.9	21435	24028	19.4	7286	2.44	35.3	6224
122	LO	Slovakia	Slovensko	Slovakia	48824.2	1090.009	5269	14.9	78508	10.4	54554	0.5	26345	154	5900	6025	13.2	1036	2.06	25.1	1323
123	LR	Liberia	Liberia	Liberia	108598	1791.78	2777	47	130519	15	41655	3.2	88864	21.66	5530	8255	144	18795	6.8	45.9	1275
124	LS	Lesotho	Lesotho	Lesotho	41354.2	773.0887	1880	40.5	76140	11.7	21996	2.88	54144	24.07	3138	4427	94.5	7195	5.79	42.9	807
125	LT	Lithuania	Lietuva	Lithuania	99254.5	1482.45	3738	15.1	56414	10.7	39975	0.44	16438	157.53	4119	4361	18	1015	1.982	22.7	848
126	LU	Luxembou	Luxembou	Luxembou	3581.25	236.0323	388	12.9	5005	10	3880	0.29	1125	239.02	408	419	7.4	37	1.62	17.3	67
127	LV	Latvia	Latvija	Latvia	98382	1720.95	2702	14	37828	12.9	34856	0.11	2972	630.13	2858	2987	19	719	1.975	21.4	578
128	LY	Libya	Al Libya	Libya	1.98E+06	6596.65	4485	36.9	165497	6.5	29153	3.04	136344	22.8	7067	9285	64.1	10608	5.19	49.7	2229
129	MA	Morocco	Al Maghre	Morocco	490427	3976.56	26167	32.6	853044	8.3	217186	2.43	635858	28.52	36045	43863	73	62272	4.2	40.6	10624
130	MC	Monaco	Monaco	Monaco	6.19418	18.4417	30	19.6	588	16.6	498	0.3	90	231.05	34	37	3.8	2	0	11.9	4
131	MD	Moldavia	Moldova	Moldavia	44781.9	1142.85	4372	17.6	76947	9.7	42408	0.79	34539	87.74	5171	5758	35	2693	2.323	27.9	1220
132	MG	Madagasc	Madagasik	Madagasc	687778	4718.21	11942	45.4	542167	13.3	158829	3.21	383338	21.59	21292	31727	115	62349	6.55	46.5	5553
133	MH	Marshall I	Marshall I	Marshall I	3375.87	514.192	50	48	2400	8.7	435	3.93	1965	17.64	100	171	54	130	7.13	51.1	26
134	ML	Mali	Mali	Mali	1.48E+06	7162.89	8538	51.8	442268	22.2	189544	2.96	252725	23.42	14226	21665	113.2	50065	7.33	47.4	4047
135	MN	Mongolia	Mongol Ar	Mongolia	2.19E+06	8211.57	2252	36.1	81297	8.3	18692	2.78	62606	24.93	3462	4584	63.9	5195	4.63	44.2	995
136	MO	Macao	Macau	Macao	9.026195	13.7529	474	16.7	7916	3.4	1612	1.33	6304	52.12	555	587	10.3	82	1.53	25.2	119
137	MP	Northern	Northern	N. Marian	128.49	83.8836	47	35.1	1650	4.6	216	3.05	1434	22.73	71	93	38	63	2.69	45.9	22
138	MQ	Martinique	Martinique	Martinique	960.896	139.449	370	17.8	6586	6.1	2257	1.17	4329	59.24	437	488	9.4	62	1.95	22.1	82
139	MR	Mauritania	Mauritaniy	Mauritania	1.19E+06	5781.078	2103	46.1	96948	18.3	38485	2.78	58463	24.93	3546	5026	122	11828	6.5	44.4	934
140	MS	Montserrat	Montserrat	Montserrat	124.586	44.5772	13	17.6	229	9.7	126	0.79	103	87.74	13	13	11.2	3	2.29	28	4
141	MT	Malta	Malta	Malta	238.0805	70.02029	361	15.2	5487	7.7	2780	0.75	2708	92.42	396	403	11.3	62	2.03	23.3	84
142	MU	Mauritius	Mauritius	Mauritius	1820.4	174.72	1094	21	22974	6.5	7111	1.45	15863	47.8	1268	1365	20.4	469	2.17	30	328
143	MV	Maldives	Divehi Raj	Maldives	60.4975	68.1211	222	40.52	8995	6.4	1421	3.412	7575	20.31	401	591	33.6	302	5.82	47	104
144	MW	Malawi	Malawi	Malawi	107257	2784.087	8709	52.7	458964	18.1	157633	3.46	301331	20.03	14915	23138	137.4	63062	7.72	47.8	4163
145	MX	Mexico	Mexico	Mexico	2.34E+06	14194.5	87715	29	2543735	5.8	508747	2.32	2034988	29.88	119513	143287	46.9	119301	3.84	38.3	33595
146	MY	Malaysia	Malaysia	Malaysia	369907	5588.72	18742	30	562260	4.7	88087	2.53	474173	27.4	27067	34889	29.3	16474	3.61	37	6935
147	MZ	Mozambiq	Mocambiq	Mozambiq	887603	7133.52	16617	44.5	739457	17.8	295783	2.67	443674	25.96	26605	35615	136	100566	6.3	43.9	7295
148	NA	Namibia	Namibia	Namibia	1.00E+06	5535.9	1452	42.8	62146	11.4	16553	3.14	45593	22.07	2898	4081	102	6339	5.9	45.5	661
149	NC	New Cale	Nouvelle-	New Cale	20361.5	1110.4	176	23.7	4171	5.9	1038	1.78	3133	38.94	230	267	18	75	2.8	32.9	58
150	NE	Niger	Niger	Niger	1.38E+06	5777.56	8319	52	432588	20.4	169708	3.16	262880	21.94	15135	24290	124	53641	7.1	49.1	4085
151	NF	Norfolk Isl	Norfolk Isl	Norfolk Isl	480.982	97.817	2	10.8	22	7.6	15	0.32	6	216.61	2	2			0	19.1	0
152	NG	Nigeria	Nigeria	Nigeria	1.01E+06	4641.4	90122	46.1	4154624	16.4	1478001	2.97	2676623	23.34	152200	216200	114	473627	6.5	45	40555
153	NI	Nicaragua	Nicaragua	Nicaragua	137528	2138.26	4096	38.3	156877	7.7	31539	3.06	125338	22.65	6443	8249	61.4	9632	4.95	47.2	1933
154	NL	Netherlan	Nederland	Netherlan	44212	1890.81	15193	13.3	202067	8.6	130660	0.47	71407	147.48	16550	16691	6.8	1374	1.63	18.3	2780
155	NO	Norway	Norge	Norway	525919	15062.5	4276	14.4	61574	10.8	46181	0.36	15394	192.54	4544	4656	6.9	425	1.93	18.9	808
156	NP	Nepal	Nepal	Nepal	182891	2457.52	19851	41.6	825802	16.6	329527	2.5	496275	27.73	30239	40833	112	92490	6.1	41.9	8318
157	NR	Nauru	Naoero	Nauru	84.5675	39.7379	9	19.9	179	5.1	46	1.48	133	46.83	11	12	41	7	2.3		
158	NU	Niue	Niue	Niue	300.151	77.0237	3	20.9	63	5.4	16	1.55	47	44.72	3	3			0	38.4	1
159	NZ	New Zeala	New Zeala	New Zeala	361020	7989.79	3433	17.53	60180	7.7	26434	0.983	33746	70.51	3844	3989	7.6	454	2.12	22.8	783
160	OM	Oman	'Uman	Oman	360877	3280.24	1588	41.6	66061	6.5	10322	3.51	55739	19.75	2991	4871	44	2907	6.7	47.2	750
161	PA	Panama	Panama	Panama	84407.3	2403.82	2431	23.9	58101	5.2	12641	1.87	45460	37.07	3214	3735	21	1220	2.87	34.8	846
162	PE	Peru	Peru	Peru	1.47E+06	7534.96	22454	31	696074	9	202086	2.2	493988	31.51	31047	37350	76	52902	4	39.4	8847
163	PF	French Po	Polynesie	French Po	2906.25	812.685	206	27.9	5747	5.3	1092	2.26	4656	30.67	294	368	16	92	3.4	36.8	76
164	PG	Papua Ne	Papua Ne	Papua Ne	511655	7885.16	3860	33.8	130468	11.1	42846	2.27	87622	30.54	5708	7319	99	12916	5.4	40.1	1548
165	PH	Philippine	Pilipinas	Philippine	323851	11829	63667	31.8	2024611	7.4	471136	2.44	1553475	28.41	85542	100845	54.2	109734	4.1	38.6	24575
166	PK	Pakistan	Pakistan	Pakistan	1.09E+06	7339.31	121665	43.7	5316761	13.2	1605978	3.05	3710783	22.73	195109	281439	109	579527	6.1	43.8	53289
167	PL	Poland	Polska	Poland	464921	3071.28	38377	14.3	548791	10.6	406796	0.37	141995	187.34	41332	42733	15.9	8726	2.04	24.9	9556
168	PM	Saint Pierr	Saint Pierr	Saint Pierr	315.879	92.1582	6	21.3	128	9.7	58	1.16	70	59.75	7	8			2.76	27	2
169	PN	Pitcairn Isl	Pitcairn Isl	Pitcairn Isl	55.4229	44.1297	0	19.2	1	19.2	1	0	0	0	0	0			0	25	0
170	PR	Puerto Ric	Puerto Ric	Puerto Ric	9769.6	412.587	3721	19.1	71071	7.4	27535	1.17	43536	59.24	3933	4224	14.3	1016	2.16	28.8	1072
171	PT	Portugal	Portugal	Portugal	122021	2514.96	10481	11.2	117387	9.9	103762	0.13	13625	533.19	10815	10537	11	1291	1.43	20.9	2191
172	PW	Palau	Belau	Palau	432.508	106.377	16	23.7	379	6.6	106	1.71	274	40.53	20	21	25	9	3.1		
173	PY	Paraguay	Paraguay	Paraguay	478789	3350.074	4519	33.9	153194	6.5	29374	2.74	123821	25.3	6928	9182	34	5209	4.7	40.4	1826
174	QA	Qatar	Al Qafar	Qatar	12742.8	490.402	483	26.9	12993	2.1	1014	2.48	11978	27.95	736	919	26	338	4.5	27.8	134
175	RE	Reunion	Reunion	Reunion	2843.37	213.68	618	23.8	14708	5.7	3523	1.81	11186	38.3	777	889	13	191	2.27	32.6	201

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	_ID	_NAME	_NAME2	SHORT_	_AREA	_LENGTH	POPULAT	BIRTHRA	BIRTHS	DEATHRA	DEATHS	INCR_RA	INCREAS	DOUBLET	POP_201	POP_202	INF_DTH	INF_DEA	FERTILIT	YOUNG_	YOUNG_
176	RO	Romania	Romania	Romania	336769	2798.001	23188	11.8	273618	10.6	245793	0.12	27826	577.62	23950	24425	25.7	7032	1.59	23.3	5403
177	RU	Russia	Rossija	Russia	2.83E+07	95943.8	149299	13.5	2015537	11.2	1672149	0.23	343388	301.37	162339	170715	30	60466	1.864	23.1	34488
178	RW	Rwanda	Rwanda	Rwanda	26061.4	758.928	7718	50.6	390531	16.4	126575	3.42	263956	20.27	14443	23231	117	45692	8	48	3705
179	SA	Saudi Ara	Al 'Arabiya	Saudi Ara	1.94E+06	7065.9	16057	42	674394	7.1	114005	3.49	560389	19.86	31086	47067	65	43836	7.1	45.3	7274
180	SB	Solomon I	Solomon I	Solomon I	25109.05	2544.37	360	40.7	14652	5.2	1872	3.55	12780	19.53	620	840	32	469	6.3	47.4	171
181	SC	Seychelle	Seychelle	Seychelle	246.734	102.168	71	24	1704	8.1	575	1.59	1129	43.59	80	89	13	22	2.57	35.1	25
182	SD	Sudan	As Sudan	Sudan	2.85E+06	7863.8	26477	44.8	1186170	13.5	357440	3.13	828730	22.15	42164	57255	86.5	102604	6.47	46	12179
183	SE	Sweden	Sverige	Sweden	745106	7266.085	8669	14.3	123967	11	95359	0.33	28608	210.04	8910	9024	6	744	2.11	18.1	1569
184	SG	Singapore	Singapura	Singapore	681.74	100.55	2765	18.5	51153	4.8	13272	1.37	37881	50.59	3174	3344	6.7	343	1.83	23.3	644
185	SH	Saint Hele	Saint Hele	Saint Hele	148.261	48.1468	7	14.1	99	8.5	60	0.56	39	123.78	7	7	25.6	3	1.27	27.7	2
186	SI	Slovenia	Slovenija	Slovenia	22324.6	1228.24	1925	12.5	24063	9.9	19058	0.26	5005	266.6	2141	2238	8.9	214	1.64	23.2	447
187	SJ	Svalbard a	Svalbard o	Svalbard	157696	9676.87															
188	SL	Sierra Leo	Sierra Leo	Sierra Leo	81290.7	1395.49	4436	48.1	213372	22.5	99810	2.56	113562	27.08	7275	10189	147	31366	6.5	44.1	1956
189	SM	San Marin	San Marin	San Marin	101.326	43.684	24	11.5	276	6.7	161	0.48	115	144.41	26	27	3.8	1	1.31	16.7	4
190	SN	Senegal	Senegal	Senegal	229727	2994.48	7947	44.7	355231	16.9	134304	2.78	220927	24.93	13064	17433	83.5	29662	6.34	45.5	3616
191	SO	Somalia	Soomaaliy	Somalia	713344	6024.68	8325	48.5	403763	19.2	159840	2.93	243923	23.66	13868	17777	127	51278	6.6	46.3	3854
192	SR	Surinam	Suriname	Surinam	166031	1743.9	437	26.3	11493	5.9	2578	2.04	8915	33.98	564	664	31	356	2.8	34	149
193	ST	Sao Tome	Sao Tome	Sao Tome	1370.74	191.254	127	35	4445	10.2	1295	2.48	3150	27.95	221	295	71.9	320	5.37	42.4	54
194	SV	El Salvado	El Salvado	El Salvado	22428.5	678.364	5574	36.2	201779	7.7	42920	2.85	158859	24.32	7806	9648	55	11098	4.6	43.5	2425
195	SY	Syria	As Suriya	Syria	239644	2527.51	13730	45.2	620596	7	96110	3.82	524486	18.15	25642	38730	48	29789	7.1	49.3	6769
196	SZ	Swaziland	Swaziland	Swaziland	18189.9	539.238	825	44.3	36548	12.4	10230	3.19	26318	21.73	1513	2191	100.6	3677	6.24	46	380
197	TC	Turks and	Turks and	Turks and	787.0544	207.254	13	17.4	226	5.2	68	1.22	159	56.82	16	18	12.9	3	2.59	41.4	5
198	TD	Chad	Tchad	Chad	1.47E+06	6010.78	5239	43.8	229468	18.7	97969	2.51	131499	27.62	7680	10329	127	29142	5.84	43	2253
199	TG	Togo	Togo	Togo	68529.2	1543.82	3814	50	190700	13.1	49963	3.69	140737	18.78	7130	11283	98.5	18784	7.17	48.8	1861
200	TH	Thailand	Muang Th	Thailand	580307	6436.6	56340	20.3	1143702	5.98	336913	1.432	806789	48.4	69164	76403	38.8	44376	2.4	34	19156
201	TJ	Tadzhikist	Tojikistan	Tadzhikist	198486	3243.24	5527	38.4	212237	6.2	34267	3.22	177969	21.53	9053	12188	73	15493	5.042	42.9	2371
202	TK	Tokelau	Tokelau	Tokelau	54.2309	32.1214	2	21.9	44	5	10	1.69	34	41.01	2	2					
203	TM	Turkmenis	Turkmenis	Turkmenis	656878	5710.22	3856	34.1	131490	7	26992	2.71	104498	25.58	5538	6813	93	12229	4.161	40.6	1566
204	TN	Tunisia	Tunis	Tunisia	195627	2617.1	8424	27.2	229133	6.4	53914	2.08	175219	33.32	11304	13440	44	10082	3.38	37.9	3193
205	TO	Tonga	Tonga	Tonga	559.224	112.391	103	28.9	2977	3.5	361	2.54	2616	27.29	119	133	24	71	4.2	40.9	42
206	TR	Turkey	Turkiye	Turkey	1.03E+06	7295.24	59245	29.3	1735879	7.4	438413	2.19	1297466	31.65	81248	98090	59	102938	3.64	35.47	21014
207	TT	Trinidad a	Trinidad a	Trinidad	5593.14	463.881	1263	20.7	26144	6.8	8588	1.39	17556	49.87	1540	1724	10.2	267	2.47	33.7	426
208	TV	Tuvalu	Tuvalu	Tuvalu	103.819	43.8858	9	29.8	268	9.9	89	1.99	179	34.83	12	15	33	9	3.1	35	3
209	TW	Taiwan	T'ai-wan	Taiwan	42854.4	943.527	20830	16.3	339529	5.1	106233	1.12	233296	61.89	24035	25367	5.2	2105	1.68	27.1	5645
210	TZ	Tanzania	Tanzania	Tanzania	1.02E+06	5441.44	27432	50	1371600	15.2	416966	3.48	954634	19.92	50150	77870	104.9	143881	7.09	48.3	13250
211	UA	Ukraine	Ukrayina	Ukraine	871796	6289.077	52103	12.7	661708	12.1	630446	0.06	31262	1155.25	53277	52925	22	14558	1.886	21.5	11202
212	UG	Uganda	Uganda	Uganda	235078	2304.81	17477	51.9	907056	15.1	263903	3.68	643154	18.84	32456	49624	95.7	86805	7.35	49	8564
213	UM-00	Baker Isla	Baker Isla	Baker Isla	5.18662	14.02207	0								0	0					
214	UM-01	Jarvis Isla	Jarvis Isla	Jarvis Isla	1054.052	179.105	0								0	0					
215	UM-02	Palmyra A	Palmyra A	Palmyra A	9.18162	17.78	0								0	0					
216	UM-AT	Johnston	Johnston	Johnston	47.4546	27.801	1								1	1					
217	UM-IY	Midway Isl	Midway Isl	Midway Isl	132.965	47.2533	2								2	2					
218	UM-WK	Wake Isla	Wake Isla	Wake Isla	44.9023	57.752	2								2	2	32				
219	US	United Sta	United Sta	United Sta	1.29E+07	57629.2	255570	16.3	4165791	8.5	2172345	0.78	1993446	88.87	295502	327489	9	37492	2.01	21.54	55050
220	UY	Uruguay	Uruguay	Uruguay	225182	1956.64	3131	18.3	57297	9.9	30997	0.84	26300	82.52	3453	3691	20.4	1169	2.4	25.8	808
221	UZ	Uzbekista	Uzbekisto	Uzbekista	560073	6767.83	21301	33.4	711453	6.1	129936	2.73	581517	25.39	32804	43120	64	45533	4.033	40.8	8691
222	VA	Vatican Ci	Citta del V	Vatican Ci	1.5964	5.062543	1	0	0	1	1				1	1			0		
223	VC	Saint Vinc	Saint Vinc	Saint Vinc	121.574	57.5364	115	22.5	2588	6.3	725	1.62	1863	42.79	142	166	21.7	56	2.55	38.2	44
224	VE	Venezuela	Venezuela	Venezuela	1.03E+06	7101.68	18883	29.9	564802	4.65	87806	2.525	476796	27.45	27344	34627	24.2	13663	3.58	38.3	7232
225	VG	British Vir	British Vir	Brit. Virgin	53.2571	43.3191	13	19.5	254	6.1	79	1.34	174	51.73	16	20	20.2	5	2.3	29.5	4
226	VI	U.S. Virgin	U.S. Virgin	U.S. Virgin	162.3	83.4514	99	22.4	2218	5.3	525	1.71	1693	40.53	107	113	19.4	43	2.86	31.7	31
227	VN	Vietnam	Viet Nam	Vietnam	366894	5670.14	69212	30.4	2104045	8	553696	2.24	1550349	30.94	92358	108222	45	94682	3.96	39	26993
228	VU	Vanuatu	Vanuatu	Vanuatu	7975.17	1087.69	175	36.2	6335	4.9	858	3.13	5478	22.15	278	363	32	203	5.4	45.3	79
229	WE	West Ban	Ad Duffah	West Ban	7494.042	445.404	1600	44.1	70560	8.3	13280	3.58	57280	19.36	2362	2980	40	2822	0		
230	WF	Wallis and	Wallis et	Wallis	176.89	52.9712	14	28.2	395	5.7	80	2.25	315	30.81	24	29			3.78		
231	WS	Western S	Samoa i S	Western S	3867.58	405.611	195	34.2	6669	6.6	1287	2.76	5382	25.11	288	367	43	287	4.7	40.4	79
232	YM	Yemen	Al Yaman	Yemen	440676	3311.71	10395	51.2	532224	16.6	172557	3.46	359667	20.03	18985	29949	124	65996	7.47	49.1	5104
233	YO	Mayotte	Mayotte	Mayotte	446.372	95.684	87	50.3	4376	12.4	1079	3.79	3297	18.29	168	270	88.5	387	7.03	48.8	42

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	_ID	_NAME	_NAME2	SHORT_	_AREA	_LENGTH	POPULAT	BIRTHRA	BIRTHS	DEATHRA	DEATHS	INCR_RA	INCREAS	DOUBLET	POP_201	POP_202	INF_DTH	INF_DEA	FERTILIT	YOUNG_	YOUNG
234	YU	Yugoslavi	Jugoslavij	Yugoslavi	101573	1831.75	9965	14.59	145388	9.3	92648	0.529	52741	130.97	10761	10983	24.4	3541	2.077	24.46	2437
235	YU-05	Macedoni	Makedonij	Macedoni	24597.3	603.352	1949	16.9	32938	7	13643	0.99	19295	70.01	2208	2341	35.3	1163	2.09	29.2	569
236	ZA	South Afri	Suid-Afrik	South Afri	1.52E+06	7481.39	41688	34.4	1434067	8	333504	2.64	1100563	26.26	66005	91952	52.3	75002	4.47	39.8	16592
237	ZM	Zambia	Zambia	Zambia	853022	5402.81	8385	50.7	425120	13	109005	3.77	316115	18.39	15515	24185	76	32309	7.2	48.9	4100
238	ZR	Zaire	Zaire	Zaire	2.63E+06	9111.39	37928	45.6	1729517	14.2	538578	3.14	1190939	22.07	65601	98194	83	143550	6.09	42.8	16233
239	ZW	Zimbabwe	Zimbabwe	Zimbabwe	463309	2907.99	10339	40.8	421831	9.8	99254	3.12	322577	22.22	16974	22616	60.5	25521	5.6	44.9	4642

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	_ID	OLD_PCT	OLD_POP	MALE_LIF	FEM_LIFE	URBAN_P	URBAN_P	DATA_AV	CONTRA	MODERN	GOVT_VI	GNP_PER	STATUS	SOV_TYP	UN_MEM	US_DIP_	CONTINE	ISO_ALP	ISO_ALPHA3	
2	AD	10.3	6			94.8	51	-			-		D	Nation	---	Y	EU	AD	AND	
3	AE	0.8	20	69.2	73.45	77.8	1962	C			S	19860	I	Nation	1971	Y	AS	AE	ARE	
4	AF	3.7	624	41	42	17.7	2985	D			H		I	Nation	1946	Y	AS	AF	AFG	
5	AG	6.1	4	70	74	57.5	37	A	53	51	S	4600	I	Nation	---	Y	NA	AG	ATG	
6	AI	10	1	71	76	0	0	-			-		D	Dependen	---	P	NA	AI	AIA	
7	AL	5.3	174	69.6	75.5	35.8	1176	A			S		I	Nation	1955	Y	EU	AL	ALB	
8	AM	5.2	182	69	74.7	68.2	2390	B		12	-		I	Nation	1992	Y	AS	AM		
9	AN	6.9	13	72	76	53	102	A			-		I	Self-gover	---	P	SA	AN	ANT	
10	AO	3	267	42	46	26.4	2350	D			H		I	Nation	1976	N	AF	AO	AGO	
11	AR	8.9	2946	66.3	73	85.7	28367	A			S	2370	I	Nation	1945	Y	SA	AR	ARG	
12	AS	3.8	2			17.5	9	-			-		D	Unincorpo	---	P	OC	AS	ASM	
13	AT	15.1	1189	72.5	79	55.1	4338	A	71	56	S	19240	I	Nation	1955	Y	EU	AT	AUT	
14	AU	11.2	1992	73.3	79.6	85.4	15186	A	76	72	S	17080	I	Nation	1955	Y	OC	AU	AUS	
15	AW	7.6	5	72	80	0	0	-			-		D	Self-gover	---	P	SA	AW	ABW	
16	AZ	4.8	343	66.6	74.2	53.4	3816	B		7	-		I	Nation	1992	Y	AS	AZ		
17	BB	11.4	29	70	76	32.2	83	A	55	53	S	6540	I	Nation	---	Y	NA	BB	BRB	
18	BD	3	3343	54	52.8	13.8	15379	B	31	24	H	200	I	Nation	1974	Y	AS	BD	BGD	
19	BE	14.7	1476	72.4	79	94.6	9499	A	81	63	S	15440	I	Nation	1945	Y	EU	BE	BEL	
20	BF	3.6	344	51	52	18	1722	C			H	330	I	Nation	1960	Y	AF	BF	BFA	
21	BG	13.2	1170	68.2	74.8	67.6	5993	A	76	8	L	2210	I	Nation	1955	Y	EU	BG	BGR	
22	BH	2.3	12	69.6	74.3	80.7	429	C			S		I	Nation	1971	Y	AS	BH	BHR	
23	BI	3	175	50	54	5	291	C	9	1	H	210	I	Nation	1962	Y	AF	BI	BDI	
24	BJ	2.9	145	45	49	39.4	1968	C	9	1	S	360	I	Nation	1960	Y	AF	BJ	BEN	
25	BK	6.4	270	69.2	74.6	36.2	1525	A			-		I	Nation	1992	Y	EU			
26	BM	9.2	6	68.8	76.3	100	61	-			-		D	Dependen	---	P	NA	BM	BMU	
27	BN	2.7	7	69	72	59.4	163	B			S		I	Nation	1984	Y	AS	BN	BRN	
28	BO	3.7	289	58.4	63.5	50.9	3971	C	30	12	H	620	I	Nation	1945	Y	SA	BO	BOL	
29	BR	4.7	7087	61.8	68.2	74.4	112191	B	66	57	S	2680	I	Nation	1945	Y	SA	BR	BRA	
30	BS	4.6	12	69	76	75.3	199	A			S	11510	I	Nation	---	Y	NA	BS	BHS	
31	BT	4.1	28	45.8	49.1	13	89	D			S	190	I	Nation	1971	I	AS	BT	BTN	
32	BU	3.9	1658	56	60	24	10200	C	5	0	S		I	Nation	---	Y	AS	BU	BUR	
33	BW	3.1	42	55	62	23.8	324	B	33	32	H	2040	I	Nation	1966	Y	AF	BW	BWA	
34	BY	10.4	1067	66.8	76.4	67.1	6886	B		13	S		I	Nation	---	Y	EU			
35	BZ	5.6	13	67	72	51.9	119	B	47	42	S	1970	I	Nation	---	Y	NA	BZ	BLZ	
36	CA	11.3	3091	73.1	79.9	77.5	21198	A	73	69	S	20450	I	Nation	1945	Y	NA	CA	CAN	
37	CC	4.3	0			0	0	-			-		D	Territory	---	P	AS	CC	CCK	
38	CF	3.3	104	45	48	42.5	1340	D			H	390	I	Nation	1960	Y	AF	CF	CAF	
39	CG	3.3	78	52	55	40.9	972	C			L	1010	I	Nation	1960	Y	AF	CG	COG	
40	CH	14.6	1003	74	80.9	60	4121	A	71	65	L	32790	I	Nation	---	Y	EU	CH	CHE	
41	CI	2.5	324	52	55	42.5	5504	C	3	1	S	730	I	Nation	1960	Y	AF	CI	CIV	
42	CK	4.8	1	63.2	67.1	53.7	10	-			-		D	Self-gover	---	P	OC	CK	COK	
43	CL	6	816	71	76.3	84.6	11506	A			S	1940	I	Nation	1945	Y	SA	CL	CHL	
44	CM	3	380	54	59	42.4	5367	C	16	4	H	940	I	Nation	1960	Y	AF	CM	CMR	
45	CN	5.6	65283	68	71.4	26.23	305782	B	71	70	H	370	I	Nation	1945	Y	AS	CN	CHN	
46	CO	3.9	1336	68	73.3	68	23291	B	66	55	S	1240	I	Nation	1945	Y	SA	CO	COL	
47	CR	4.5	143	75	79	44.5	1418	A	70	58	H	1910	I	Nation	---	Y	NA	CR	CRI	
48	CU	8.8	954	74	78	72.6	7874	A	70	67	S		I	Nation	1992	N	NA	CU	CUB	
49	CV	4.7	19	59	63	33.1	133	B			H	890	I	Nation	1975	Y	AF	CV	CPV	
50	CX							-			-		D	External T	---	P	AS	CX	CRX	
51	CY	10.1	72	73.9	78.3	62	444	B			L	8040	I	Nation	1960	Y	AS	CY	CYP	
52	DE	14.9	12003	72.1	78.4	90.48	72887	A			L		I	Nation	---	Y	EU	DE	DEU	
53	DJ	2.5	11	46	49	79.2	343	D			S		I	Nation	1977	Y	AF	DJ	DJI	
54	DK	15.6	806	72	77.7	84.56	4370	A	63	60	S	22090	I	Nation	1945	Y	EU	DK	DNK	
55	DM	7	6	73	79	0	0	A	50	48	H	1940	I	Nation	---	Y	NA	DM	DMA	
56	DO	3.3	247	66	69	58.1	4341	B	50	47	H	820	I	Nation	---	Y	NA	DO	DOM	
57	DZ	3.7	964	65	67	49.6	12916	B	36	31	H	2060	I	Nation	1962	Y	AF	DZ	DZA	
58	EC	3.7	370	64.5	68.8	55.4	5538	B	53	41	H	960	I	Nation	1945	Y	SA	EC	ECU	
59	EE	11.4	180	65.8	75	71.49	1130	B		26	-		I	Nation	---	Y	EU	EE		

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	_ID	OLD_PCT	OLD_POP	MALE_LIF	FEM_LIFE	URBAN_P	URBAN_P	DATA_AV	CONTRA	MODERN	GOVT_VI	GNP_PER	STATUS	SOV_TYP	UN_MEM	US_DIP_	CONTINE	ISO_ALP	ISO_ALPHA3	
60	EG	3.9	2172	58	61	45.3	25223	B	38	35	H	600	I	Nation	1945	Y	AF	EG	EGY	
61	EH							D			-		U	Unresolve	—	P	AF	EH	ESH	
62	ES	13.4	5166	73.2	79.8	91.4	35238	A	59	38	S	10920	I	Nation	1955	Y	EU	ES	ESP	
63	ET	2.7	1465	46	48	11.9	6458	C	4	3	H	120	I	Nation	1945	Y	AF	ET	ETH	
64	EZ	12.6	1297	68.5	76	0	0	A	66	25		3140	I	Nation	1993	Y	EU	EZ		
65	FI	13.46	677	70.9	78.9	61.8	3107	A	80	77	S	26070	I	Nation	1955	Y	EU	FI	FIN	
66	FJ	2.9	22	61.7	60	38.7	290	B	41	35	H	1770	I	Nation	1970	Y	OC	FJ	FJI	
67	FK					65.5	1	-			-		D	Dependen	—	P	SA	FK	FLK	
68	FM					0		C			-		I	Nation	1991	Y	OC	FM	FSM	
69	FO	11.5	6	73.3	79.6	0	0	-			-		D	Self-gover	—	P	EU	FO	FRO	
70	FR	14	7963	72.7	80.9	73.4	41747	A	81	67	L	19480	I	Nation	1945	Y	EU	FR	FRA	
71	GA	5.9	65	51	54	43.3	479	D			L	3220	I	Nation	1960	Y	AF	GA	GAB	
72	GB	15.7	9069	73.1	78.7	89.6	51756	A	72	71	S	16070	I	Nation	1945	Y	EU	GB	GBR	
73	GD	6.3	5	69	74	0	0	A	31	27	H	2120	I	Nation	—	Y	NA	GD	GRD	
74	GE	8.9	487	68.1	75.7	56.2	3078	B		8	-		I	Nation	—	N	AS			
75	GF	4.5	5	70.6	77.4	81	85	-			-		D	Overseas	—	P	SA	GF	GUF	
76	GH	2.8	448	52	56	32.3	5171	B	13	5	H	390	I	Nation	1957	Y	AF	GH	GHA	
77	GI	10.3	3	72	78	100	30	-			-		D	Dependen	—	P	EU	GI	GIB	
78	GL	3.9	2	63	69	74.7	43	-			-		D	Self-gover	—	P	NA	GL	GRL	
79	GM	2.9	26	42	46	21.9	199	C			H	260	I	Nation	1965	Y	AF	GM	GMB	
80	GN	2.9	226	40	44	22.2	1728	C			H	480	I	Nation	1945	Y	AF	GN	GIN	
81	GO							-			-		U	Unresolve	—	N	AS	-	-	
82	GP	8.3	32	71	78	47.7	186	A	44	31	-		I	Overseas	—	P	NA	GP	GLP	
83	GQ	4	15	48	52	27.6	101	C			L	330	I	Nation	1968	Y	AF	GQ	GNQ	
84	GR	13.9	1432	72.6	77.6	58	5976	A			L	6000	I	Nation	1945	Y	EU	GR	GRC	
85	GT	3.2	311	60	65	38.8	3767	B	23	19	H	900	I	Nation	—	Y	NA	GT	GTM	
86	GU	2.8	4	69.5	75.6	39.5	56	-			-		D	Unincorpo	—	P	OC	GU	GUM	
87	GW	4.1	41	40	43	27.1	272	C			H	180	I	Nation	1974	Y	AF	GW	GNB	
88	GY	3.8	31	61.4	67.1	34.6	279	B	31	28	S	370	I	Nation	1966	Y	SA	GY	GUY	
89	GZ							C			-		U	Occupied	—	N	AS			
90	HK	9	517	75	80			A	81	75	-	11540	D	Dependen	—	P	AS	HK	HKG	
91	HN	2.6	142	62	66	43.8	2392	B	41	33	H	590	I	Nation	—	Y	NA	HN	HND	
92	HR	11.5	523	68	75.6	50.8	2311	A			-		I	Nation	—	Y	EU	HR		
93	HT	4.4	283	53	56	28.6	1840	B	10	10	H	370	I	Nation	—	Y	NA	HT	HTI	
94	HU	13.5	1395	65.4	73.8	62.9	6498	A	73	62	L	2780	I	Nation	1955	Y	EU	HU	HUN	
95	ID	3.8	7010	58	63	31	57187	B	50	47	H	560	I	Nation	1950	Y	AS	ID	IDN	
96	IE	10.8	381	71	77	56.4	1992	A	60		S	9550	I	Nation	1955	Y	EU	IE	IRL	
97	IL	9.2	481	74.6	78.1	90.9	4757	A			L	10970	I	Nation	1949	Y	AS	IL	ISR	
98	IN	4.1	36186	58.1	59.1	25.7	226822	B	49	43	H	350	I	Nation	1945	Y	AS	IN	IND	
99	IQ	3.4	620	65.5	67.6	73	13303	C			L		I	Nation	1945	Y	AS	IQ	IRQ	
100	IR	3	1790	62.7	65.7	54.3	32390	C		22	H	2450	I	Nation	1945	N	AS	IR	IRN	
101	IS	10.8	28	75.2	79.9	90.49	235	A			S	21150	I	Nation	1946	Y	EU	IS	ISL	
102	IT	14.47	8396	73.2	79.7	72	41779	A	78	32	L	16850	I	Nation	1955	Y	EU	IT	ITA	
103	JM	7.5	188	71	75	50.9	1276	B	55	51	H	1510	I	Nation	—	Y	NA	JM	JAM	
104	JO	2.6	92	69.3	72.9	69.7	2479	B	35	27	H	1240	I	Nation	1955	Y	AS	JO	JOR	
105	JP	12.6	15670	76	82	77	95762	A	64	60	L	25430	I	Nation	1956	Y	AS	JP	JPN	
106	KE	2.2	576	59	63	21.7	5678	B	27	18	H	370	I	Nation	1963	Y	AF	KE	KEN	
107	KG	5	225	64.3	72.4	38.1	1717	B		25	-		I	Nation	1992	Y	AS			
108	KH	3.2	290	47	50	13	1177	D			L		I	Nation	1955	Y	AS	KH	KHM	
109	KI	3.6	3			32	24	-			-	760	I	Nation	----	Y	OC	KI	KIR	
110	KM	3.1	15	54	58	26.4	130	C			H	480	I	Nation	1975	Y	AF	KM	COM	
111	KN	9.2	4	63	69	45	18	A	41	37	H	3330	I	Nation	1983	Y	NA	KN	KNA	
112	KP	3.7	822	66	72	63.8	14181	D			S		I	Nation	1991	N	AS	KP	PRK	
113	KR	4.7	2081	67	75	73.9	32726	B	77	70	S	5400	I	Nation	1991	Y	AS	KR	KOR	
114	KW	1.3	18	71.8	76.1	0	0	-			S		I	Nation	1963	Y	AS	KW	KWT	
115	KY	7	2	75	79	100	31	-			-		D	Dependen	—	P	NA	KY	CYM	
116	KZ	5.6	949	63.9	73.1	57.6	9761	B		22	-		I	Nation	1992	Y	AS			
117	LA	4.1	182	48	51	15.9	706	C			S	200	I	Nation	1955	Y	AS	LA	LAO	

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	ID	OLD_PCT	OLD_POP	MALE_LIF	FEM_LIFE	URBAN_P	URBAN_P	DATA_AV	CONTRA	MODERN	GOVT_VI	GNP_PER	STATUS	SOV_TYP	UN_MEM	US_DIP_	CONTINE	ISO_ALP	ISO_ALPHA3	
118	LB	5.2	179	65.8	70.4	83.7	2878	D			S		I	Nation	1945	Y	AS	LB	LBN	
119	LC	5.6	9	69	74	46	72	A	47	46	H	1900	I	Nation	----	Y	NA	LC	LCA	
120	LI	9.8	3	66.1	72.9	0	0	A			L		I	Nation	1990	Y	EU	LI	LIE	
121	LK	4.3	758	68.3	73.45	21.5	3791	A	62	40	H	470	I	Nation	1955	Y	AS	LK	LKA	
122	LO	10.4	548	66.6	75.4	0	0	A	66	25		3140	I	Nation	1993	Y	EU	LO		
123	LR	3.7	103	53	56	44.3	1230	B	6	6	H		I	Nation	1945	Y	AF	LR	LBR	
124	LS	3.7	70	53	62	18.5	348	B	5	2	H	470	I	Nation	1966	Y	AF	LS	LSO	
125	LT	10.7	400	66.9	76.3	66.8	2570	B		12	-		I	Nation	1991	Y	EU	LT		
126	LU	13.4	52	70.6	77.9	77.8	302	A			L	28770	I	Nation	1945	Y	EU	LU	LUX	
127	LV	11.8	319	65.3	75.2	71.1	1921	B		19	-		I	Nation	1991	Y	EU	LV		
128	LY	2.3	103	65	70	75.8	3400	B			S		I	Nation	1955	Y	AF	LY	LBY	
129	MA	4	1047	62	65	46.1	12063	B	36	29	H	950	I	Nation	1956	Y	AF	MA	MAR	
130	MC	22.5	7			100	30	-			L		I	Nation	---	Y	EU	MC	MCO	
131	MD	8.1	354	65.5	72.3	47.5	2077	B		15	-		I	Nation	1992	Y	EU	MD		
132	MG	3.3	394	53	56	23.4	2794	C			H	230	I	Nation	1960	Y	AF	MG	MDG	
133	MH	2.8	1	61	64	0	0	C			-		D	Nation	1991	Y	OC	MH	MHL	
134	ML	3.6	307	43	46	22	1878	B	5	1	S	270	I	Nation	1960	Y	AF	ML	MLI	
135	MN	4.1	92	62	67	41.8	941	C			H		I	Nation	1961	Y	AS	MN	MNG	
136	MO	5.9	28	77	81	97	460	B			-		D	Overseas	—	P	AS	MO	MAC	
137	MP	2.3	1			16	8	-			-		D	Common	—	P	OC	MP	MNP	
138	MQ	9.4	35	74	81	82	303	B	51	38	-		I	Nation	---	Y	NA	MQ	MTQ	
139	MR	3.1	65	46	49	40.8	858	B	1	0	S	500	I	Nation	1961	Y	AF	MR	MRT	
140	MS	12.8	2	74	78	0	0	-	53	52	-		D	Dependen	----	P	NA	MS	MSR	
141	MT	10.5	38	73.8	78	85	307	A			S	6630	I	Nation	1964	Y	EU	MT	MLT	
142	MU	5	55	65	72	41	449	A	75	46	S	2250	I	Nation	1968	Y	AF	MU	MUS	
143	MV	2.7	6	62.2	59.48	28.2	63	B			S	440	I	Nation	1965	Y	AS	MV	MDV	
144	MW	2.7	235	48	50	15.3	1332	B	7	1	H	200	I	Nation	1964	Y	AF	MW	MWI	
145	MX	4.1	3596	66	72	71.1	62365	B	53	45	H	2490	I	Nation	----	Y	NA	MX	MEX	
146	MY	3.7	693	69	73	34.6	6485	B	51	30	S	2340	I	Nation	1957	Y	AS	MY	MYS	
147	MZ	3.2	532	46	49	23.1	3839	C			S	80	I	Nation	1975	Y	AF	MZ	MOZ	
148	NA	3.3	48	59	61	26.5	385	D	26	26	-		I	Nation	1990	Y	AF	NA	NAM	
149	NC	4.5	8	69	76	59.4	105	B			-		D	Overseas	----	P	OC	NC	NCL	
150	NE	3.2	266	43	46	15.1	1256	B			H	310	I	Nation	1960	Y	AF	NE	NER	
151	NF	10.2	0			0	0	-			-		D	External T	----	P	OC	NF	NFK	
152	NG	2.1	1893	48	49	16.1	14510	B	6	4	H	370	I	Nation	1960	Y	AF	NG	NGA	
153	NI	3.9	160	59	65	56.6	2318	C	27	23	H		I	Nation	----	Y	NA	NI	NIC	
154	NL	12.7	1930	73.7	79.9	88.6	13461	A	76	72	S	17330	I	Nation	1945	Y	EU	NL	NLD	
155	NO	16.3	697	73.4	79.8	70.5	3015	A	71	65	S	23120	I	Nation	1945	Y	EU	NO	NOR	
156	NP	3.1	615	50.4	49.8	8	1588	B	14	14	H	170	I	Nation	1955	Y	AS	NP	NPL	
157	NR							-			-		I	Nation	----	Y	OC	NR	NRU	
158	NU	7.4						-			-		D	Self-gover	—	P	OC	NU	NIU	
159	NZ	11	378	71.6	77.6	83.8	2877	A	70	62	S	12680	I	Nation	1945	Y	OC	NZ	NZL	
160	OM	2.7	43	64.2	67.8	10.6	168	D			S		I	Nation	1991	Y	AS	OM	OMN	
161	PA	5.3	129	71	75	52.9	1286	B	58	54	S	1830	I	Nation	----	Y	NA	PA	PAN	
162	PE	3.6	808	59.5	63.4	69.9	15695	B	46	23	H	1160	I	Nation	1945	Y	SA	PE	PER	
163	PF	3.1	6	66	71	58	119	B			-		D	Overseas	—	P	OC	PF	PYF	
164	PG	2.6	100	53.2	54.7	13	502	B	5		H	860	I	Nation	1945	Y	OC	PG	PNG	
165	PH	3.5	2228	63	66	42.7	27186	B	36	22	H	730	I	Nation	1945	Y	AS	PH	PHL	
166	PK	4	4867	55.8	56.7	28.2	34310	B	12	9	H	380	I	Nation	1947	Y	AS	PK	PAK	
167	PL	10.2	3914	66.8	75.5	61.4	23563	A	75	26	S	1700	I	Nation	1945	Y	EU	PL	POL	
168	PM	8.8	1			90.2	5	-			-		D	Territorial	----	P	NA	PM	SPM	
169	PN	11.5	0			100	0	-			-		D	Dependen	----	P	OC	PN	PCN	
170	PR	9.6	357	70	78	72.3	2690	A	70	62	-	6470	I	Common	----	P	NA	PR	PRI	
171	PT	13.1	1373	70.9	77.9	30.4	3186	A	66	33	S	4890	I	Nation	1955	Y	EU	PT	PRT	
172	PW					30.3	5	-			-		I	UN Truste	----	P	OC	PW	PLW	
173	PY	3.6	163	65	69.3	42.8	1934	B	48	35	S	1110	I	Nation	1945	Y	SA	PY	PRY	
174	QA	1.1	5	68.7	73.5	89.5	432	C			S	15860	I	Nation	1955	Y	AS	QA	QAT	
175	RE	4.95	31	67	75	61.9	383	B			-		I	Overseas	----	P	AF	RE	REU	

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	_ID	OLD_PCT	OLD_POP	MALE_LIF	FEM_LIFE	URBAN_P	URBAN_P	DATA_AV	CONTRA	MODERN	GOVT_VI	GNP_PER	STATUS	SOV_TYP	UN_MEM	US_DIP_	CONTINE	ISO_ALP	ISO_ALPHA3	
176	RO	10.6	2458	66.6	72.7	53.9	12498	B	58	5	L	1640	I	Nation	1955	Y	EU	RO	ROM	
177	RU	9.6	14333	64.2	74.5	73.9	110332	B		22	-		I	Nation	1945	Y	AS	RU		
178	RW	2.9	224	48	51	7	540	C	10	1	H	310	I	Nation	1962	Y	AF	RW	RWA	
179	SA	2.6	417	63	66.45	77.3	12412	D			S		I	Nation	1945	Y	AS	SA	SAU	
180	SB	3.3	12	59.9	61.4	9	32	B		23	H	580	I	Nation	1978	Y	OC	SB	SLB	
181	SC	5.4	5	65	74	51.8	37	B			H	4670	I	Nation	1976	Y	AF	SC	SYC	
182	SD	2.4	635	52	53	20.2	5348	B	9	6	S		I	Nation	1956	Y	AF	SD	SDN	
183	SE	17.8	1543	74.8	80.4	83.1	7204	A	78	71	S	23860	I	Nation	1946	Y	EU	SE	SWE	
184	SG	6	166	72	77	100	2765	A	74	73	L	12310	I	Nation	1965	Y	AS	SG	SGP	
185	SH	8.8	1	68	75	17.4	1	-			-		D	Dependen	---	P	AF	SH	SHN	
186	SI	10.7	206	68.8	76.7	48.9	941	A			-		I	Nation	1992	P	EU	SI		
187	SJ												D	Territories	---	P	EU	SJ	SJM	
188	SL	3.1	138	41	44	30.3	1344	C			H	240	I	Nation	1961	Y	AF	SL	SLE	
189	SM	13.3	3	73.2	79.1	90.6	22	A			-		I	Nation	1992	Y	EU	SM	SMR	
190	SN	2.9	230	47	49	37.4	2972	B	11	2	H	710	I	Nation	1960	Y	AF	SN	SEN	
191	SO	2.8	233	44	48	23.5	1956	C			S	150	I	Nation	1960	Y	AF	SO	SOM	
192	SR	4.2	18	67.1	72.1	47.5	208	B			S	3050	I	Nation	1975	Y	SA	SR	SUR	
193	ST	4.8	6	64	67	37.6	48	A			S	380	I	Nation	---	Y	AF	ST	STP	
194	SV	3.5	195	61	68	48	2676	C	47	44	H	1100	I	Nation	---	Y	NA	SV	SLV	
195	SY	4.4	604	64.2	66.1	50	6865	C			S	990	I	Nation	1945	Y	AS	SY	SYR	
196	SZ	2.5	21	51	59	22.8	188	B	20	17	H	820	I	Nation	1968	Y	AF	SZ	SWZ	
197	TC	6.4	1	73	77	43.06	6	-			-		D	Dependen	---	P	NA	TC	TCA	
198	TD	3.6	189	45	47	30.2	1582	D			S	190	I	Nation	1960	Y	AF	TD	TCD	
199	TG	2.4	92	53	57	23.9	912	B	34	3	H	410	I	Nation	1960	Y	AF	TG	TGO	
200	TH	3.7	2085	64	69	17.9	10085	B	66	64	H	1420	I	Nation	1946	Y	AS	TH	THA	
201	TJ	3.8	210	66.8	71.7	31.4	1735	B		15	-		I	Nation	1992	Y	AS	TJ		
202	TK										-		I	Territory	---	P	OC	TK	TKL	
203	TM	3.7	143	61.8	68.4	45.4	1751	B		12	-		I	Nation	1992	Y	AS	TM		
204	TN	4.9	413	65	66	52.8	4448	B	50	40	H	1420	I	Nation	1956	Y	AF	TN	TUN	
205	TO	4.2	4			30.7	32	-			-	1010	I	Nation	---	Y	OC	TO	TON	
206	TR	4.3	2548	63.9	69	59	34955	B	63	31	H	1630	I	Nation	1945	Y	AS	TR	TUR	
207	TT	5.3	67	67	73	64	808	A	53	44	H	3470	I	Nation	1962	Y	SA	TT	TTO	
208	TV	4.8	0	61	63	29	3	-			-		I	Nation	---	Y	OC	TV	TUV	
209	TW	6.2	1291	71	76	70.6	14706	A	78	62	S		I	Nation	---	Y	AS	TW	TWN	
210	TZ	2.9	796	49	54	20.8	5706	C			H	120	I	Nation	1961	Y	AF	TZ	TZA	
211	UA	11.98	6242	66.1	75.2	67.54	35190	B		15	S		I	Nation	1945	Y	EU	UA		
212	UG	2.2	384	50	52	9.9	1730	B	5	3	H	220	I	Nation	1962	Y	AF	UG	UGA	
213	UM-00												D	Unincorpo	---	P	OC	UM	UMI	
214	UM-01												D	Dependen	---	P	OC	UM	UMI	
215	UM-02												D	Unincorpo	---	P	OC	UM	UMI	
216	UM-AT												D	Dependen	---	P	OC	JT	JTN	
217	UM-IY							-			-		D	Unincorpo	---	P	OC	IY	IWY	
218	UM-WK							-			-		D	Unincorpo	---	P	OC	UM	UMI	
219	US	12.6	32202	71.8	78.5	75.2	192189	A	74	69	S	21700	I	Nation	1945	N	NA	US	USA	
220	UY	11.6	363	68.4	74.9	89.3	2796	A			L	2560	I	Nation	1945	Y	SA	UY	URY	
221	UZ	4.1	873	66	72.1	40.3	8584	B		19	-		I	Nation	1992	Y	AS	UZ		
222	VA					100	1	-			-		I	Nation	---	Y	EU	VA	VAT	
223	VC	5.2	6	70	73	20.6	24	A	58	55	H	1610	I	Nation	---	Y	NA	VC	VCT	
224	VE	3.7	699	67	73.3	84	15862	A			S	2560	I	Nation	1945	Y	SA	VE	VEN	
225	VG	6.1	1	71	74	0	0	-			-		D	Dependen	---	P	NA			
226	VI	5.2	5	74	77	39	39	-			-		D	Unincorpo	---	P	NA	VI	VIR	
227	VN	4.7	3253	62	66	19.8	13704	B	53	38	H		I	Nation	1977	Y	AS	VN	VNM	
228	VU	2.6	5	67	72	18.4	32	B	13		S	1060	I	Nation	1981	Y	OC	VU	VUT	
229	WE							C			-		U	Occupied	---	N	AS	--	---	
230	WF							-			-		D	Overseas	---	P	OC	WF	WLF	
231	WS	3.6	7	64	69	21.2	41	B		19	H	730	I	Nation	---	N	OC	WS	WSM	
232	YM	2.7	281	48.3	50.54	25.3	2630	C			H		I	Nation	---	Y	AS	YE	YMN	
233	YO	2.7	2	54	58	13.2	11	-			-		D	Territorial	---	P	AF	YO	XYO	

ATLAS GIS DATA BASE

	A	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	_ID	OLD_PCT	OLD_POP	MALE_LIF	FEM_LIFE	URBAN_P	URBAN_P	DATA_AV	CONTRA	MODERN	GOVT_VI	GNP_PER	STATUS	SOV_TYP	UN_MEM	US_DIP_	CONTINE	ISO_ALP	ISO_ALPHA3	
234	YU	9.45	942	68.73	73.83	46.81	4664	A			-		I	Nation	1945	Y	EU	YU	YUG	
235	YU-05	7.1	138	69.7	73.5	53.9	1051	A			-		I	Nation	----	--	EU			
236	ZA	3.9	1626	61	67	55.9	23304	B	48	46	H	2520	I	Nation	1945	Y	AF	ZA	ZAF	
237	ZM	2.3	193	51	54	49.3	4134	B			H	420	I	Nation	1964	Y	AF	ZM	ZMB	
238	ZR	3.6	1365	50	54	39.6	15019	C			H	230	I	Nation	No	N	AF	ZR	ZAR	
239	ZW	2.7	279	58	61	26	2688	B	43	36	H	640	I	Nation	1980	Y	AF	ZW	ZWE	

SAMPLE 6
MAP PROJECTION

1. It is not possible to unwrap a globe a put it in a plane--consider flattening out an orange peel. The branch of mathematics that has a theorem that illustrates this is called "topology." The theorem is the "one-point compactification" theorem--if one point is removed from a sphere, then it is possible--otherwise, not.

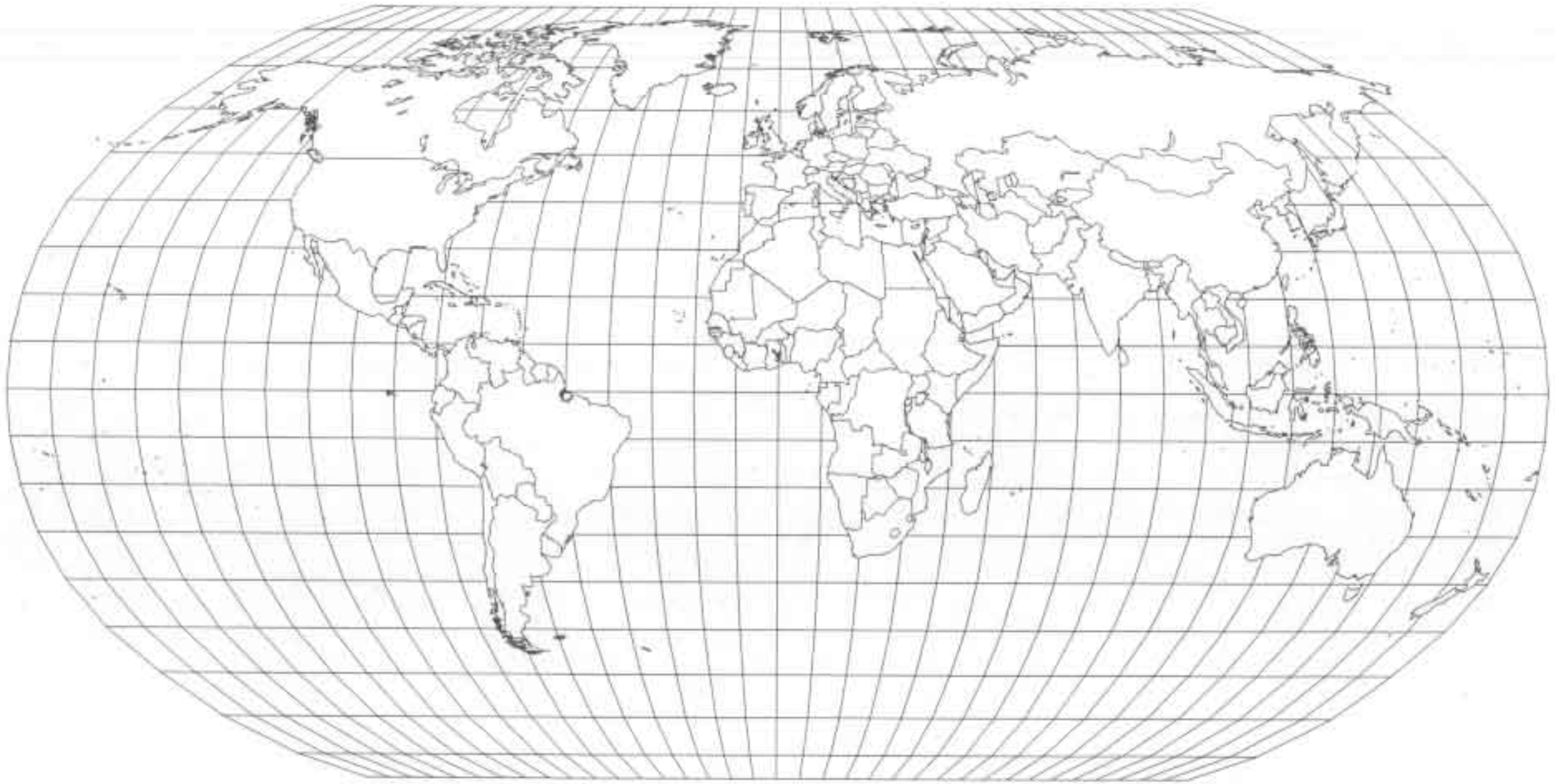
2. Thus, no map of the globe in the plane is "accurate." Different characteristics are preserved by different projections. One class of projections is "equal area" projections. On these, a unit square of paper placed on the map represents the same amount of land wherever that square is placed on the map--be it in Greenland or in Brazil. On equal area maps, however, the shape of the landmasses is distorted. If it is desired to preserve shape locally, then a conformal projection should be used. In addition, there are compromise projections--ones, such as the default Robinson projection in Atlas GIS--in which the "look" of the map is close to the appearance of the landmasses on the globe.

3. In this sample, a few of the map projections available in Atlas are printed out.

4. To change a projection, pull down the Map menu from the top bar and click on Change Projection. A long list will appear of available projections. Consult with the instructor to determine which sorts of projections might be best suited to your needs. Often, for a global view, the Robinson projection is fine.

ROBINSON PROJECTION

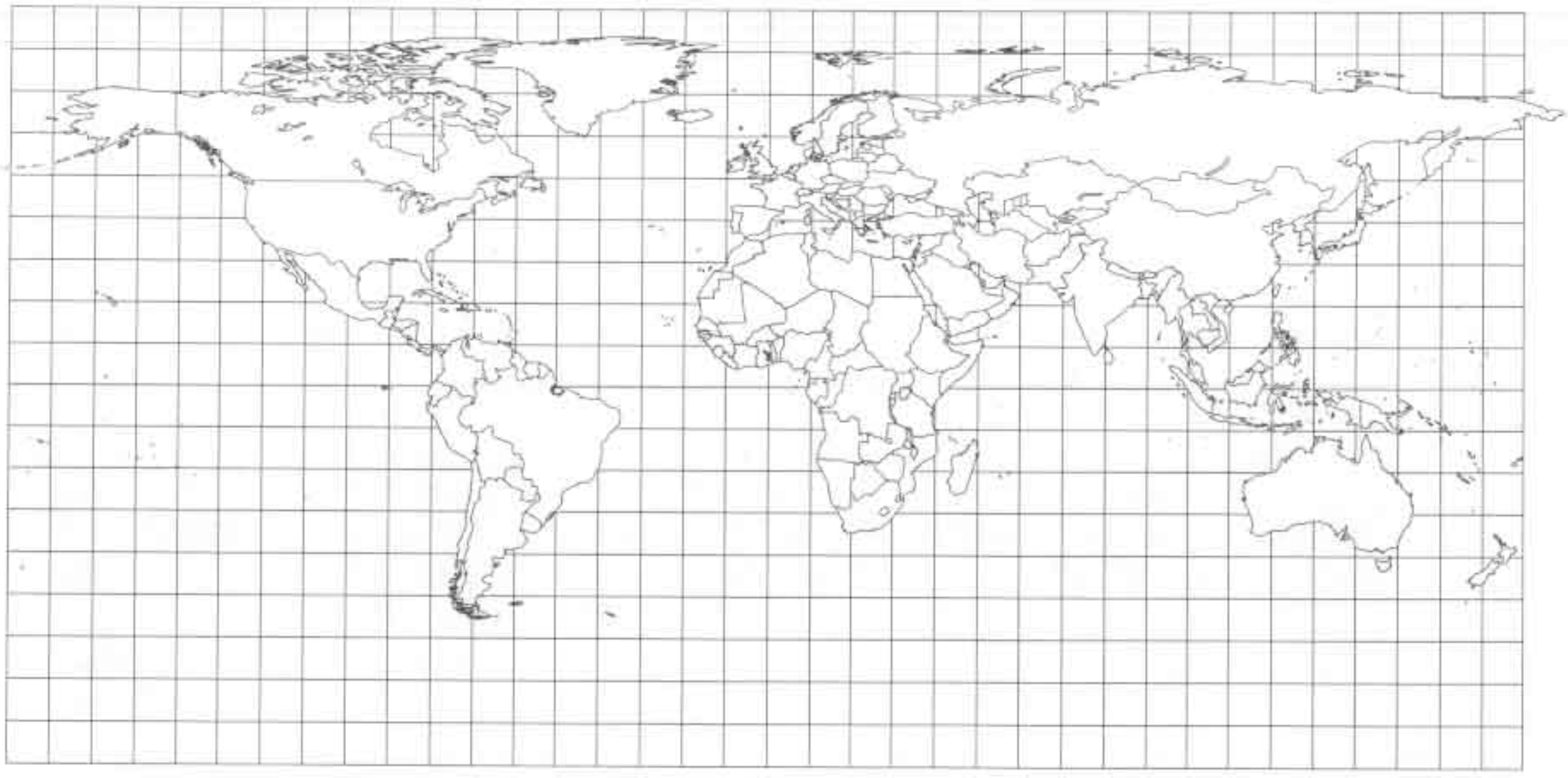
A compromise projection



KM

0 2000 4000

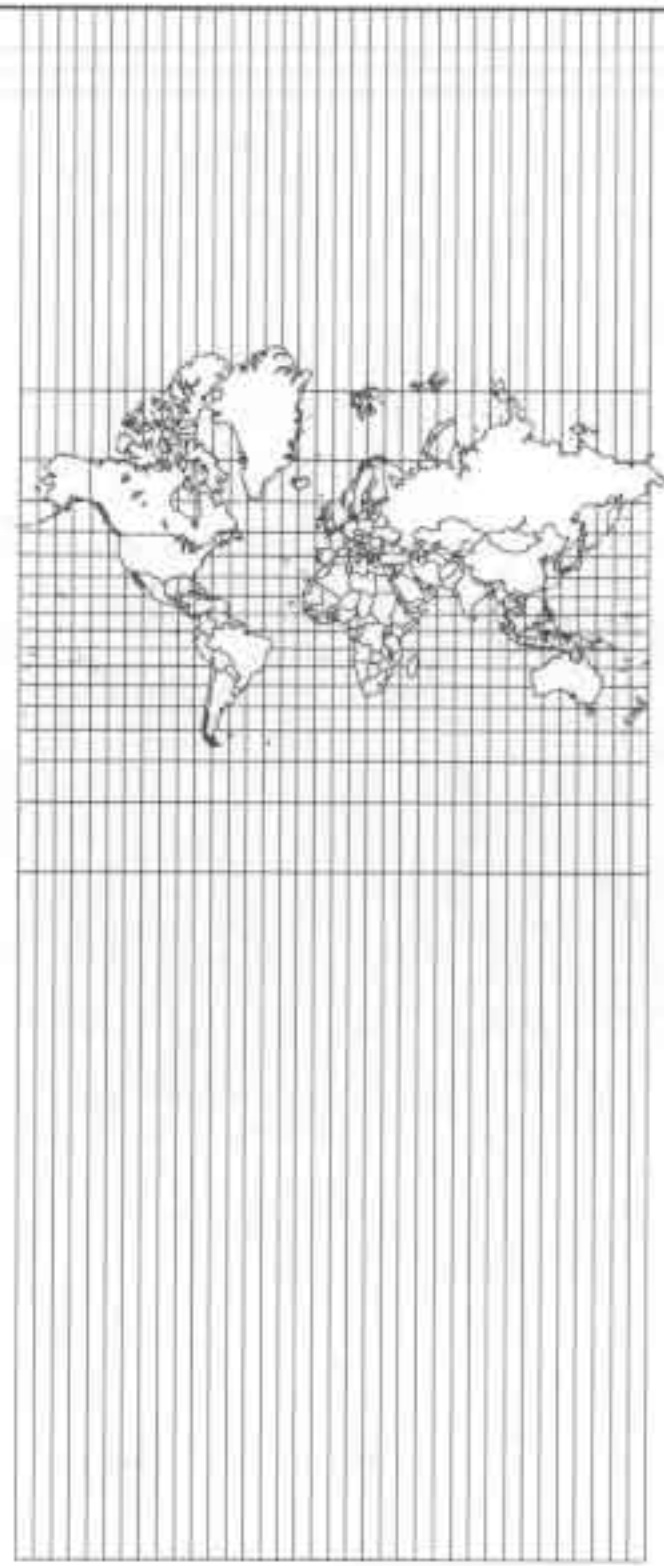
LATITUDE AND LONGITUDE
GRID CELLS OF EQUAL SIZE THROUGHOUT
EXTREME DISTORTION OF LANDMASSES, GLOBALLY



KM

0 2000 4000

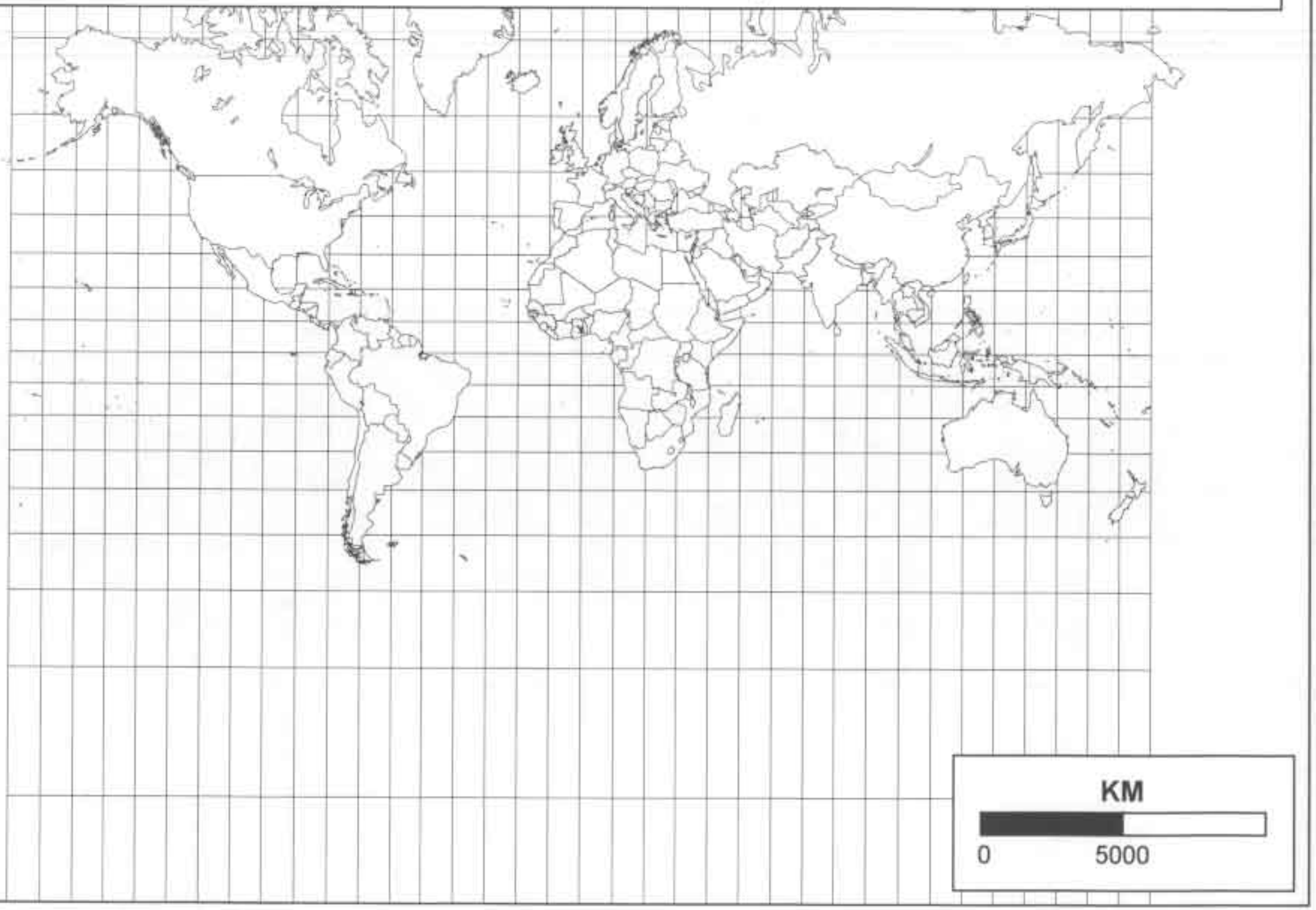
MERCATOR PROJECTION, CYLINDRICAL, CONFORMAL
SUITABLE FOR SAILING
DISTORTION OF LANDMASSES, POLEWARD



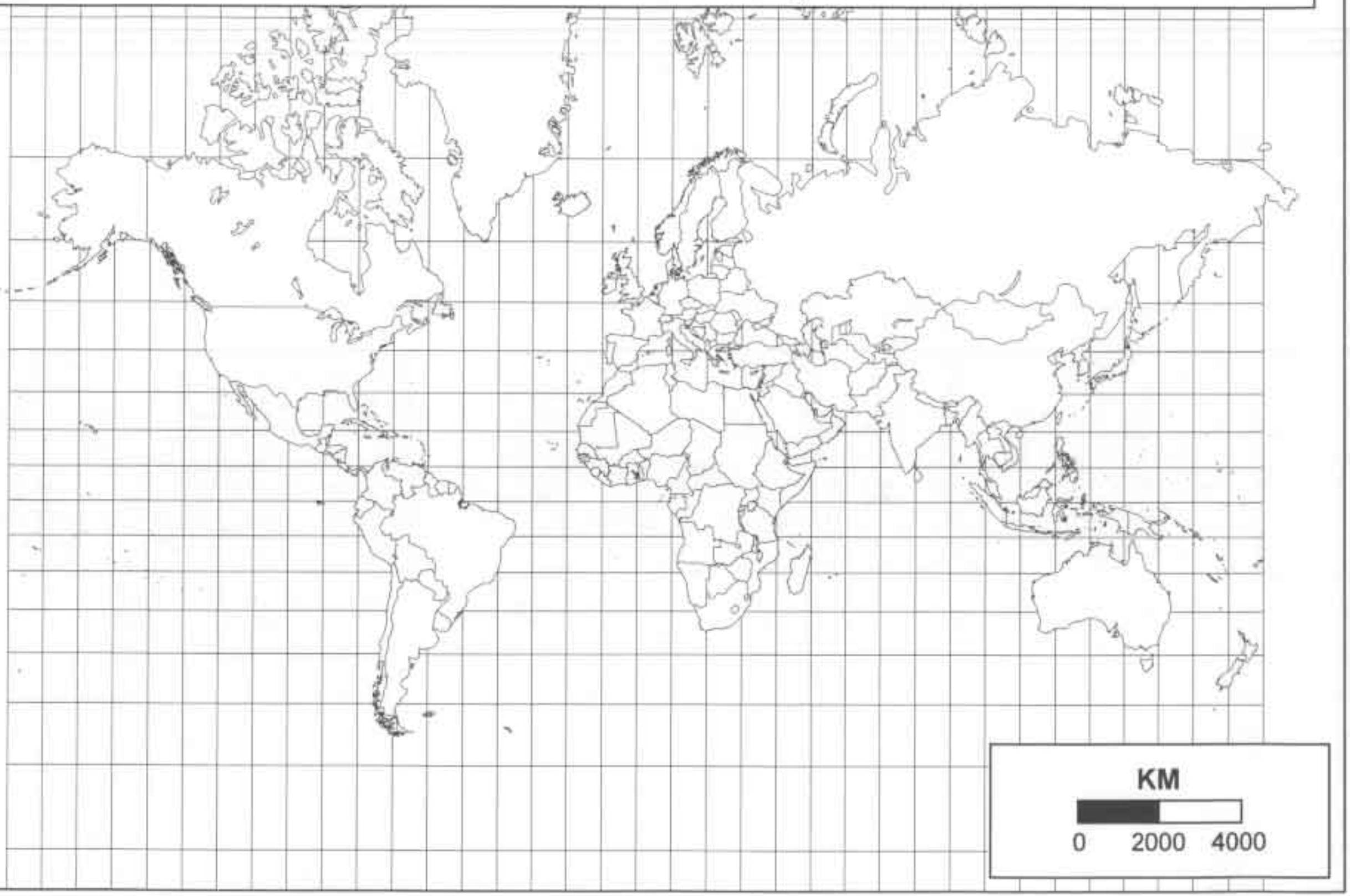
KM

0 10000 20000

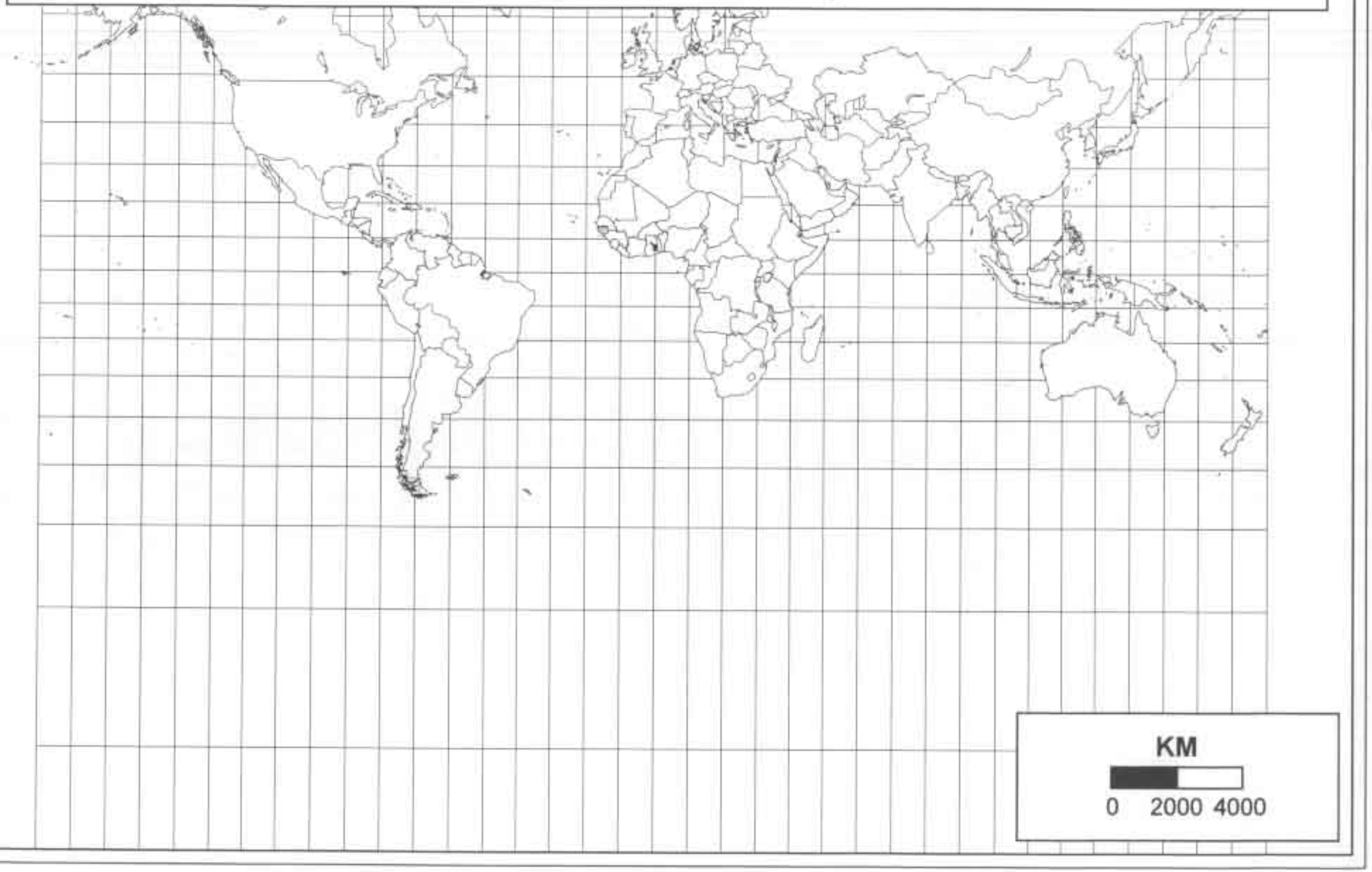
MERCATOR PROJECTION, CYLINDRICAL, CONFORMAL
TRUNCATION FAVORING NEITHER HEMISPHERE
DISTORTION OF LANDMASSES, POLEWARD



MERCATOR PROJECTION, CYLINDRICAL, CONFORMAL
TRUNCATION SHOWING MORE OF NORTHERN HEMISPHERE
DISTORTION OF LANDMASSES, POLEWARD

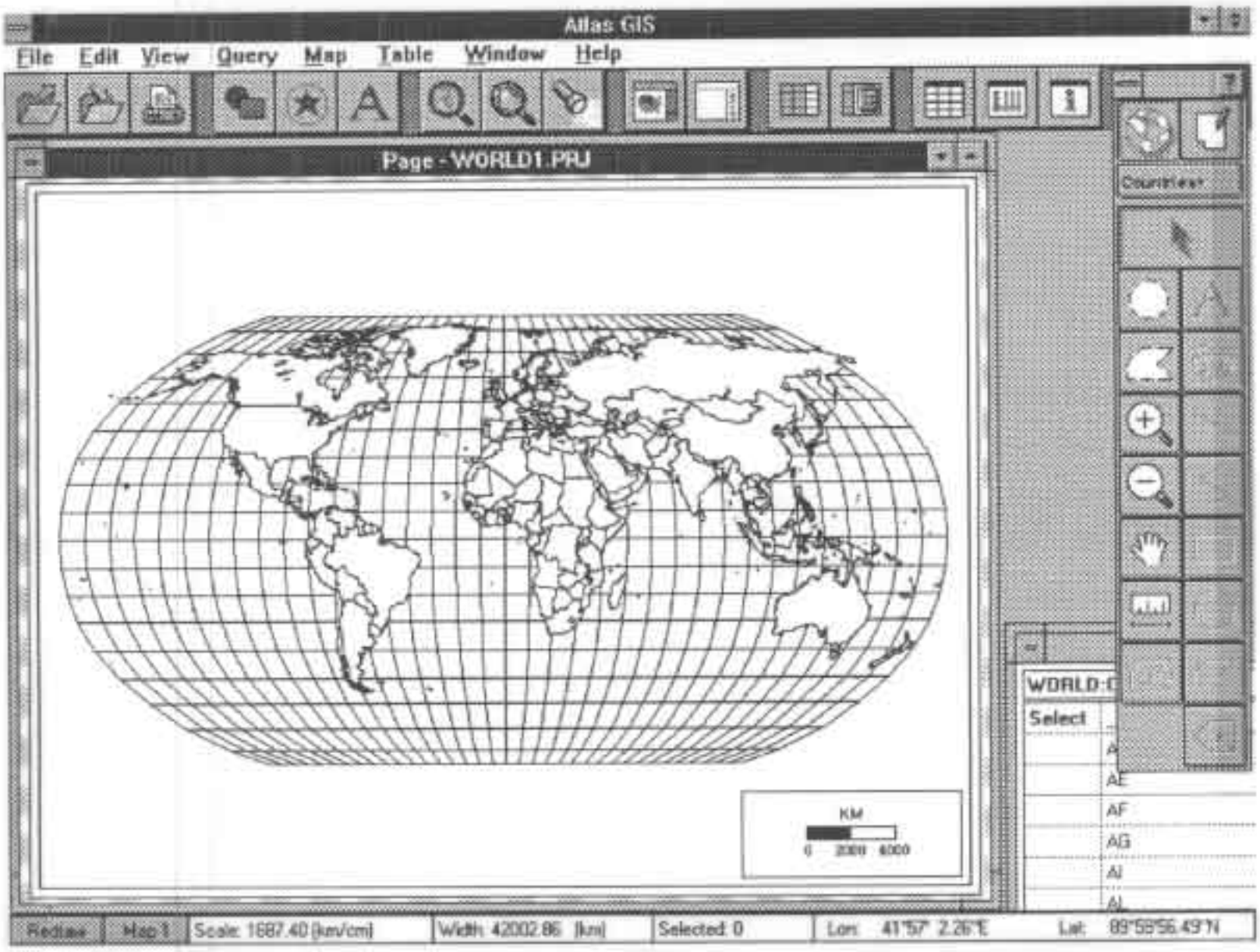


MERCATOR PROJECTION, CYLINDRICAL, CONFORMAL
TRUNCATION SHOWING MORE OF SOUTHERN HEMISPHERE
DISTORTION OF LANDMASSES, POLEWARD

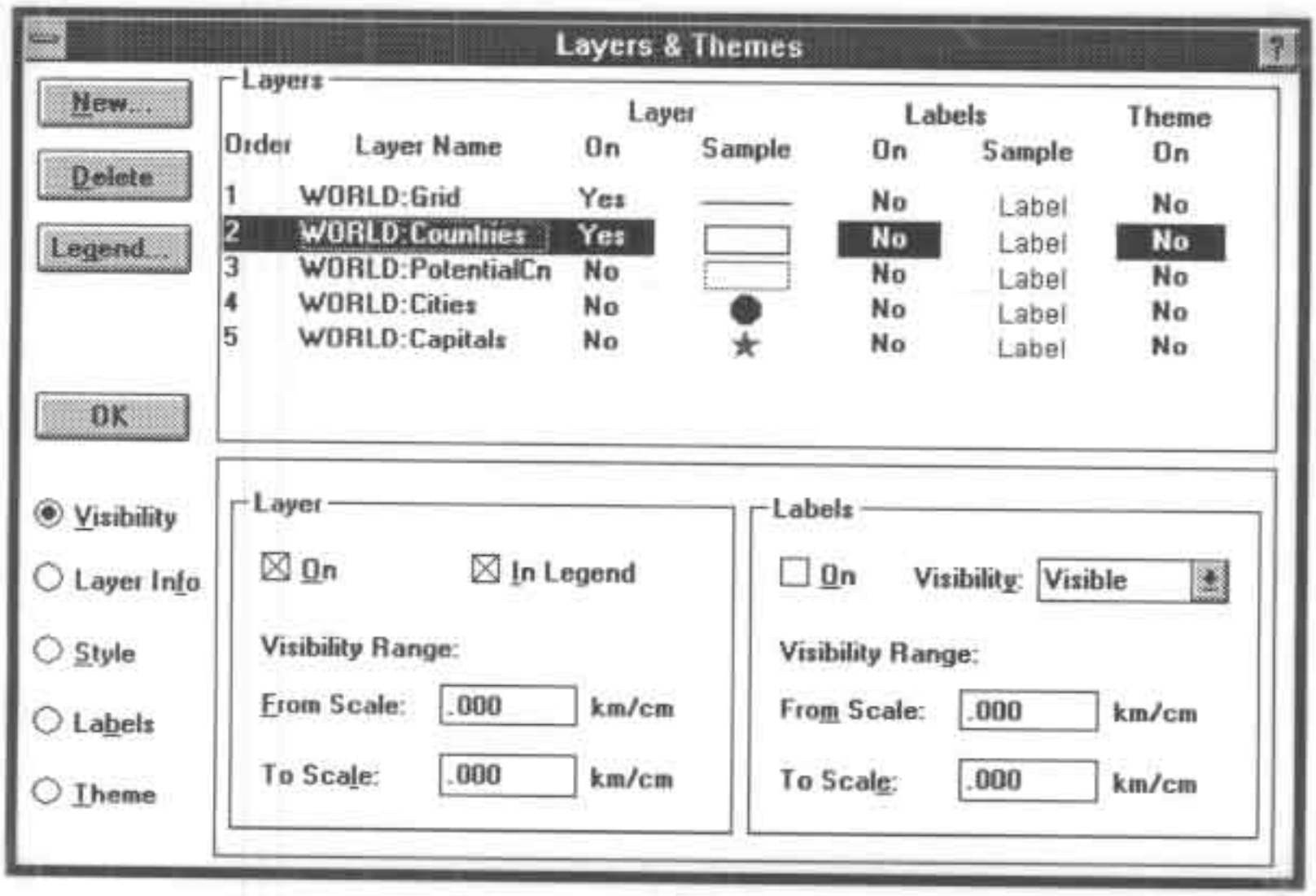


SAMPLE 7
CREATING A THEMATIC MAP

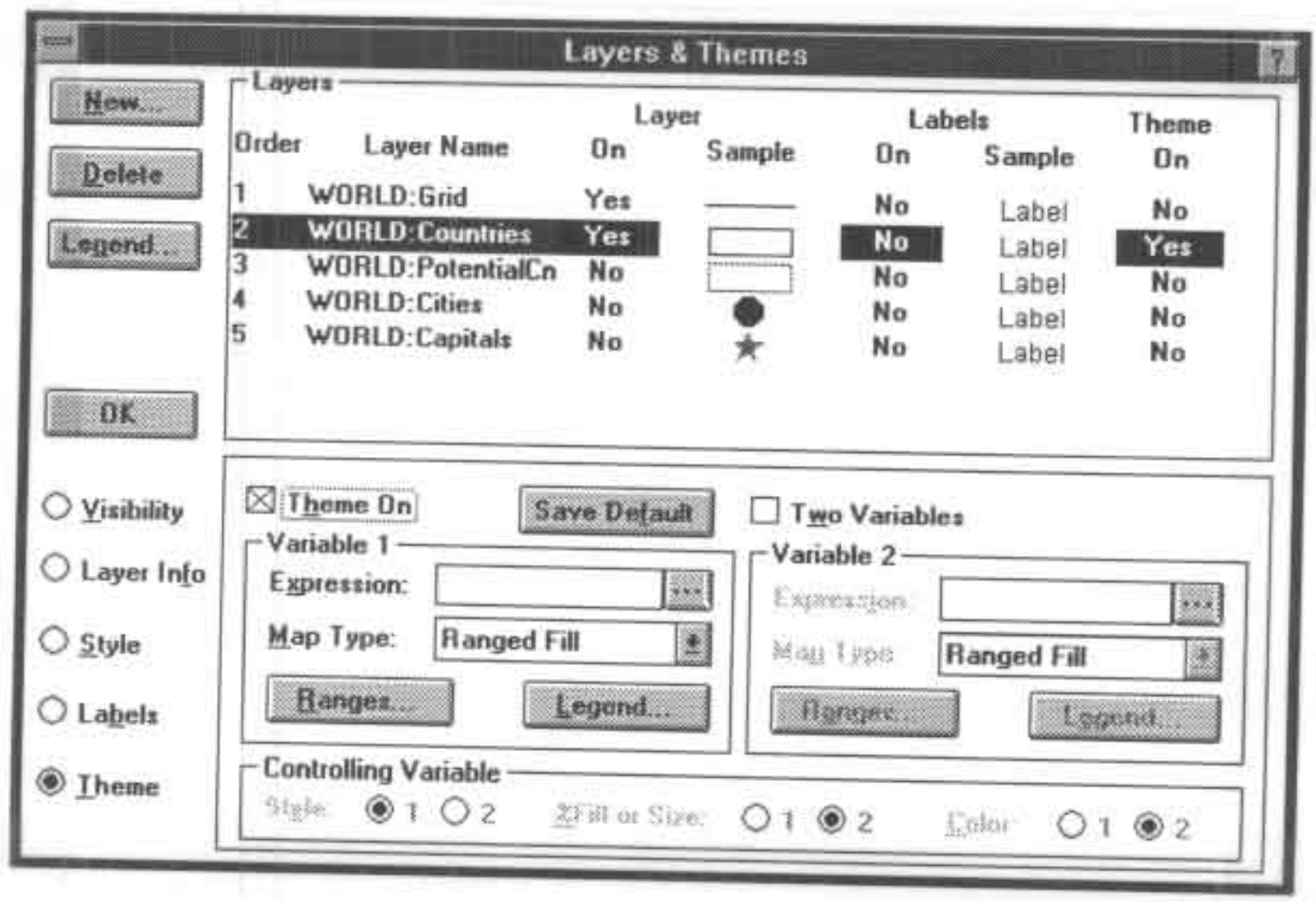
1. A thematic map is one that is shaded to show different ranges of a given variable. Pull up the file WORLD1.PRJ--shown below, once again, for ease in reference. In this Sample, directions will be give visually to create a map, using the base map below, that depicts ranges of data in two different ways.



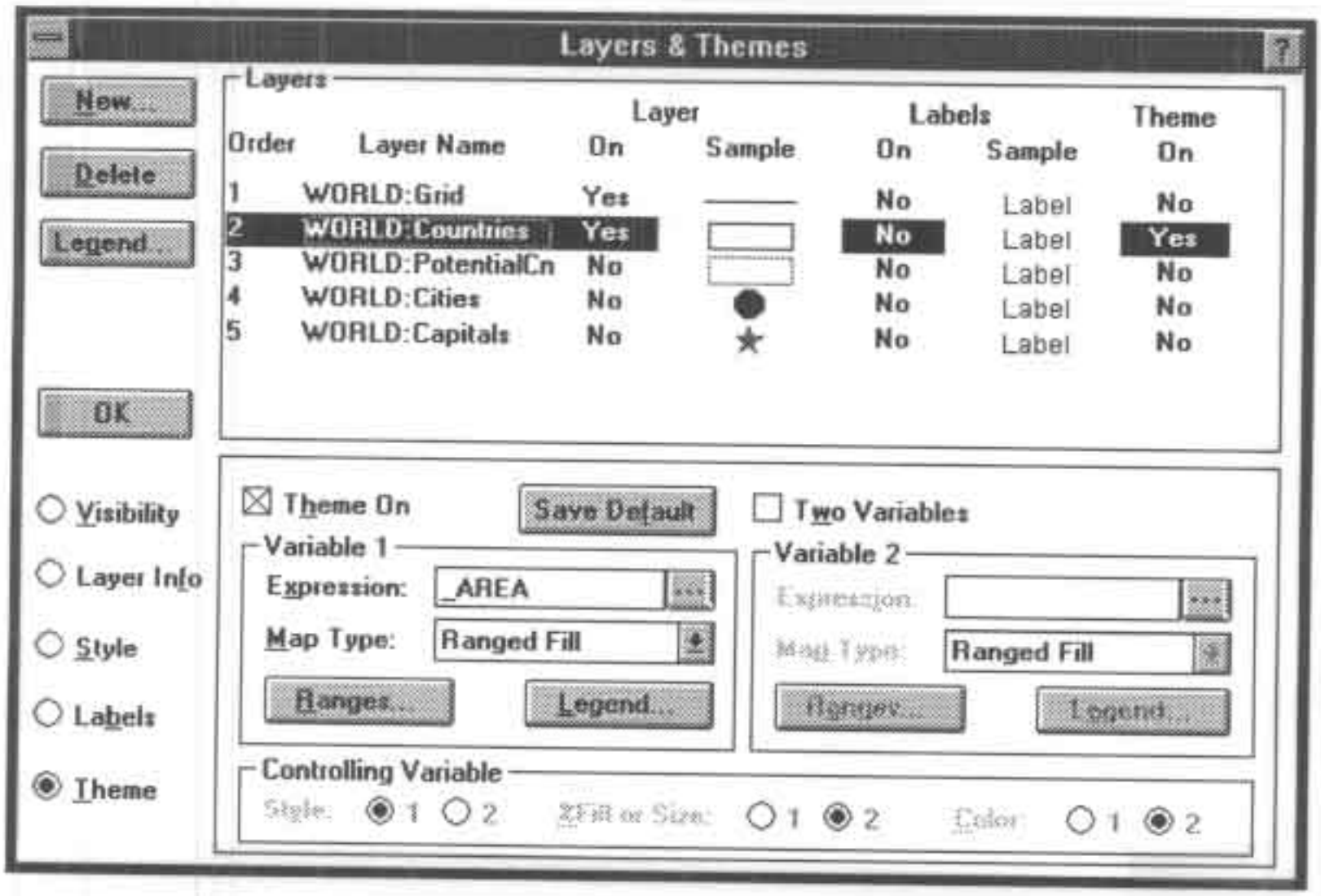
2. Pull down the Map menu from the horizontal menu bar at the top. Click on Layers and Themes--the window below will emerge. Note that there are five layers, which may be turned on or off (indicated as yes or no in the Layer On column). In this example, the layers Grid and Countries are turned on. No labels are turned on, but they may be turned on from this menu. Highlight the Countries layer by clicking on the word "countries."

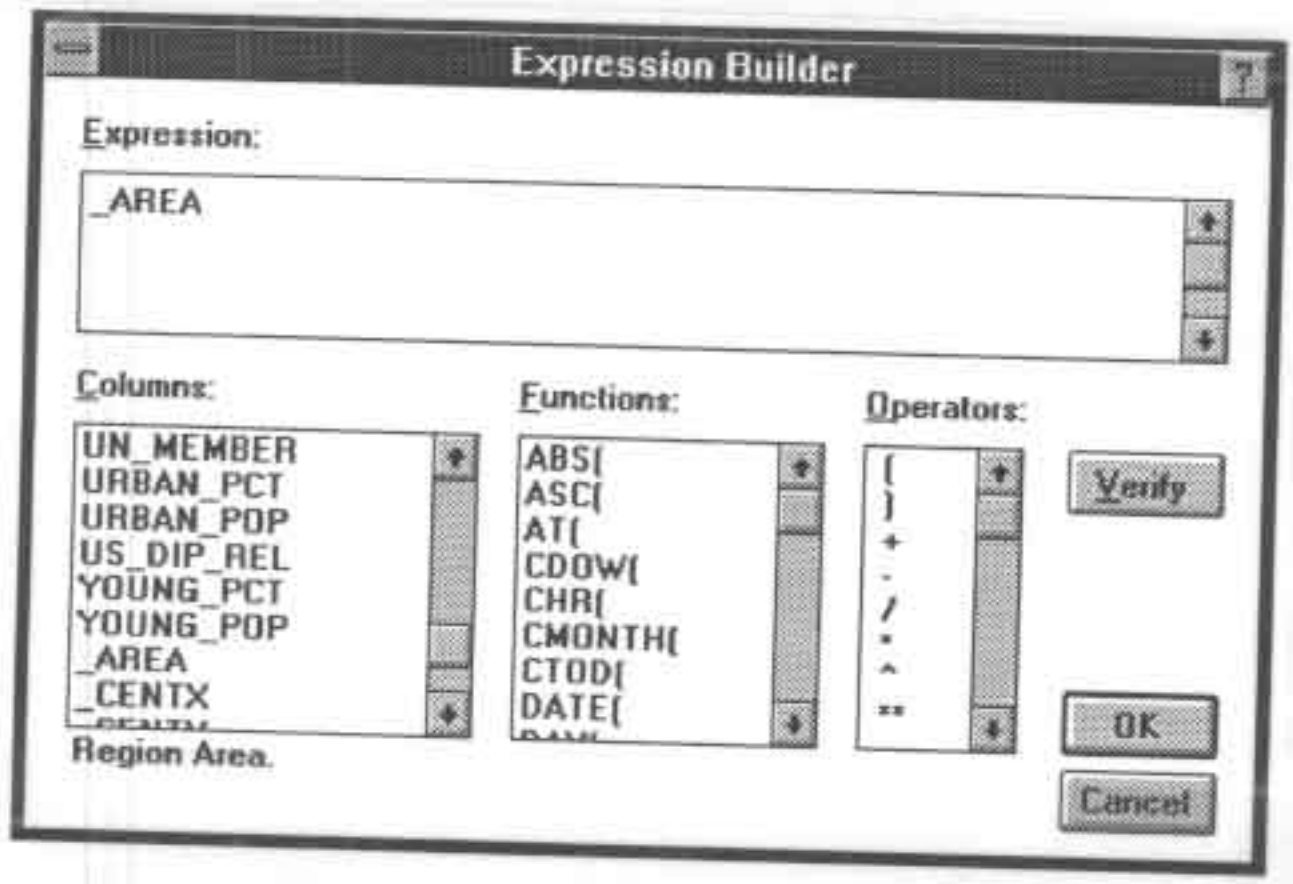


3. Notice the column of buttons below the OK bar. Click on the "Theme" button--shown below.

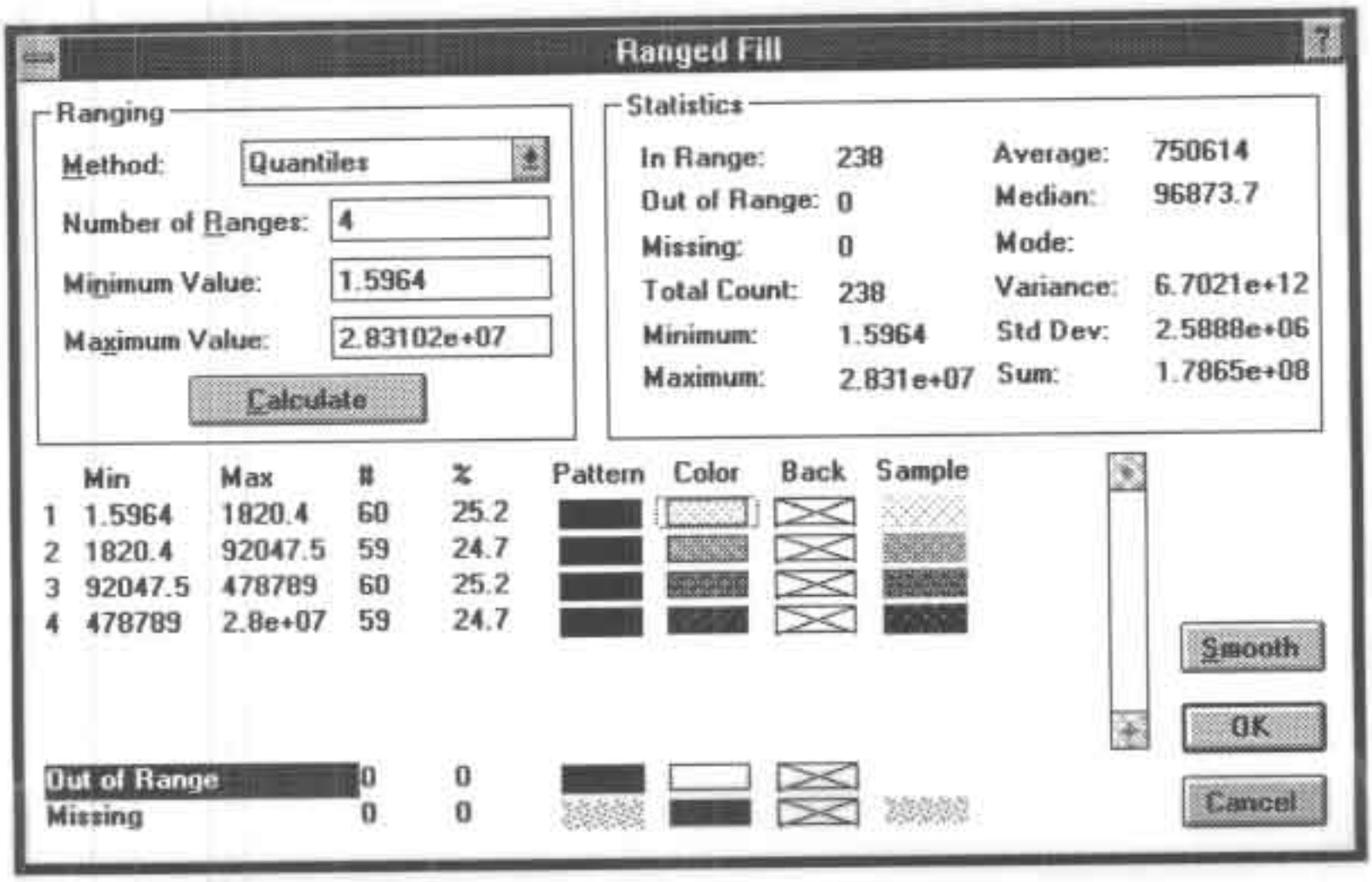


4. Then, in the box to the right of the column of buttons, click on the Theme On box--an x will appear in it as below, and much of the writing will become active. Then go to the button with the set of three dots to the right of the expression box for variable 1--click on it--a menu of choices will pop-up, shown below in the "Expression Builder" box. Click on area and then click OK. Now the layers and themes box should be as below.

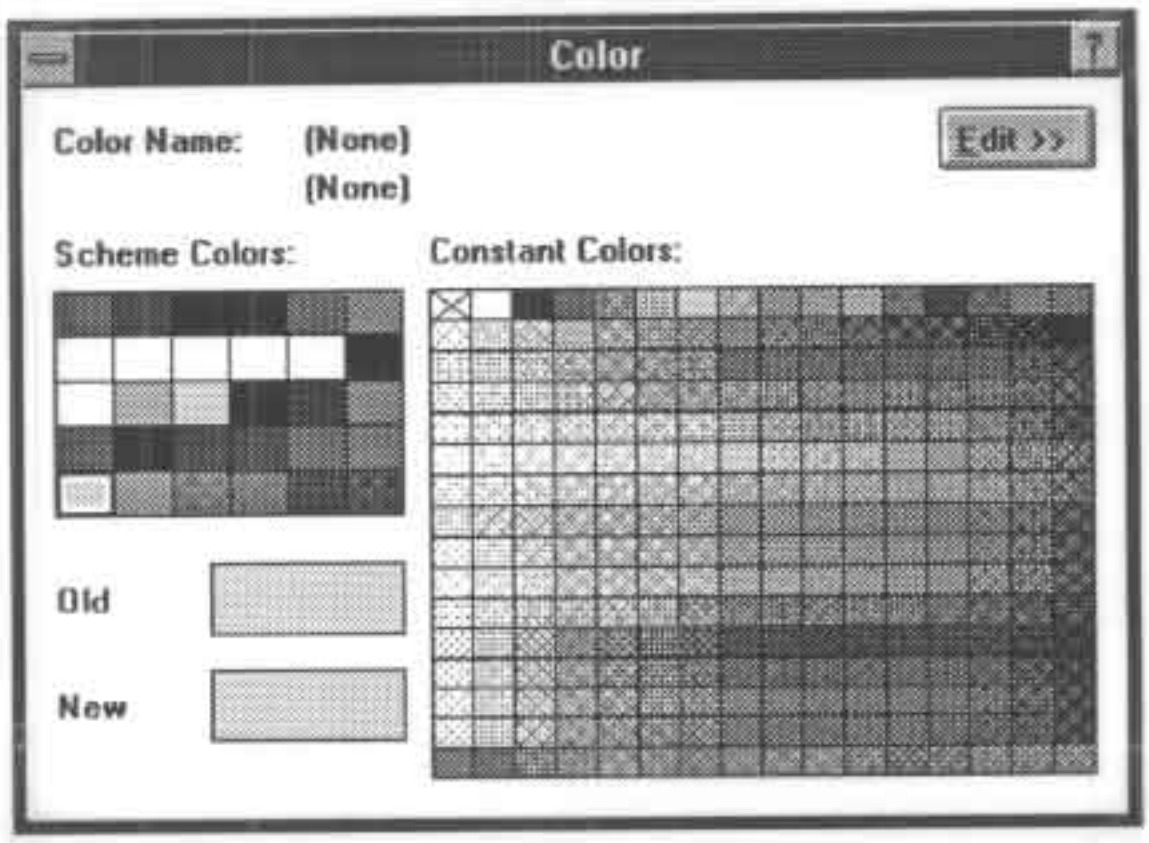




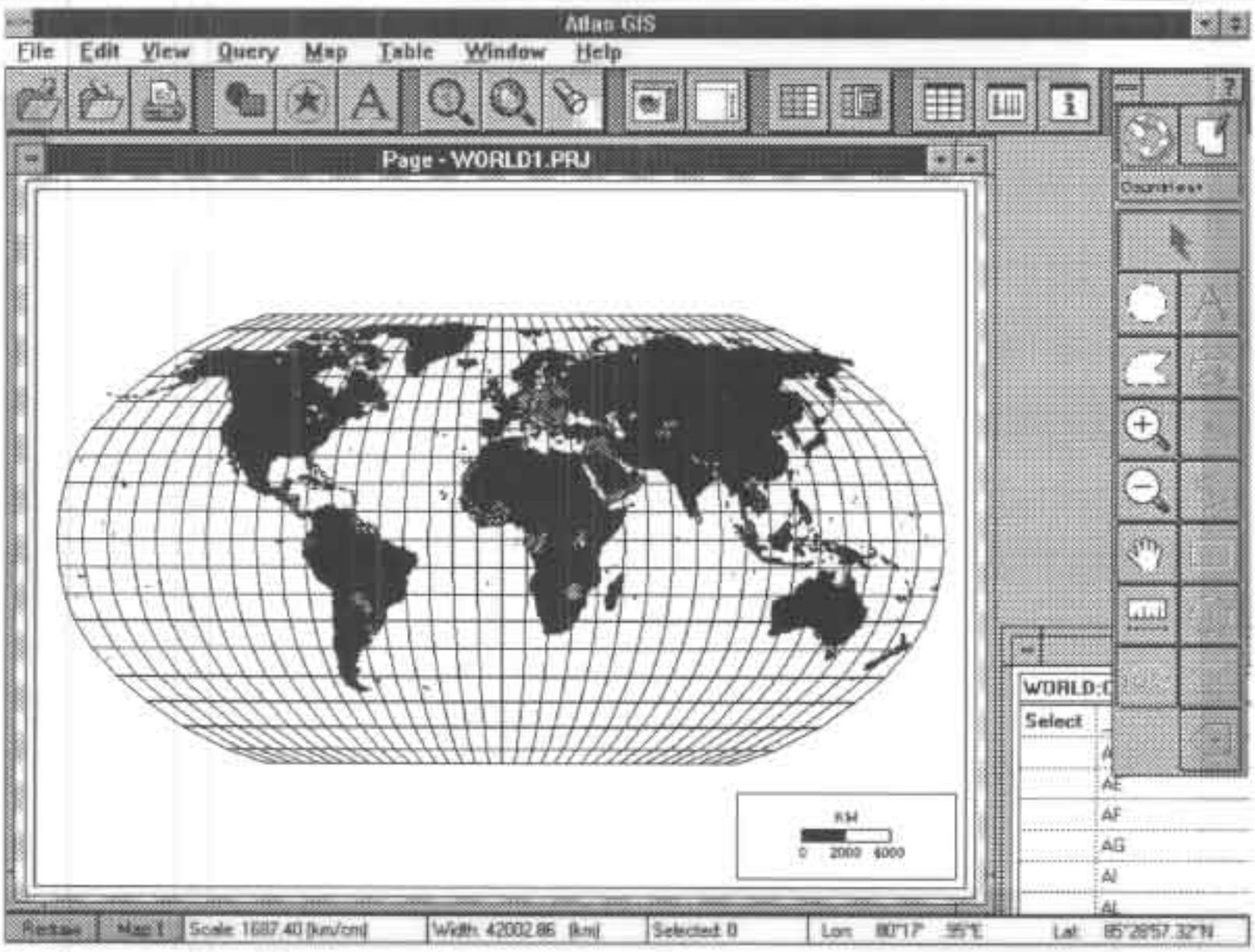
5. Now click on the bar in the Variable 1 box that says "Ranges"--doing so will pop-up another menu, shown below. The purpose of this menu is to enable you to customize your map--colors and size of ranges. When the Ranged Rill window comes up, notice that the data is partitioned into four ranges--the size of the range is shown in the Min/Max columns; the number of entries in each range is shown in the # column. The value in the fourth range of 2.8e+07 is scientific notation--2.8 times 10 to the seventh. The Method of Ranging is by quantiles (as default). This means that the size of the interval is not uniform--what is uniform, insofar as is feasible, is the number of entries in each range.



6. Alter the color sequence--click on the Color column, on the top color. A new window will appear--a "Color" window. Click on any color you would like.



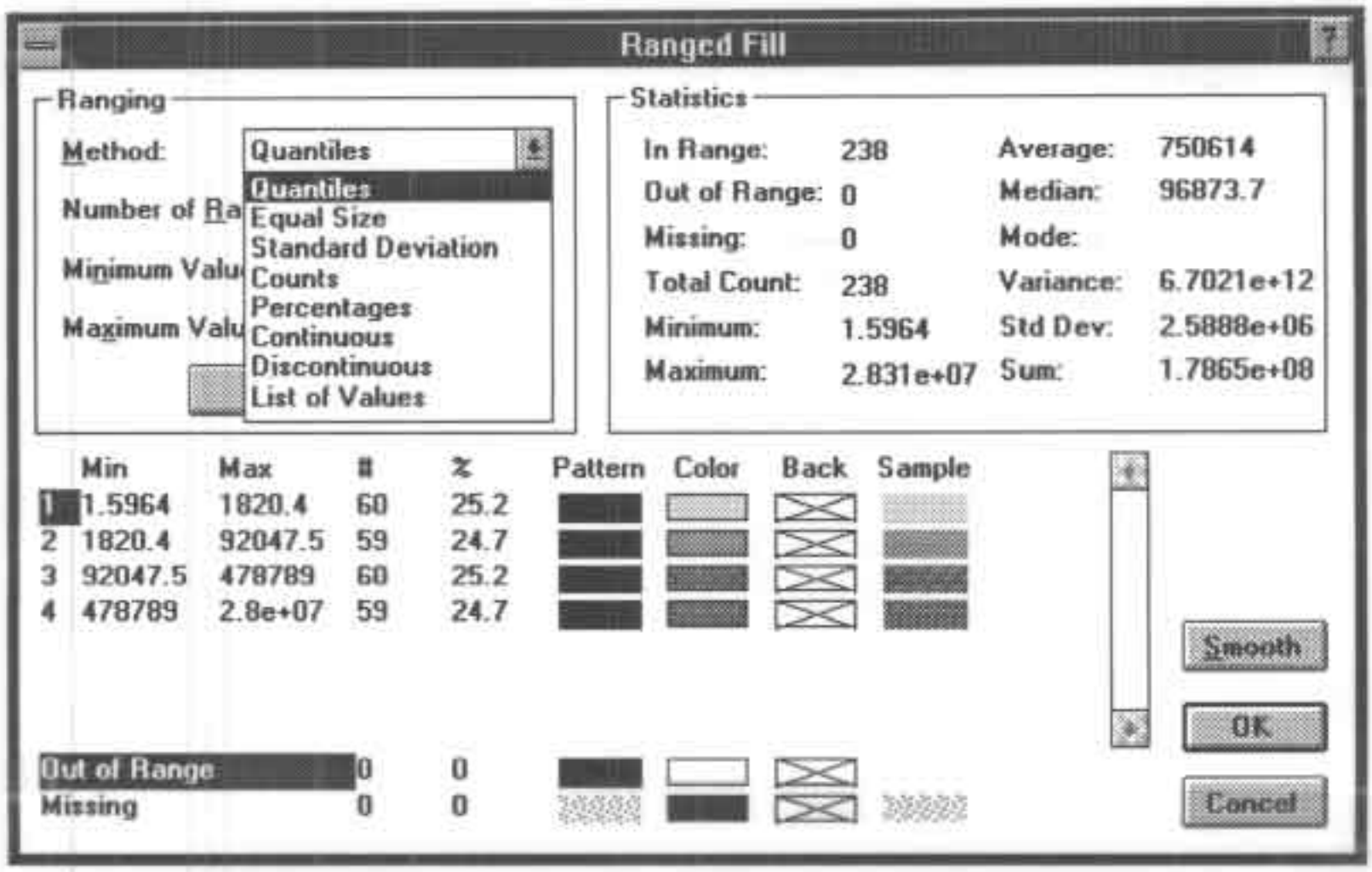
7. Once you have selected the colors you would like, click OK in the Ranged Fill window. Then click OK in the Layers and Themes window. A colored map of the world will appear. There may be a legend box, too. Right click inside it--another window will popup--turn the legend off in the upper left corner of this box. Then the map should appear to be similar to the sample below, colored by quantiles.

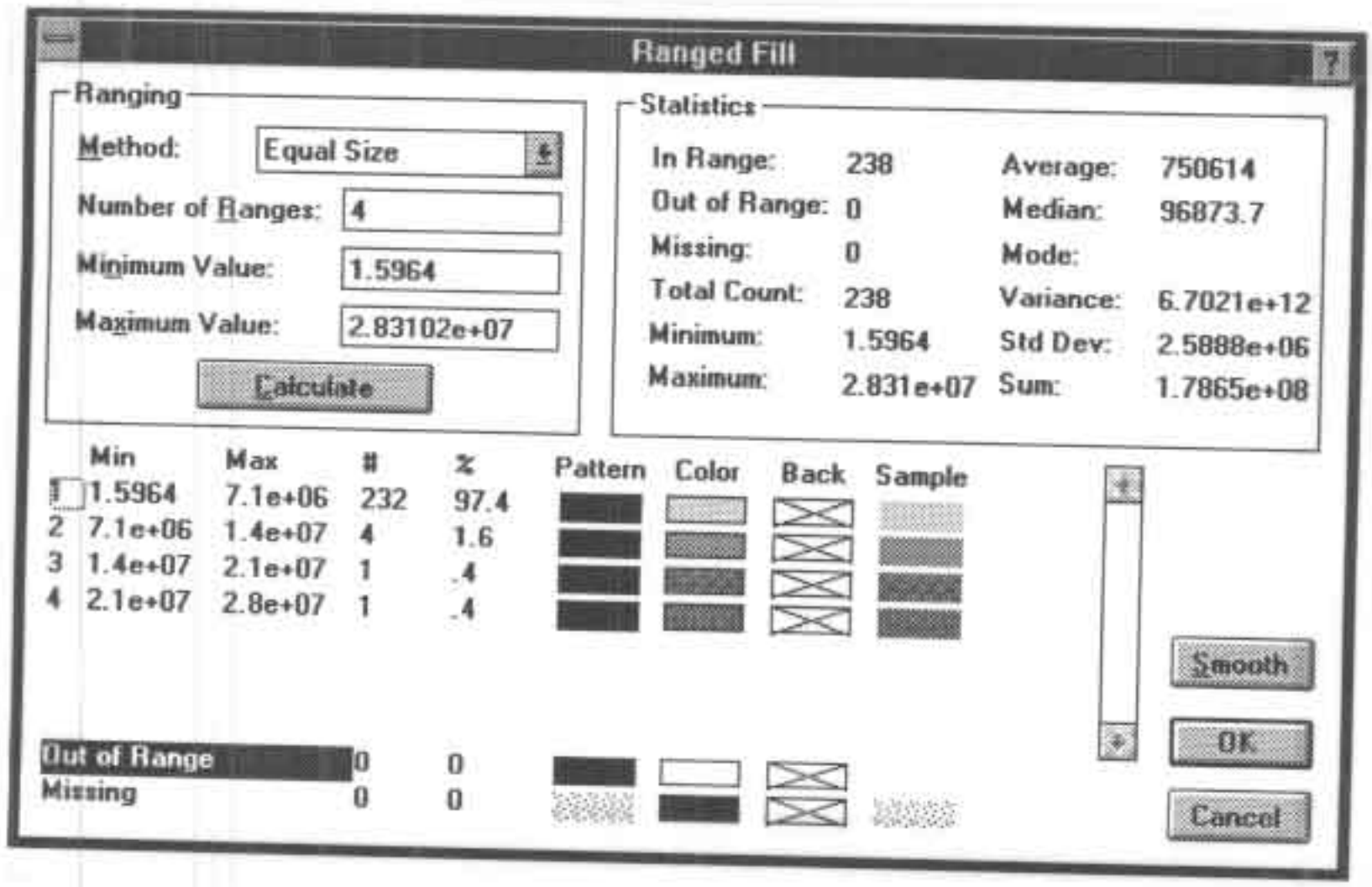


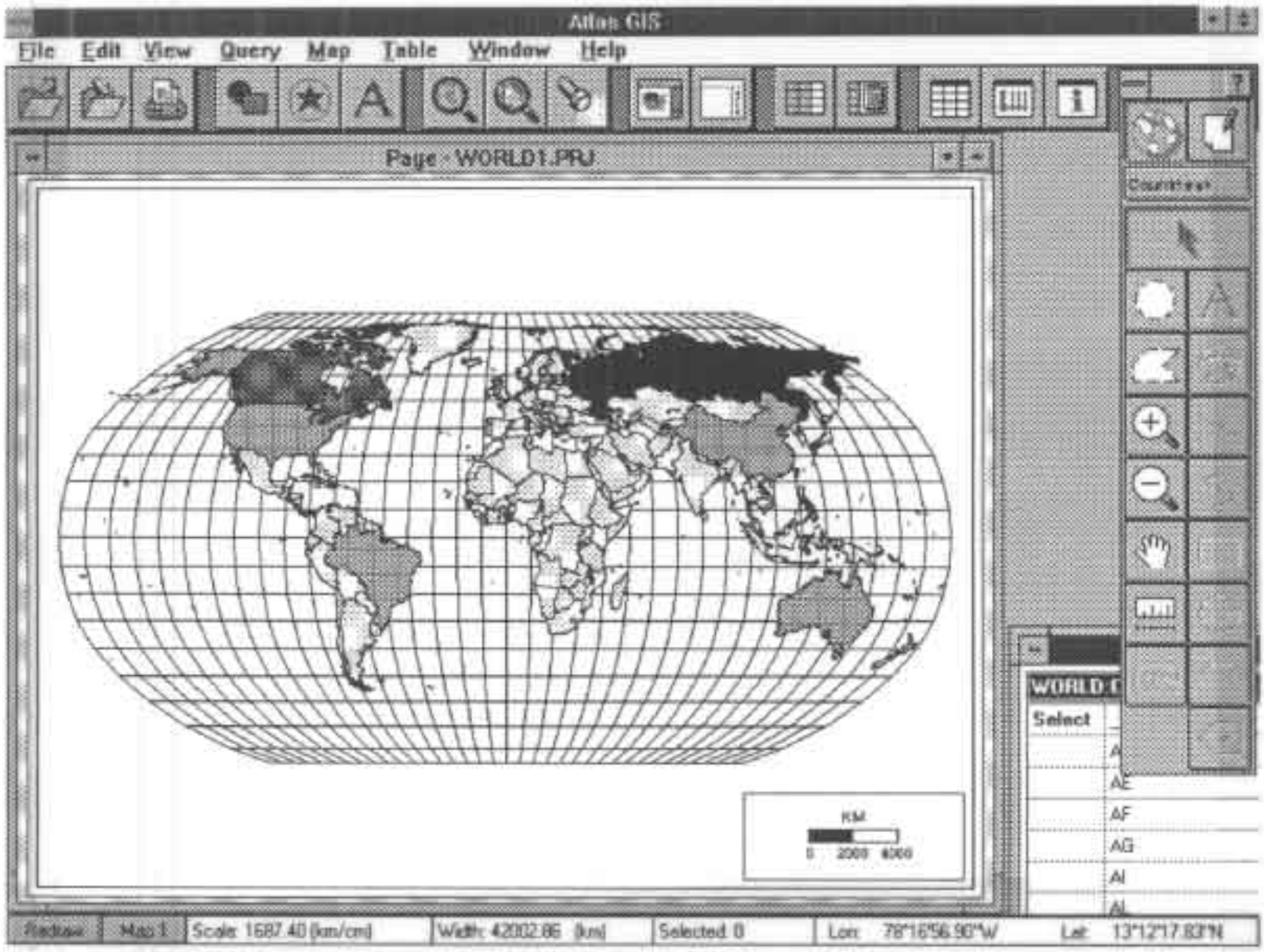
8. Now, consider making a map with ranges of equal size, instead of with equal numbers of entries in each. Go back to Map and pull down. Then to Layers and Themes. Then to Ranges. Then, in the Ranged Fill window, pull down the Method of ranging menu, which by default says Quantiles. See figure below.

9. Choose equal area from the menu. Then click on the "Calculate" button. The Ranged Fill box should now look like the second one below. Notice that now the ranges are about the same size but contain vastly different numbers of entries. Clearly the method chosen to establish ranges is critical in determining the final product!

10. Then click on OK and you will go back to the Layers and Themes window. Then click on OK there and a different map will emerge similar to the one below (third figure down). This one is colored differently from the previous one because a different ranging method was chosen.


Ranged Fill
Ranging
Method:
Quantiles
Quantiles
Equal Size
Standard Deviation
Counts
Percentages
Continuous
Discontinuous
List of Values
Number of Ra
Minimum Valu
Maximum Valu
Statistics
In Range: 238
Out of Range: 0
Missing: 0
Total Count: 238
Minimum: 1.5964
Maximum: 2.831e+07
Average: 750614
Median: 96873.7
Mode:
Variance: 6.7021e+12
Std Dev: 2.5888e+06
Sum: 1.7865e+08
Min Max # % Pattern Color Back Sample
1 1.5964 1820.4 60 25.2
2 1820.4 92047.5 59 24.7
3 92047.5 478789 60 25.2
4 478789 2.8e+07 59 24.7
Out of Range 0 0
Missing 0 0
Smooth
OK
Cancel


Ranged Fill
Ranging
Method:
Equal Size
Number of Ranges:
4
Minimum Value:
1.5964
Maximum Value:
2.83102e+07
Calculate
Statistics
In Range: 238
Out of Range: 0
Missing: 0
Total Count: 238
Minimum: 1.5964
Maximum: 2.831e+07
Average: 750614
Median: 96873.7
Mode:
Variance: 6.7021e+12
Std Dev: 2.5888e+06
Sum: 1.7865e+08
Min Max # % Pattern Color Back Sample
1 1.5964 7.1e+06 232 97.4
2 7.1e+06 1.4e+07 4 1.6
3 1.4e+07 2.1e+07 1 .4
4 2.1e+07 2.8e+07 1 .4
Out of Range 0 0
Missing 0 0
Smooth
OK
Cancel


Atlas GIS
File Edit View Query Map Table Window Help
Page - WORLD1.PRJ
KM
0 2000 4000
Select
AE
AF
AG
AI
AL
Redraw
Map 1
Scale: 1687.40 (km/cm)
Width: 42002.86 (km)
Selected: 0
Lon: 78°16'56.90"W
Lat: 13°12'17.83"N

SAMPLE 8
WORLD RESOURCES INSTITUTE DATABASE

1. The database of the World Resources Institute is a database that is more comprehensive than is that of Atlas GIS. There are over 500 variables in the database for a wide range of the world's countries. Many of these variables cover a span of time ranging anywhere from 1950 to projections to 2025.

2. In looking at projected data, consider how the projections might have been made.

3. There is documentation to accompany this database; a copy of it is in 2044 Dana Building.

4. The database is largely self-explanatory. To gain access to it, double click on the icon, WRD--that acronym stands for World Resources (Institute) Database. Perhaps one reason the database is not abbreviated as "wri" is that those letters form the file extension for Windows "Write" files.

5. Open the database; follow the on-screen instructions to create a set of variables for a number of countries. For the purposes of learning, keep the number of variables small--say, one. The data base does not support a mouse; you will need to use the cursor movement keys and other keys on the keyboard to move around.

6. The only place where problems seem to arise, as with most software, is in the interfaces between software packages.

7. Here is a sequence to create a particular file and export it to Excel.

Open WRD and move through the opening comments to the menu as per on-screen instructions.

Then, hit the following sequence of commands

New--enter
Retrieve--enter
Variables--enter
a set of categories will pop up--economic, population and health, land cover and settlements, food and agriculture, forests and rangelands, biodiversity, energy and meterials, water, atmosphere and climate.

Economic--enter
Select--enter
Use the down cursor movement key; when GNP--current $US is highlighted hit enter, then escape (ESC)
Countries--enter
Select--enter; move down, Algeria, enter; Argentina, enter; Armenia, enter; Australia, enter; escape.
Go--enter....forms four series--a series is formed by associating a variable with a country
Export--enter
Choose--enter, enter. Then, put a check mark next to each series to select it with a sequence of four "enters." ESC
Type--enter
WK1--enter
Go enter.

The pattern C:\WRD\..... will appear on the screen. Backspace to erase C:\WRD\ and type it to read C:\EXCEL\ATLASDAT enter
The export will take place and a file called ATLASDAT.WK1 will be placed in the EXCEL subdirectory.

[The name ATLASDAT is just a file name chosen for the purpose of example--choose any name of 8 or fewer letters that you wish]

Quit--enter
Discard--enter
Quit

Now you should be back in Windows; open Excel to make sure the filel is there.

8. Spend some time browsing through the database and the documentation to see what sorts of variables are available.

SAMPLE 9
LINKING AN EXTERNAL DATABASE TO ATLAS GIS

1. There are a number of ways to link data to Atlas GIS. In this sample, instructions will be given for a very simple procedure. Work with the instructor to determine which of several ways might work best for your project. The idea in this one sample is to introduce a new column into the Atlas GIS database and then to use the Windows clipboard to move data from Excel into Atlas and paste the content of the clipboard into the new column.

2. Open Atlas--get into file World1.prj. Display the underlying table prominently on the screen; make it the active window.

3. Pull down Table from the horizontal menu bar at the top.

4. Choose "Define Columns" from the list.

5. Choose Insert. Then, in the box for "Name" type in "newdata" In the box for Type, pull down and choose "float." The box under Dec indicates the number of decimal positions you wish to have in the data. Anchor -- place a check mark in this column using the enter key--this will keep your new column to the left side of the table, making it more readily visible.

6. Then, choose OK, the "yes" when prompted to the restructuring of the file.

7. Fold up Atlas (using the down arrow in the upper right corner). This will keep everything active--just shrunk, so that you can use other software.

8. Go to Excel and open up Atlasdat.wk1. Put the cursor on the 1970 entry for Australia. Then copy it to the Windows Clipboard using Edit, Copy.

9. Then fold up Excel into an icon.

10. Go back to Atlas; place the cursor in the table in the new column in the row for Australia.

11. Use Edit, Paste Cells to enter the data.

12. The new data could now be used in a thematic map.

13. Entries need not be brought in one at a time; to bring in whole sets of data, it is necessary to ensure that the order of the data in the Excel spreadsheet matches the order of the data in the Atlas database. Considerable time and effort can be devoted to this effort of "cleaning" data so that all matches up correctly. However, for the resulting maps to make sense, this effort is critical.

14. Data bases saved as .dbf files, such as census data, may sometimes be directly linked to the Atlas database. Again, consult with the instructor to determine which methods to employ.

SAMPLE 10
PRELIMINARY PROJECT SAMPLE

Maps can be used at various stages of project development to motivate directions for analysis. In the sample that follows, a series of maps were created to respond to an actual population-environment dynamics study that is on-going in the country of Russia. It is being done by Community Systems Foundation; William D. Drake is the principal investigator. What is enclosed here is the work of S. Arlinghaus--a preliminary approach using the CSF strategy of Assessment, Analysis, and Action.

Consider the set of maps, and the guide outline, as one way to start on a new project. The set of global maps set the stage for an international project; they put the country under consideration in perspective. In this case, the global maps were made using the data available in Atlas GIS. Regional maps were made in Atlas, using only the various tools available on the toolbar. It does not take long to produce this entire set.

One way to test your current flexibility with Atlas is to see if you can re-create these maps on screen. Give it a try!

POPULATION-ENVIRONMENT DYNAMICS MAP SERIES

This series of maps is intended to suggest one type of approach to managing complicated sets of information. The actual data used to illustrate the strategy is taken only from global data bases. Local data bases can be used instead, with local maps. It is not a difficult matter to make a computer map from a paper map (latitude/longitude "flat" map, in which the grid of parallels and meridians is a square tessellation, is preferred to any projection). Local maps, used with local data, can be used to create sets of maps assessing local resources. Spatial analysis, performed using these maps, can suggest directions for action.

I. POPULATION VARIABLES

A. GLOBAL VIEW

i. ***Assessment***--data availability/reliability map

Crude birth rate; births per 1000 population
Annual number of births
Contraception use: % of in-union women using
Crude death rate: deaths per 1000 population
Annual number of deaths
Population doubling time at current rate (years)
Life expectancy of females at birth (years)
Total fertility rate: avg. # of children a woman will ever bear
Gross national product: [current?] US $ per capita
Government view of fertility
Rate of natural increase: annual %
Annual natural increase
Infant deaths under age one year
Infant mortality rate: deaths per 1000 live births
Life expectancy of males at birth (years)
Population age 65 and over (%)
Population age 65 and over (thousands)
Population (thousands), mid-1991
Population (thousands), projected to 2010
Population (thousands), projected to 2025
Political status
United Nations membership (year)
Urban population (%)
Urban population (thousands)
Diplomatic relations with U.S.A.
Population under age 15 (%)
Population under age 15 (thousands)

ii. ***Analysis***

Population density
Birthrate minus deathrate, per thousand
Education of women and fertility rates

iii. ***Action***
iv. ***Feedback***

B. REGIONAL VIEW
i. ***Assessment***--Place names--countries
Crude birth rate; births per 1000 population
Annual number of births
ii. ***Analysis***
Population density
Distance--cities within 1000 km of Syktyvkar
Distance--cities within 325, 650, and 1000 km of Syktyvkar
Distance--cities within 325, 650, and 1000 km of Moscow
Distance--cities within 325, 650, and 1000 km of Syktyvkar and Moscow
iii. ***Action***
iv. ***Feedback***

C. LOCAL VIEW
i. ***Assessment***--data availability/reliability map
ii. ***Analysis***
iii. ***Action***
iv. ***Feedback***

II. ENVIRONMENT VARIABLES

A. GLOBAL VIEW
i. ***Assessment***
ii. ***Analysis***
iii. ***Action***
iv. ***Feedback***

B. REGIONAL VIEW
i. ***Assessment***
Oil reserves, million MT
Raw natural gas reserves, billion MT
Hard coal reserves, terajoules
Soft coal reserves, terajoules
Bauxite production, thousand MT
Bauxite reserves, million MT
Bauxite reserves (value), million $ US
Methane emissions--coal mining, thousand MT
Sulfur emissions, thousand MT
ii. ***Analysis--includes temporal component in addtion to the spatial***
Forest and woodland, 1991 WRD data--use as baseline study
Deforestation--1981-1990, Annual Average, Thousand HA
iii. ***Action***
iv. ***Feedback***

C. LOCAL VIEW
i. ***Assessment***
ii. ***Analysis***

iii. ***Action***
iv. ***Feedback***

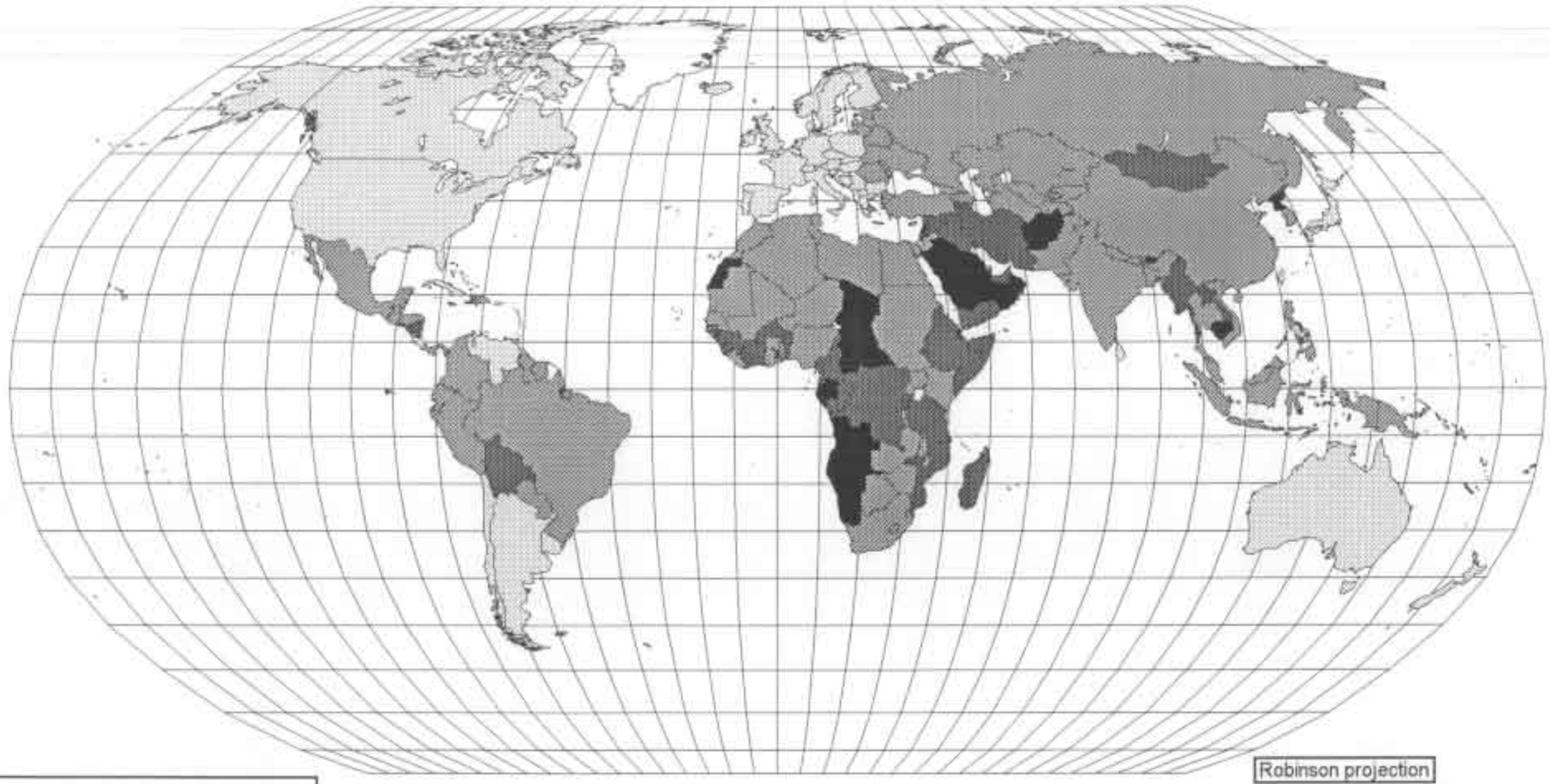
III. POPULATION-ENVIRONMENT DYNAMICS
A. GLOBAL VIEW
i. ***Assessment***
ii. ***Analysis***
iii. ***Action***
iv. ***Feedback***
B. REGIONAL VIEW
i. ***Assessment***
ii. ***Analysis***
Environmental stress--acid rain plume approaches Syktyvkar
Population density and acid rain
Population over 65 and acid rain
iii. ***Action***
Target area for regional action--in advance of the plume
iv. ***Feedback***
C. LOCAL VIEW
i. ***Assessment***
ii. ***Analysis***
iii. ***Action***
iv. ***Feedback***

IV. TRANSITION THEORY

ASSESSMENT: GLOBAL VIEW

Data availability: A=reliable...D=unreliable

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

DATA_AVAIL

- A
- B
- C
- D
- Missing

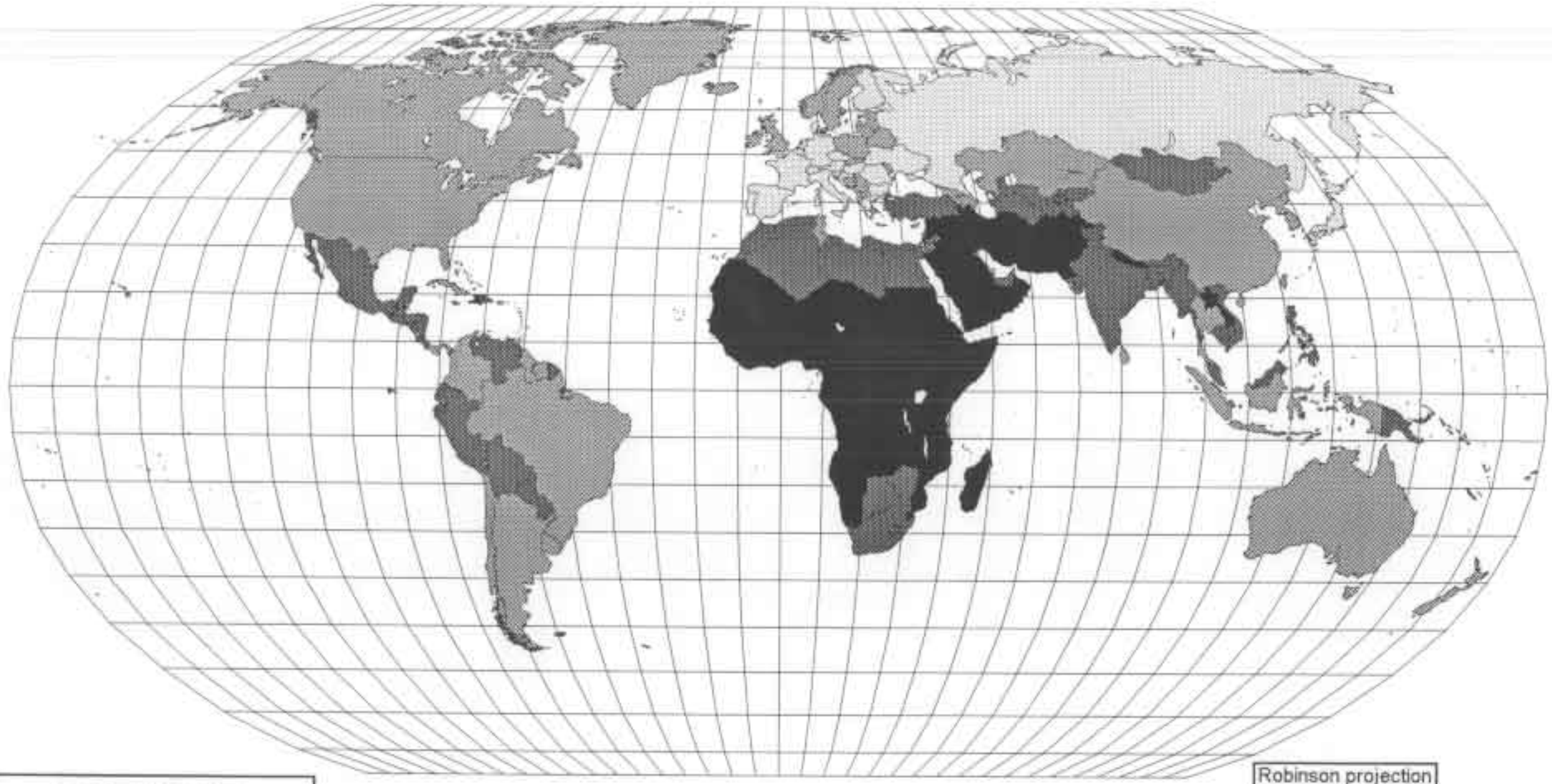
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Crude birth rate; births per 1000 population.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

BIRTHRATE

.00 to	13.65
13.65 to	27.30
27.30 to	40.95
40.95 to	54.60
Missing	

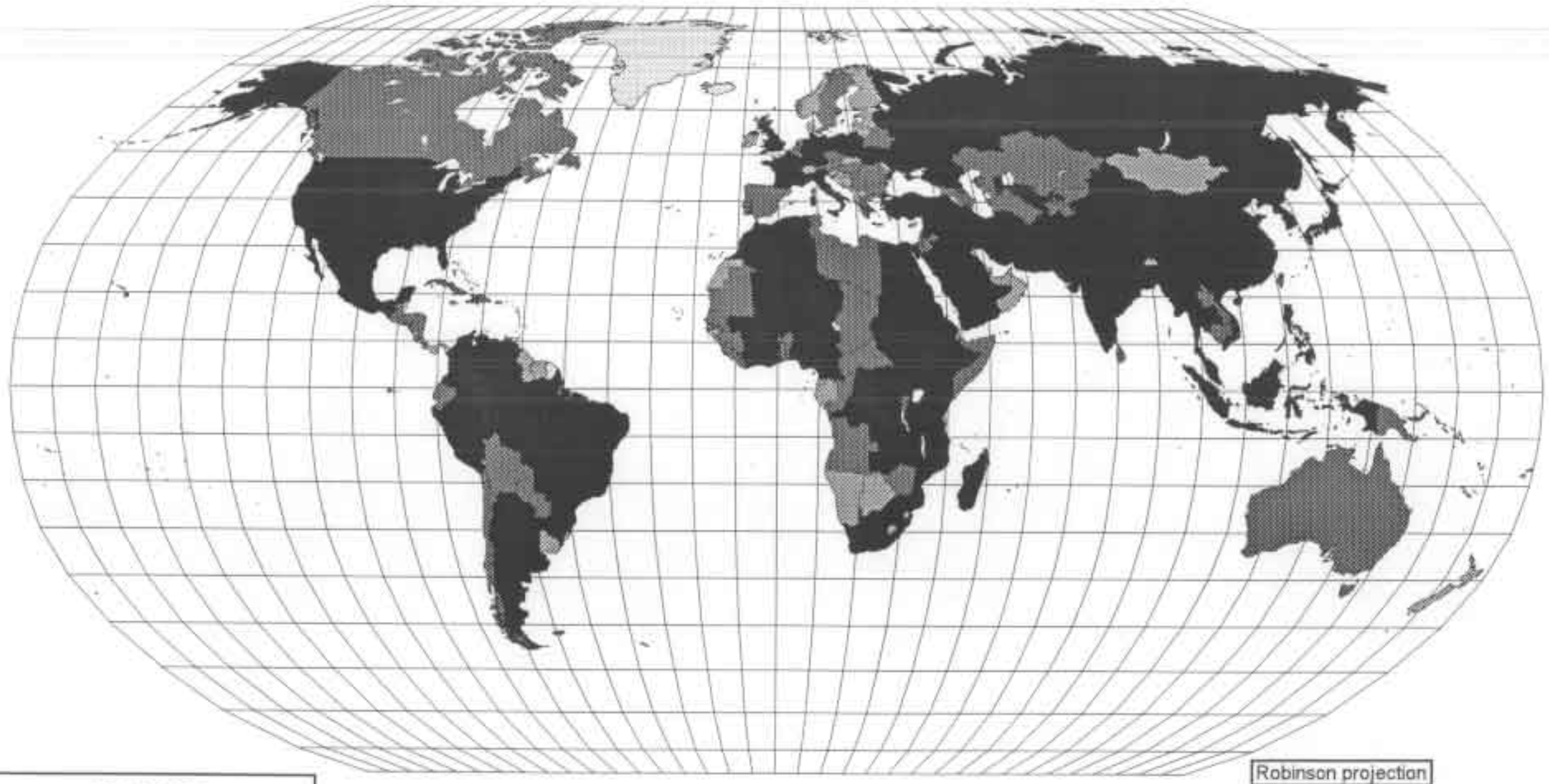
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Annual number of births

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

BIRTHS

.00 to	6669.00
6669.00 to	85850.00
85850.00 to	421831.00
421831.00 to	**********
Missing	

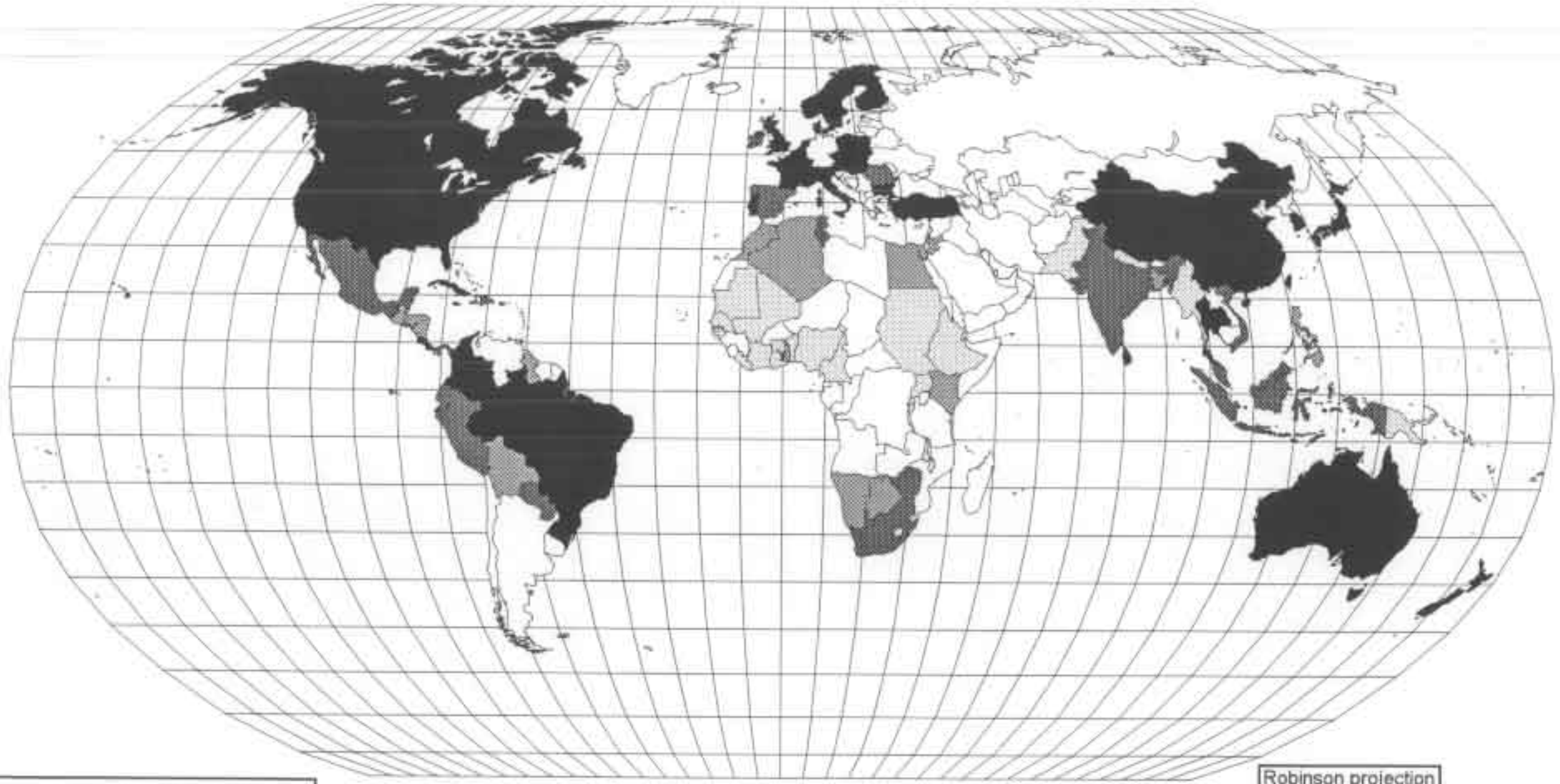
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Contraception use: % of in-union women using.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

CONTRACEPT

1.00 to	21.00
21.00 to	41.00
41.00 to	61.00
61.00 to	81.00
Missing	

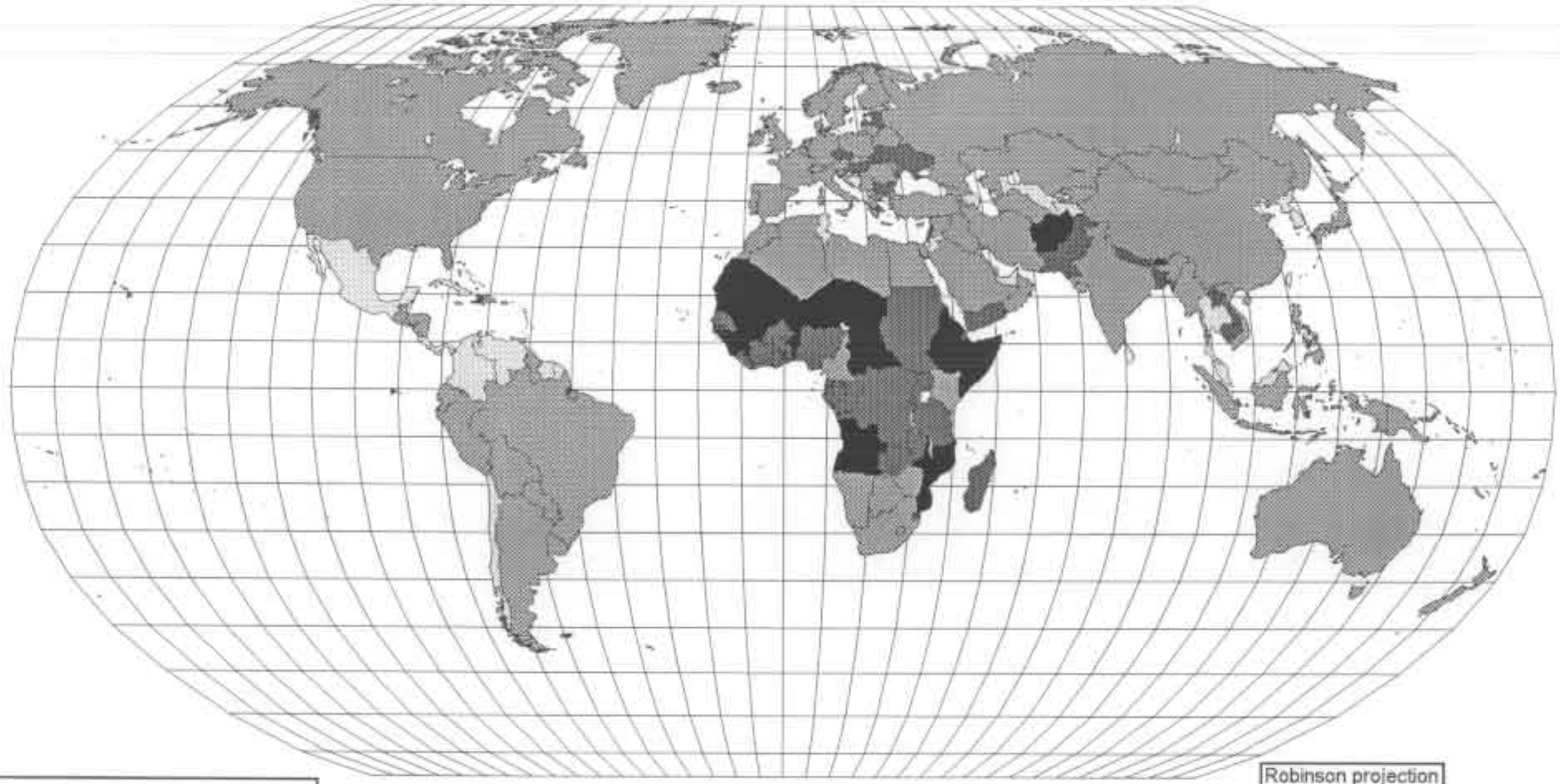
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Crude death rate: deaths per 1000 population

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

DEATHRATE

.90 to	6.42
6.42 to	11.95
11.95 to	17.47
17.47 to	23.00
Missing	

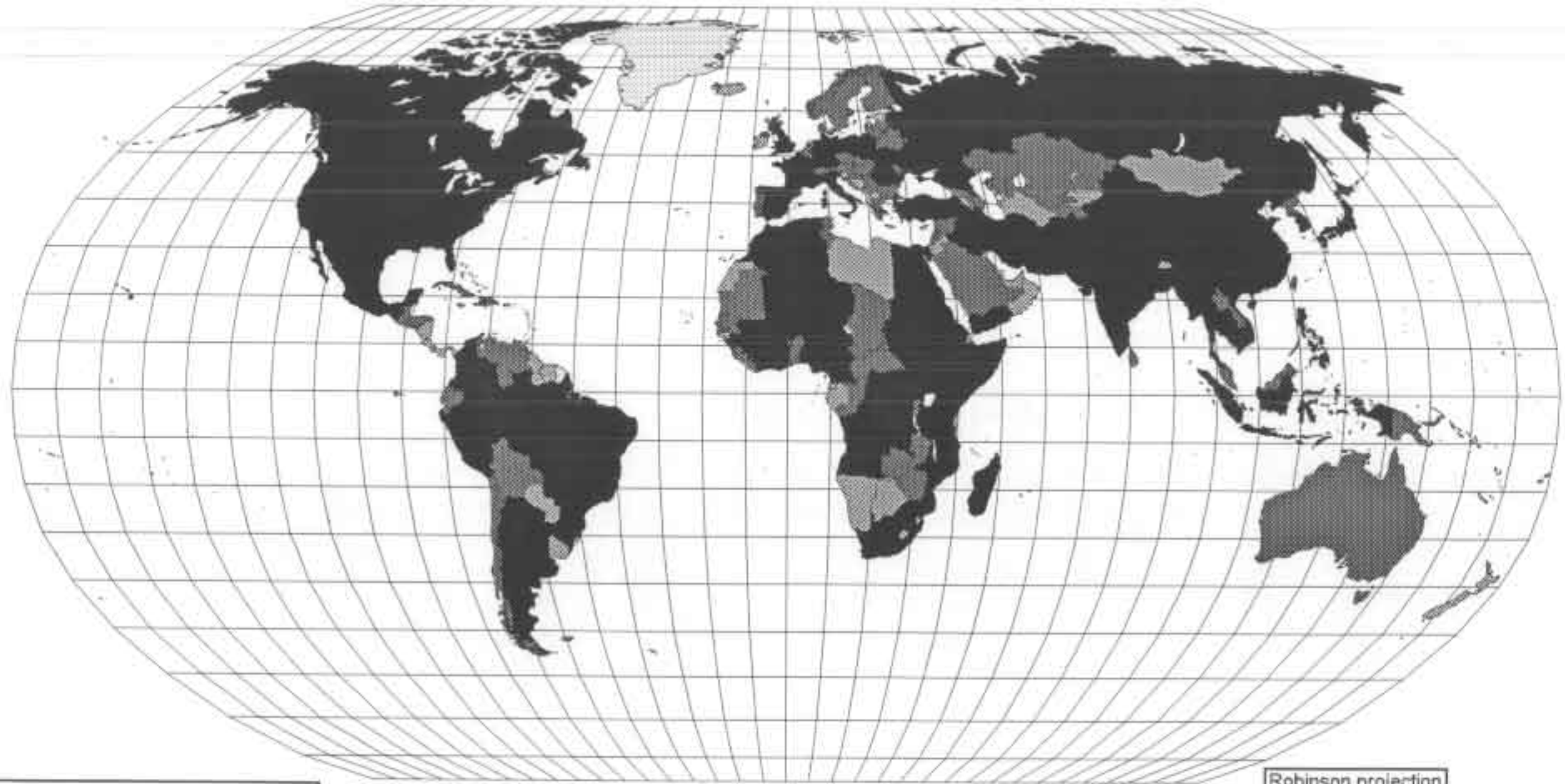
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Annual number of deaths

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

DEATHS

1.00 to 1612.00
1612.00 to 32494.00
32494.00 to 142568.00
142568.00 to 9002265.00
Missing

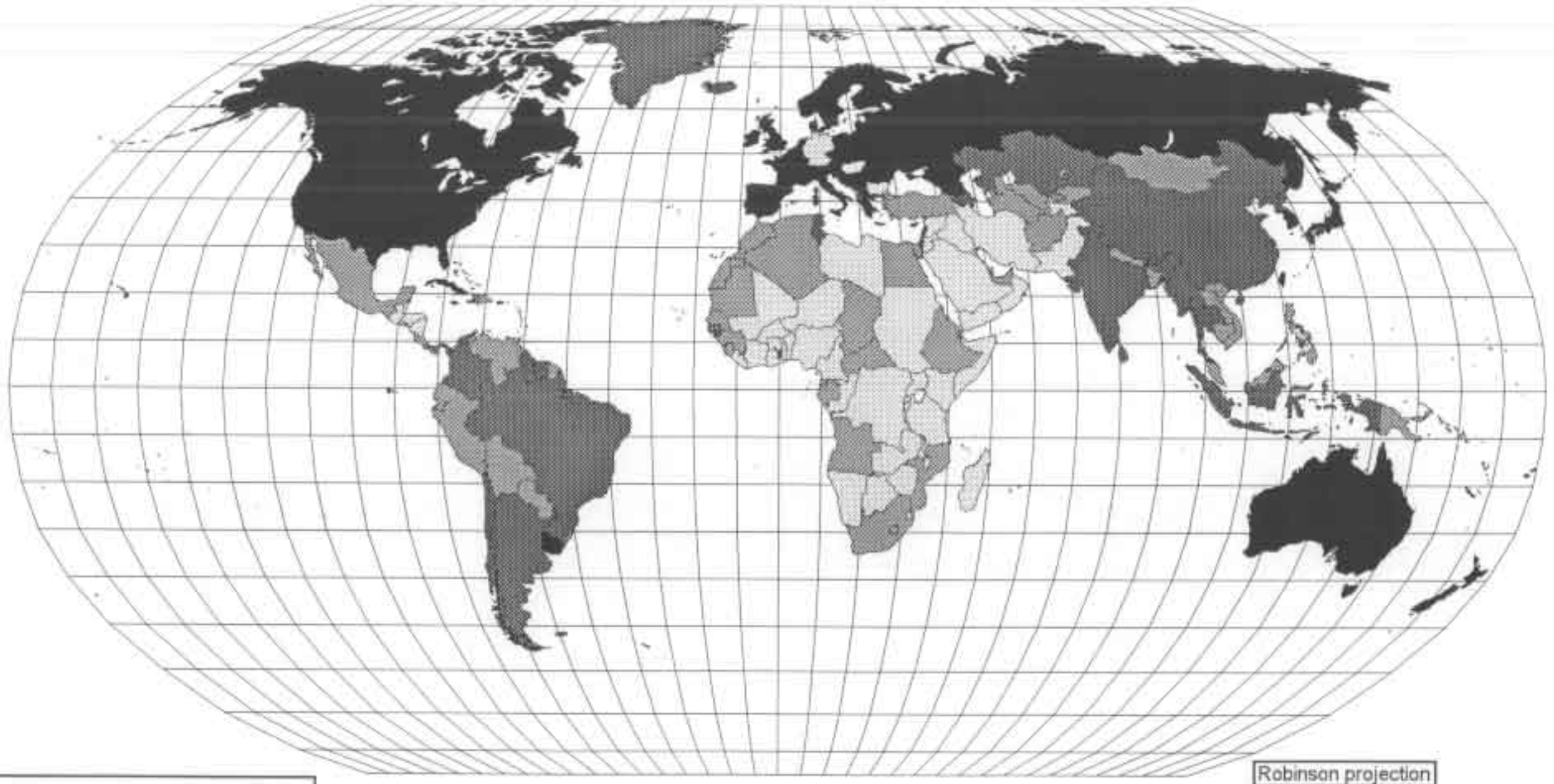
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population doubling time at current rate (years)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinsan projection

DOUBLETIME

-1732.87 to	23.66
23.66 to	32.85
32.85 to	60.27
60.27 to	1386.29
Missing	

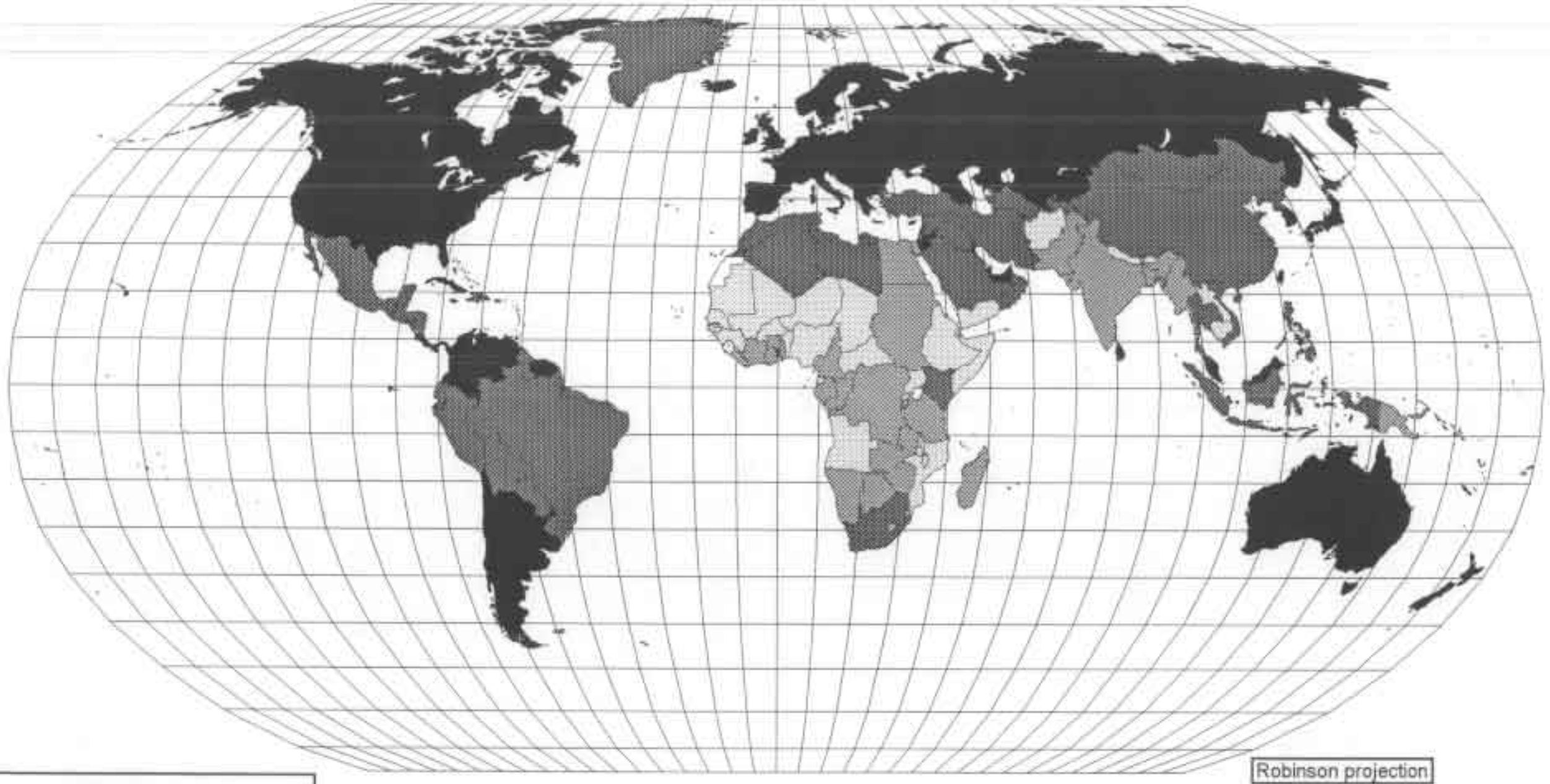
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Life expectancy of females at birth (years)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

FEM_LIFE

42.00 to	52.00
52.00 to	62.00
62.00 to	72.00
72.00 to	82.00
Missing	

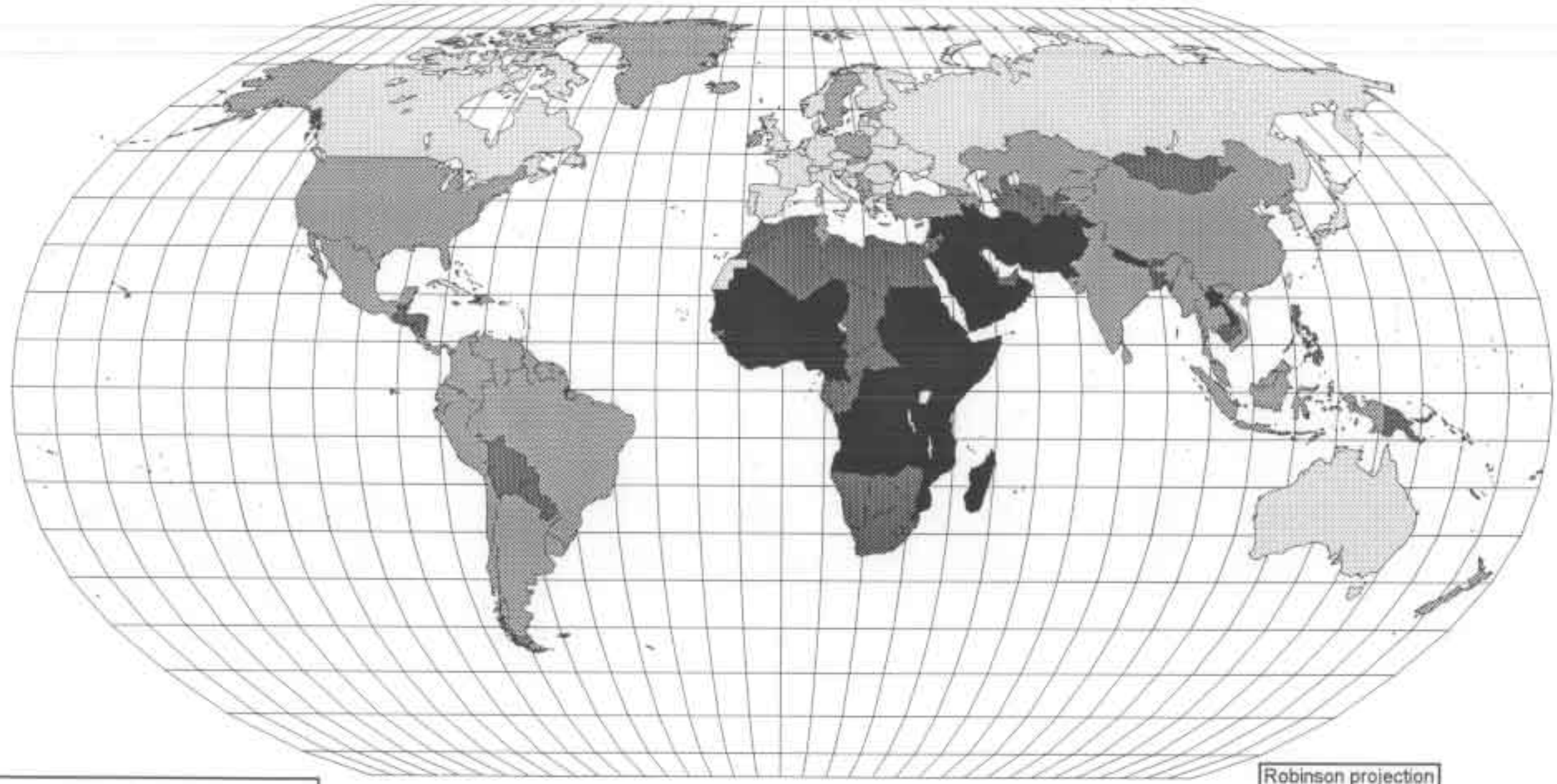
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Total fertility rate: avg. # children a woman will ever bear.

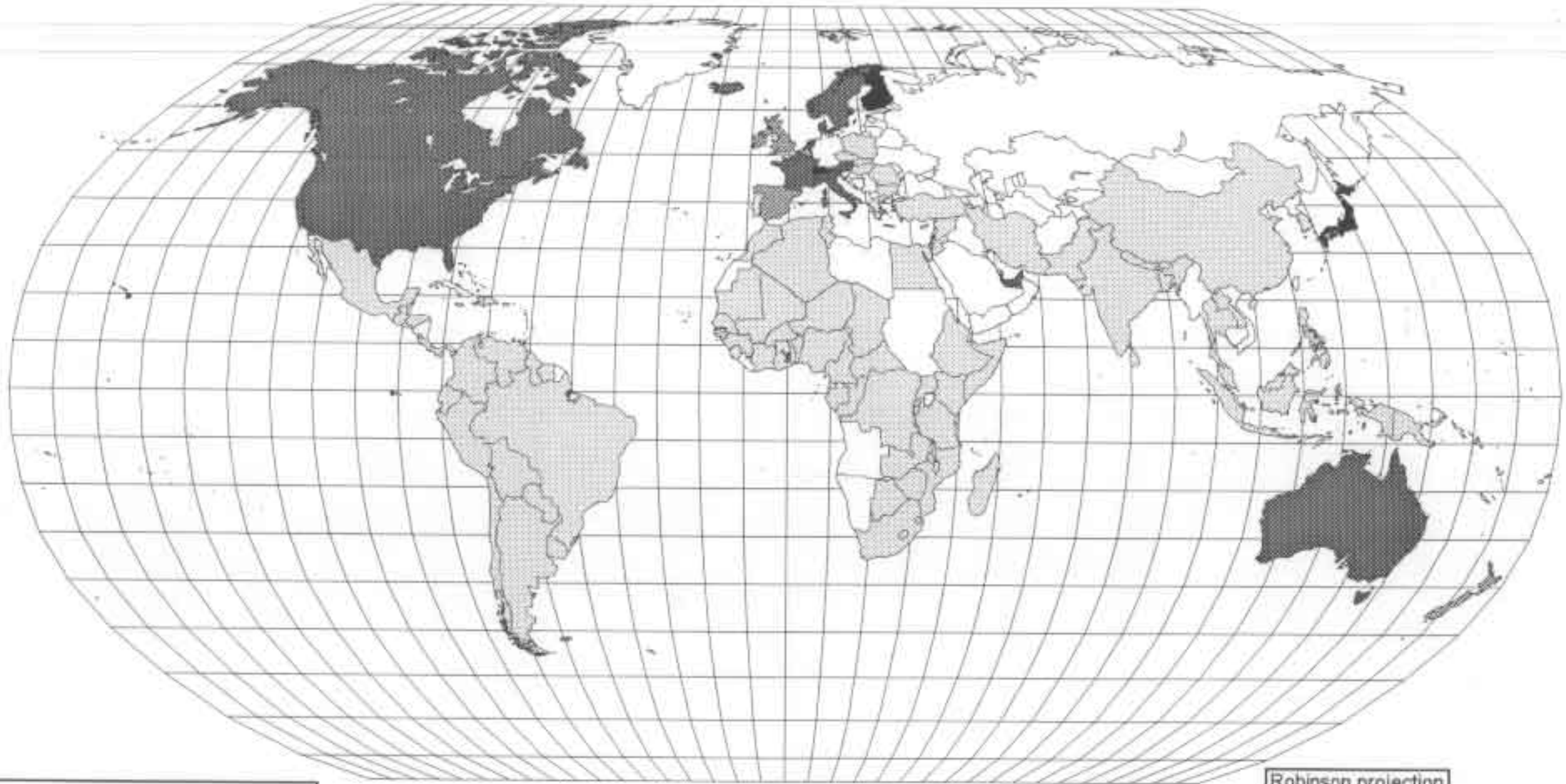
Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Gross national product: [current?] US $ per capita.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

GNP_PERCAP

80.00 to 8257.50
8257.50 to 16435.00
16435.00 to 24612.50
24612.50 to 32790.00
Missing

KM

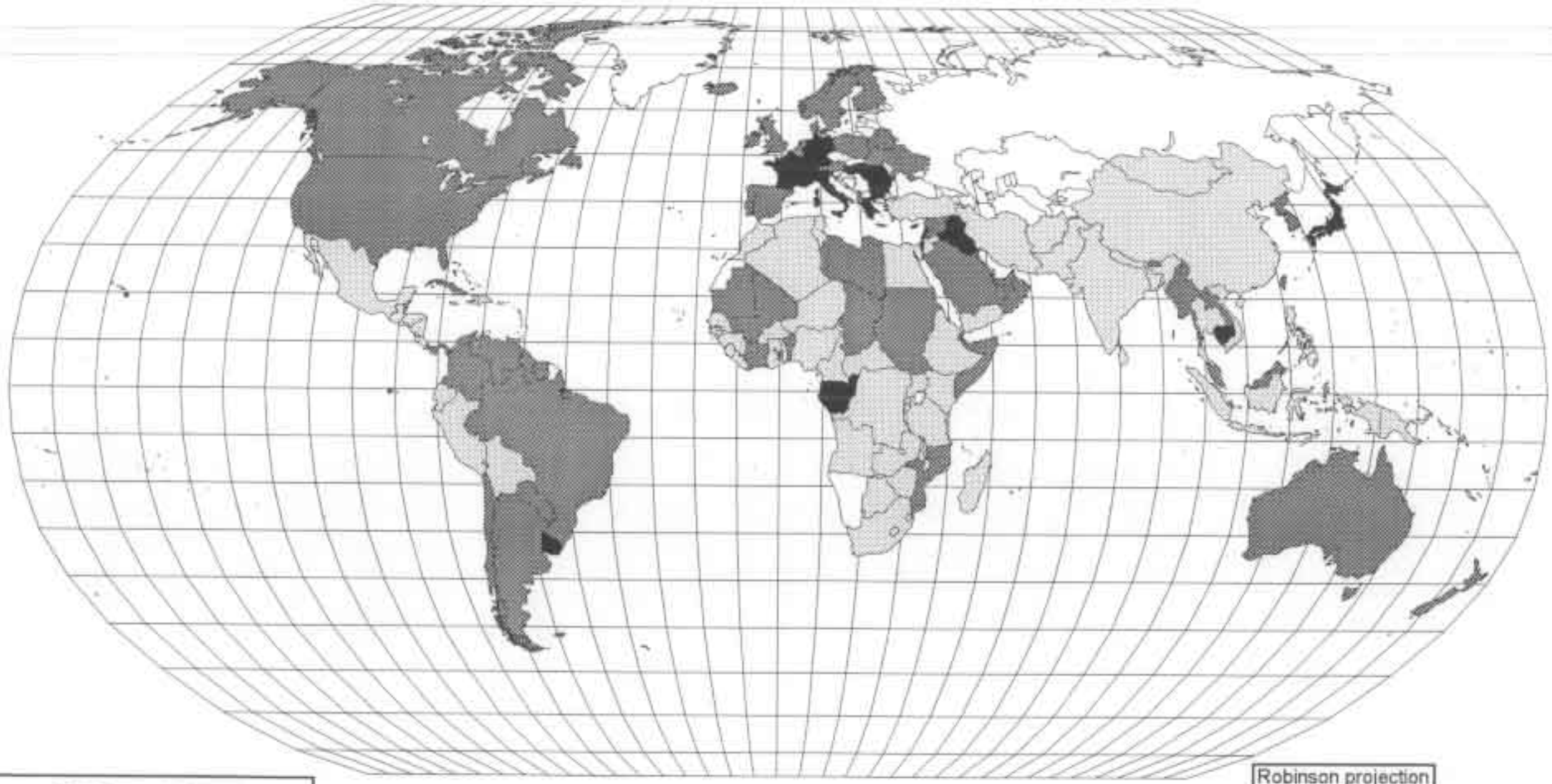
0 2000 4000

57

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Government view of fertility

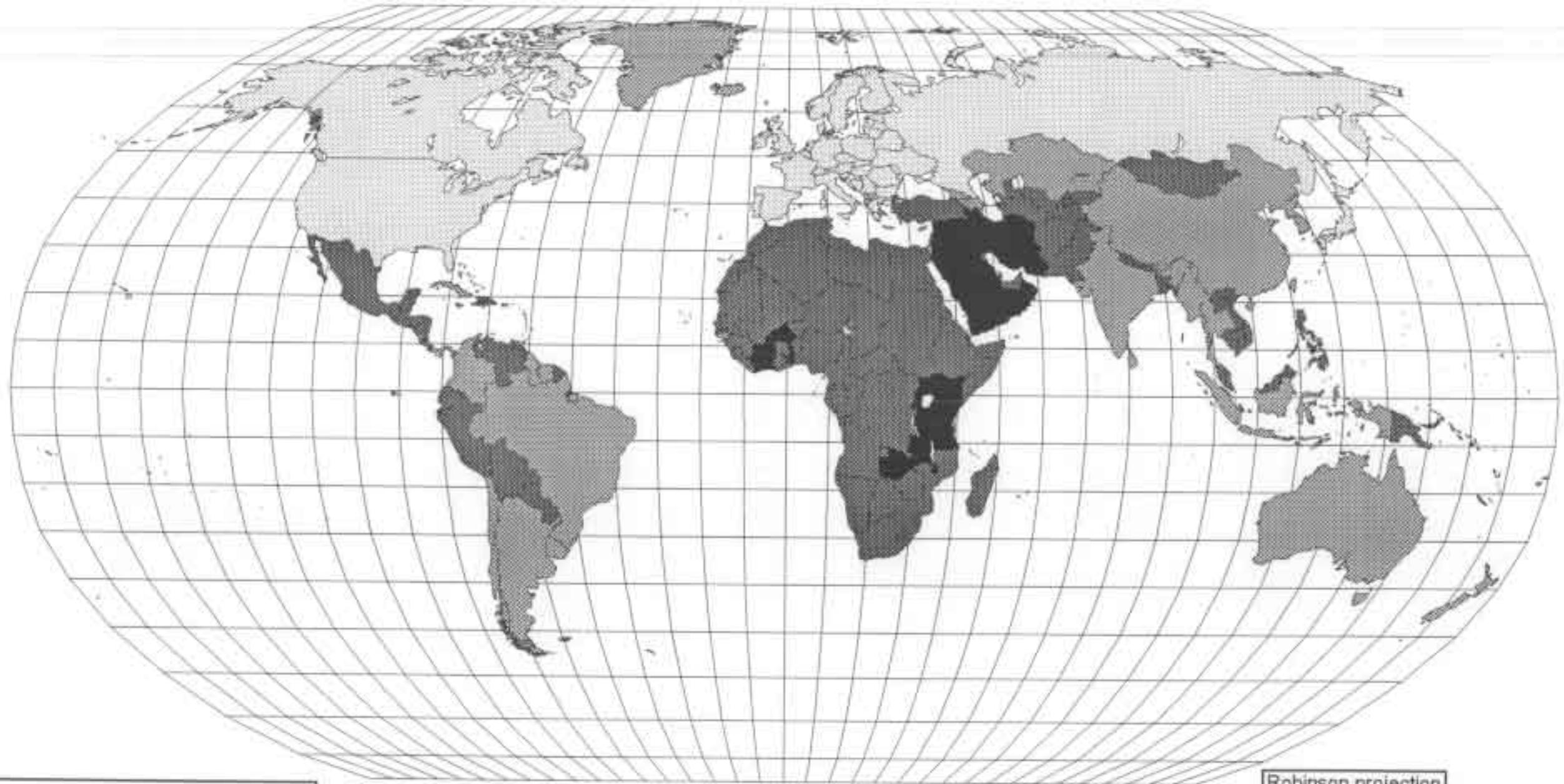
Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Rate of natural increase: annual %

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

INCR_RATE

-.42 to	.82
.82 to	2.07
2.07 to	3.31
3.31 to	4.56
Missing	

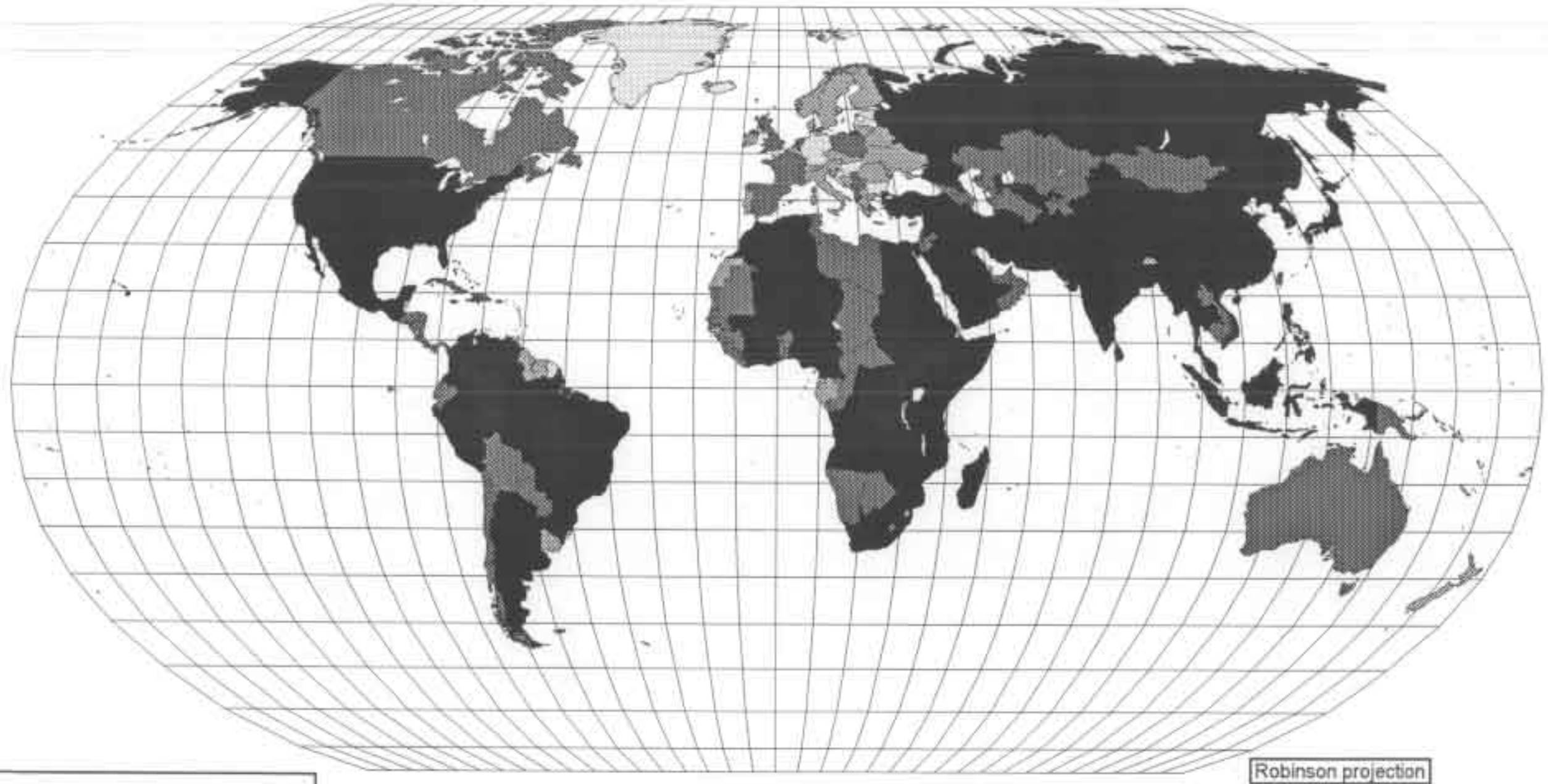
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Annual natural increase

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

INCREASE

.00 to 3223.00
3223.00 to 40351.00
40351.00 to 239904.00
239904.00 to **********
Missing

KM

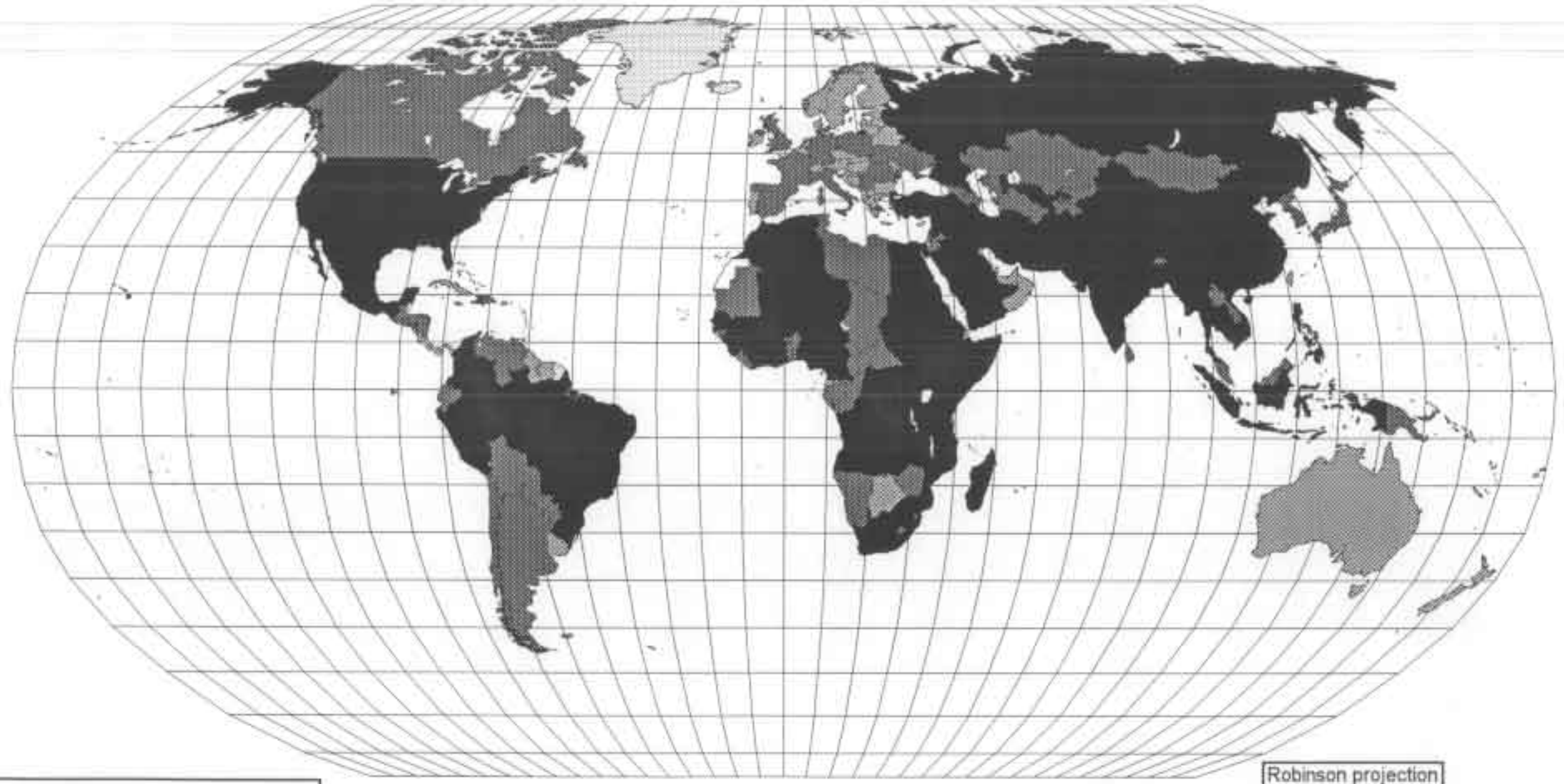
0 2000 4000

609

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Infant deaths: under age one year.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



INF_DEATHS

1.00 to 302.00
302.00 to 2907.00
2907.00 to 29142.00
29142.00 to 2441555.00
Missing

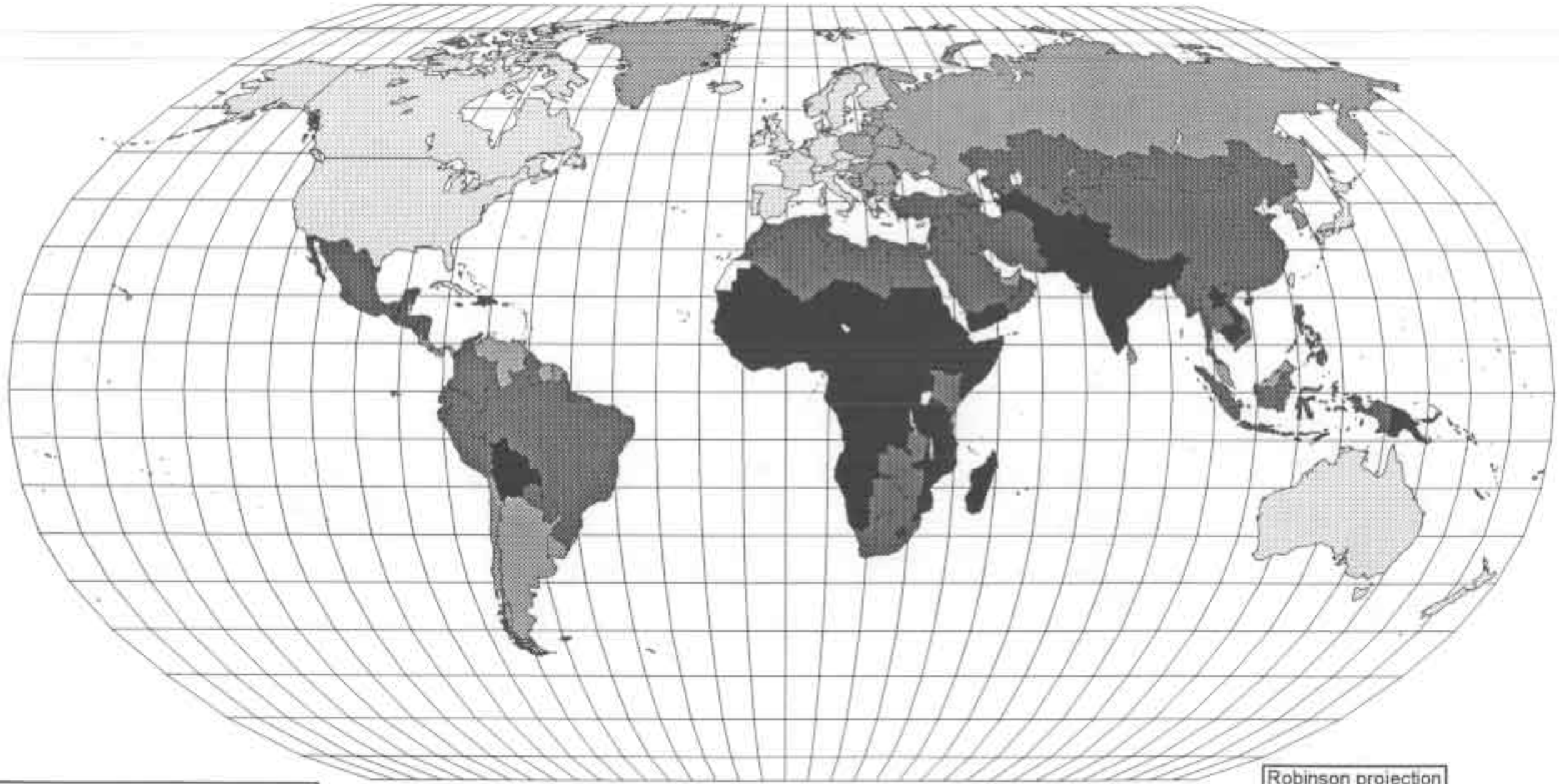
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Infant mortality rate: deaths per 1000 live births

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

INF_DTH_RT

2.70 to	13.20
13.20 to	33.00
33.00 to	76.00
76.00 to	172.00
Missing	

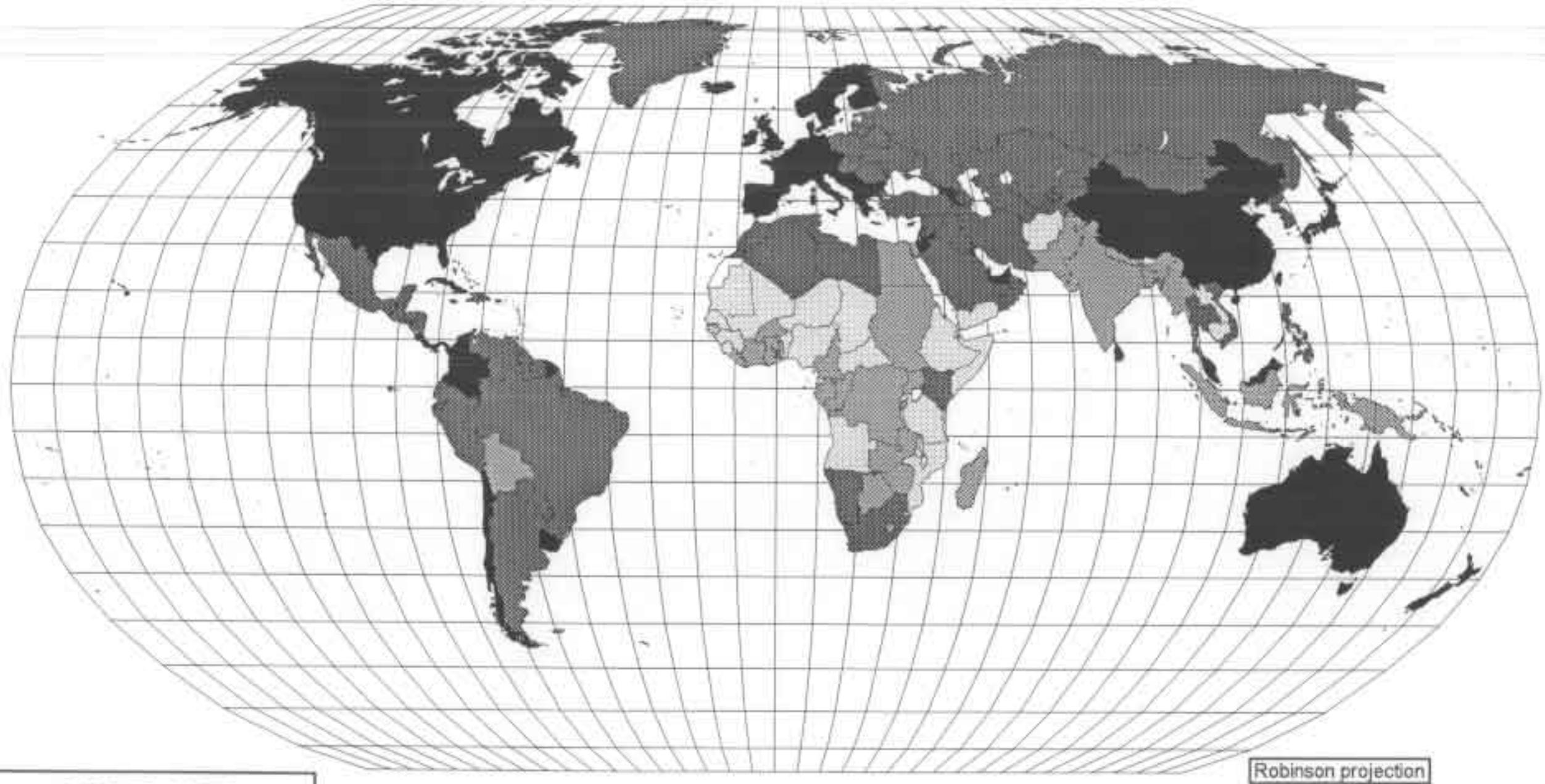
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Life expectancy of males at birth (years)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

MALE_LIFE

40.00 to	49.25
49.25 to	58.50
58.50 to	67.75
67.75 to	77.00
Missing	

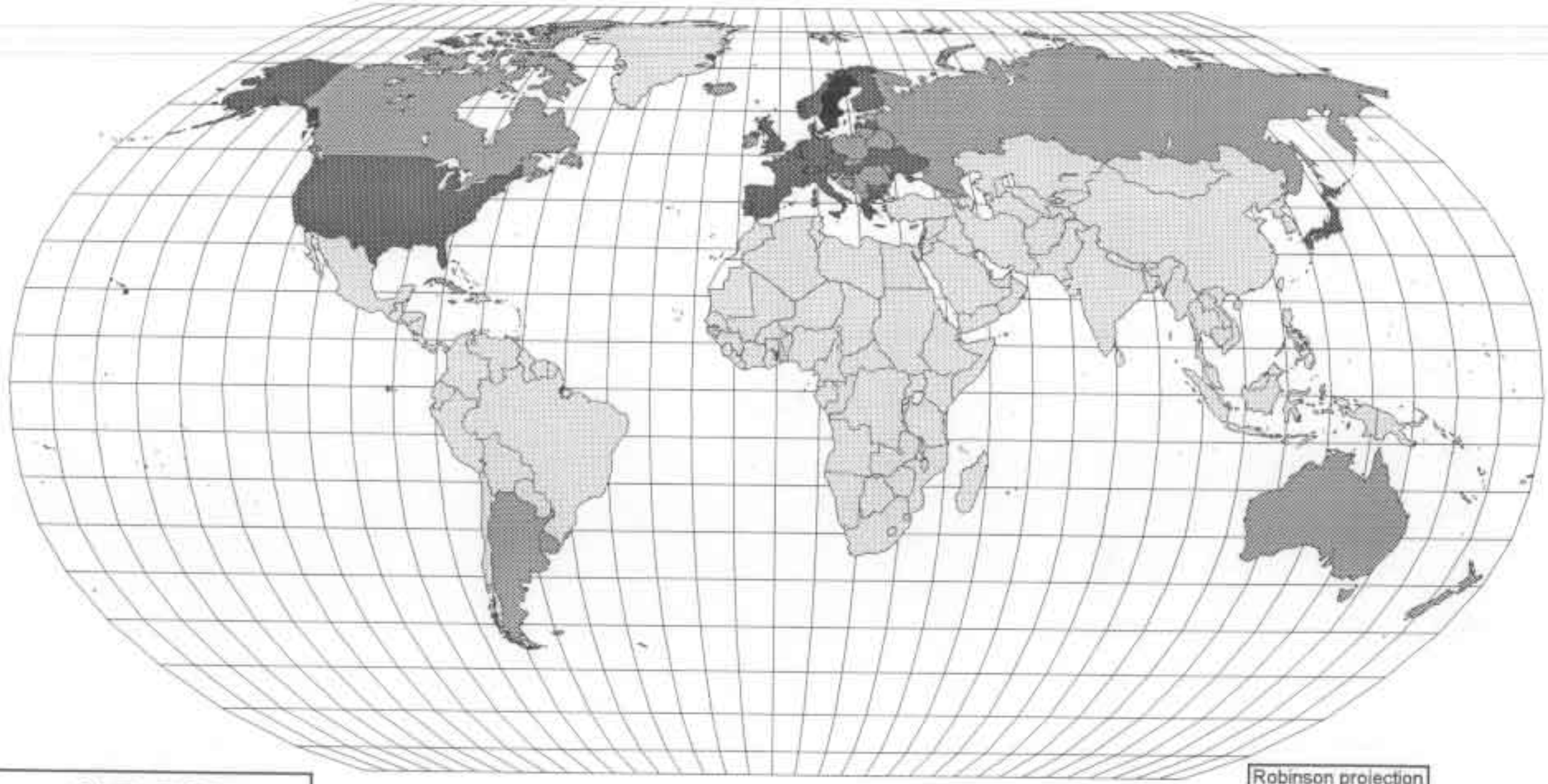
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population age 65 and over (%)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

OLD_PCT

.80 to	6.22
6.22 to	11.65
11.65 to	17.07
17.07 to	22.50
Missing	

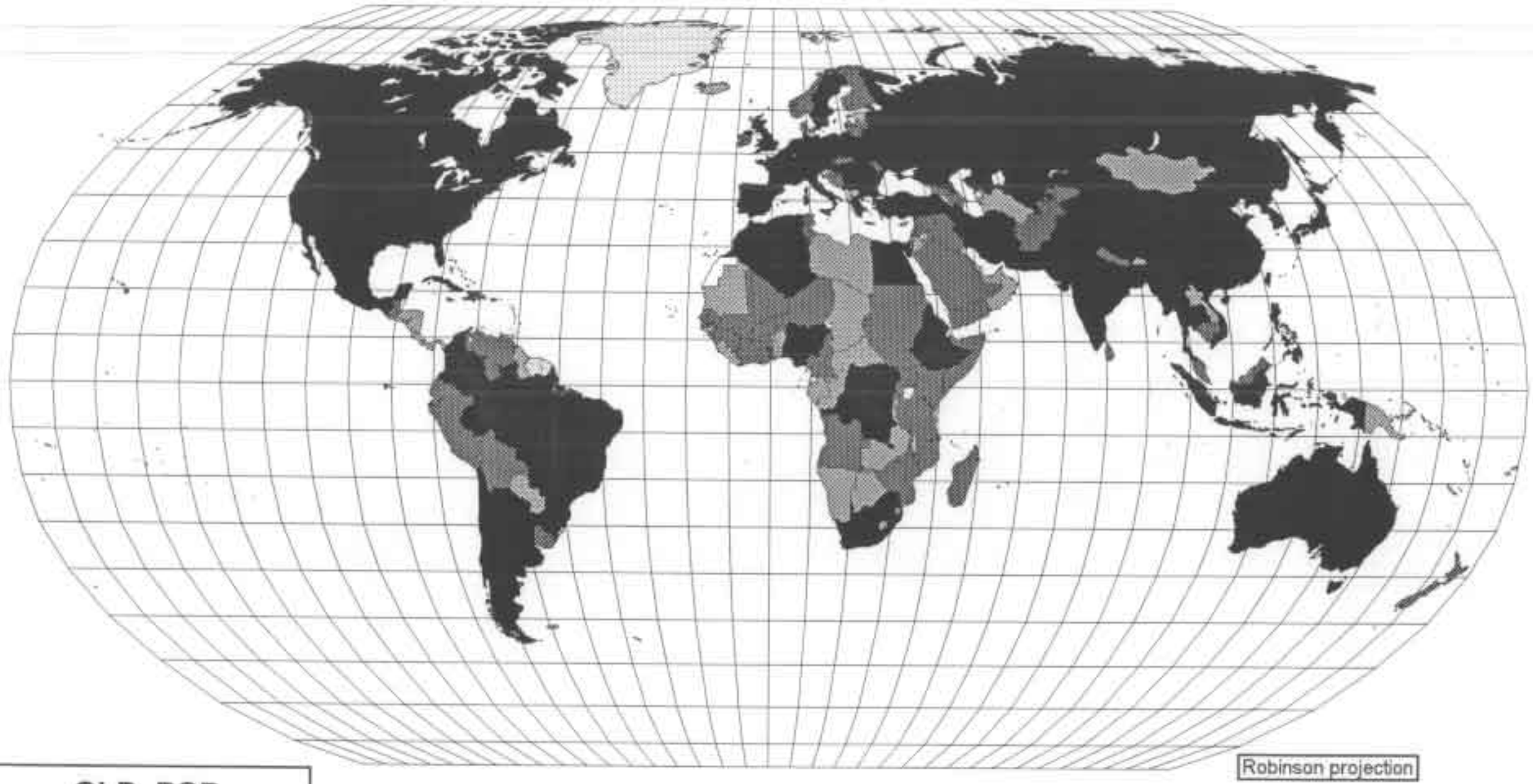
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population age 65 and over (thousands)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

OLD_POP

.00 to	18.00
18.00 to	206.00
206.00 to	808.00
808.00 to	65283.00
Missing	

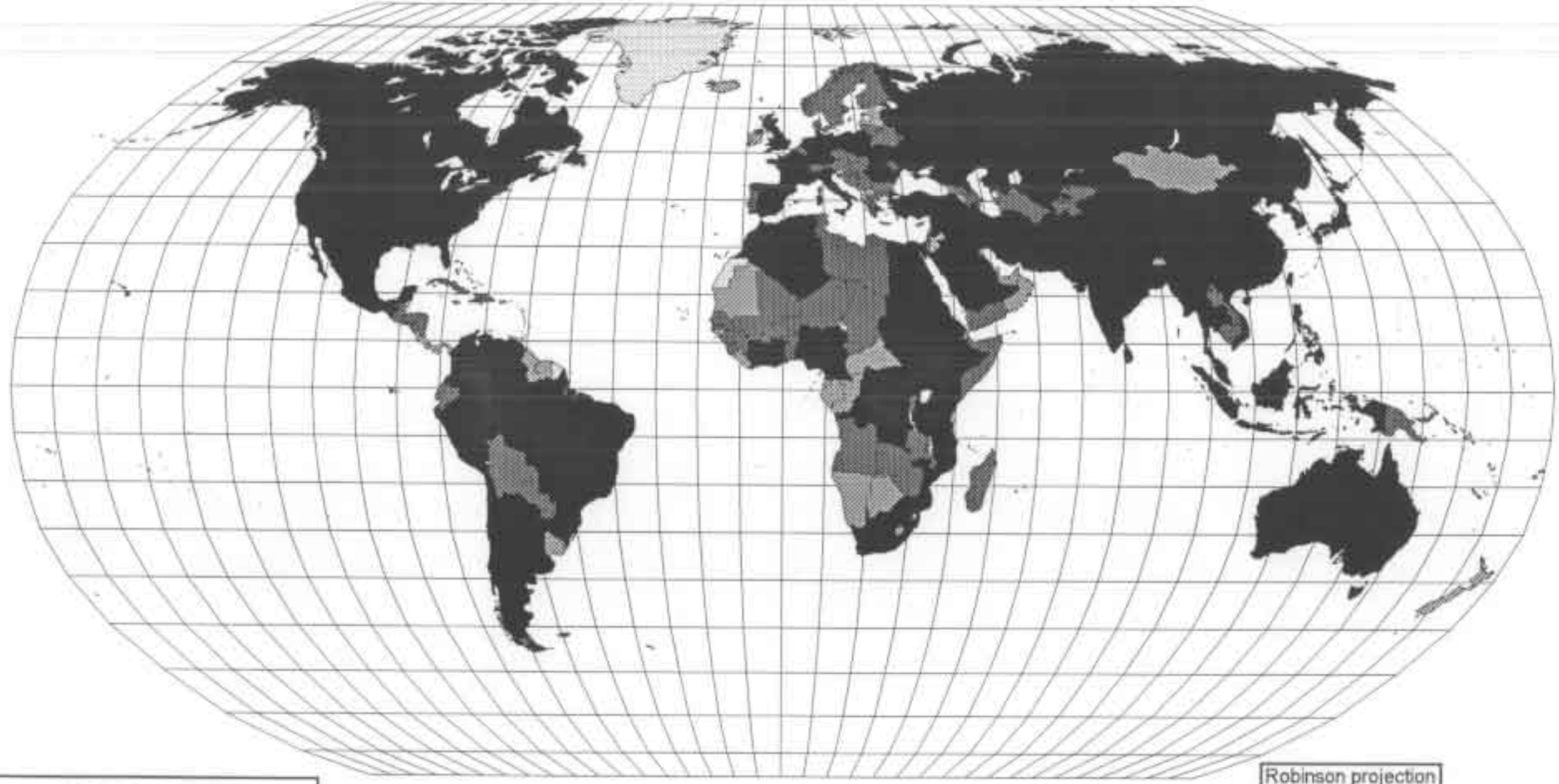
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population (thousands), mid-1991

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

POPULATION

.00 to	206.00
206.00 to	3721.00
3721.00 to	11942.00
11942.00 to	1165771.00
Missing	

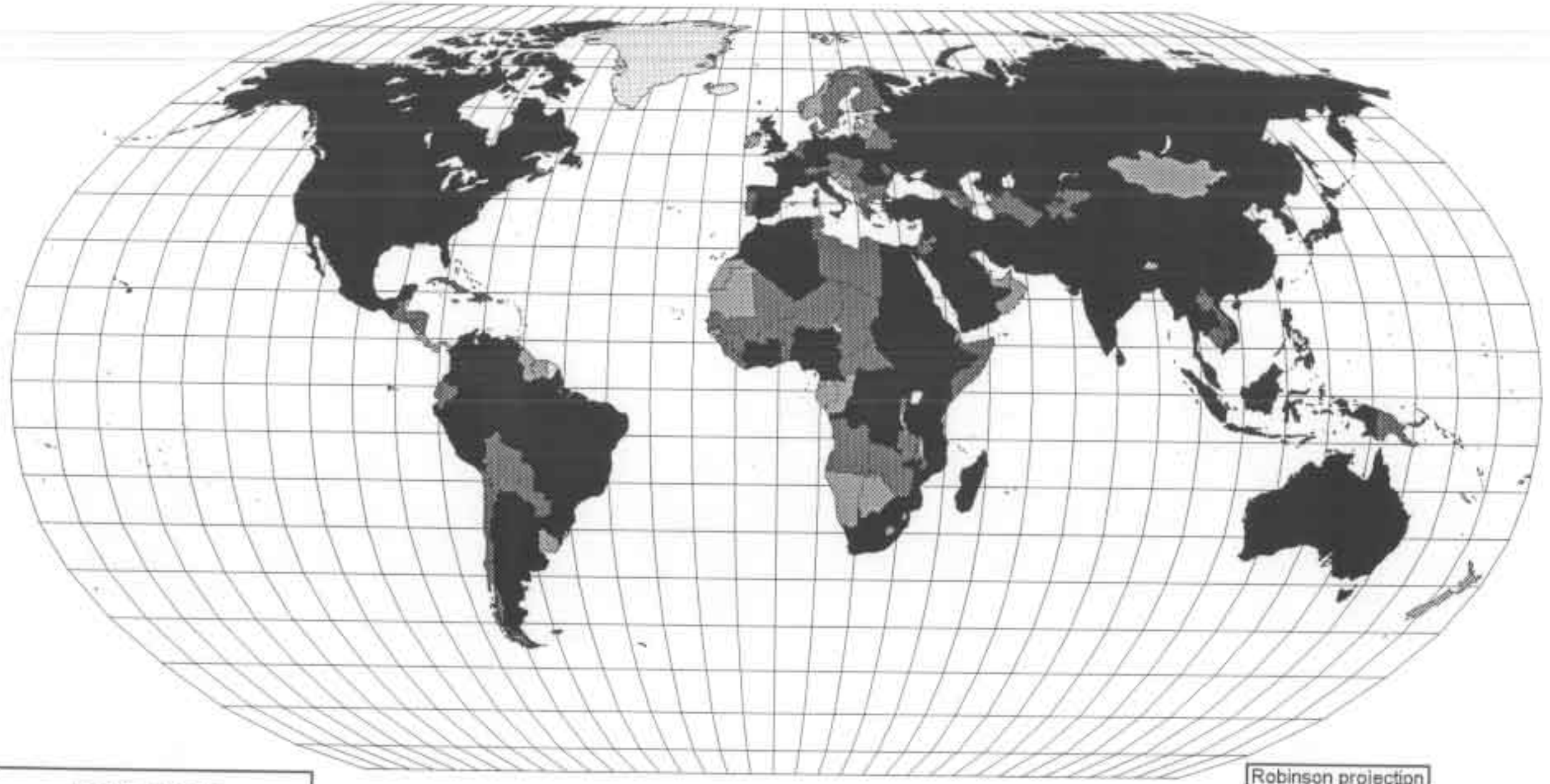
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population (thousands), projected to 2010

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



POP_2010

.00 to 288.00
288.00 to 4873.00
4873.00 to 17182.00
17182.00 to 1420312.00
Missing

Robinson projection

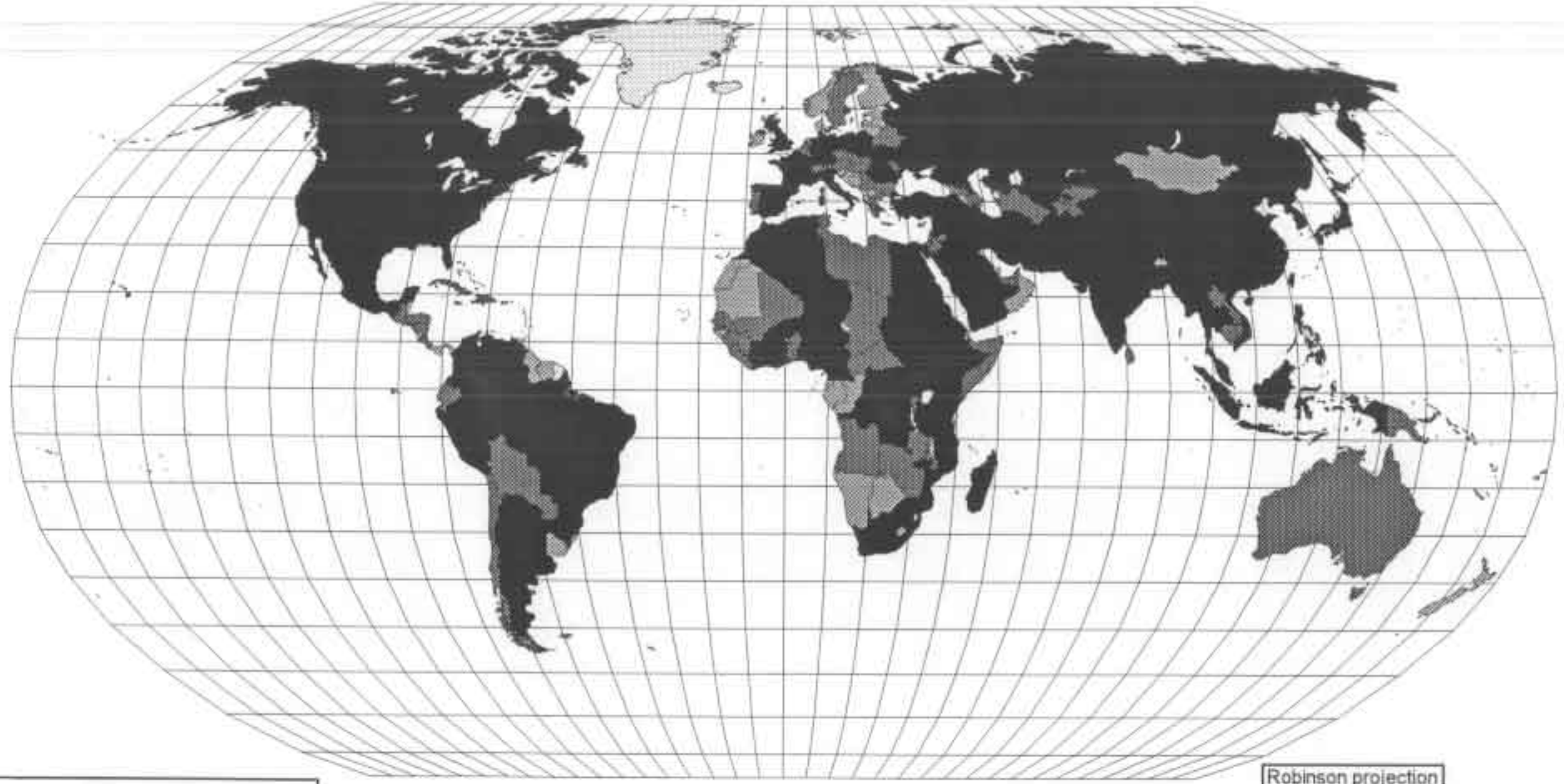
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population (thousands), projected to 2025

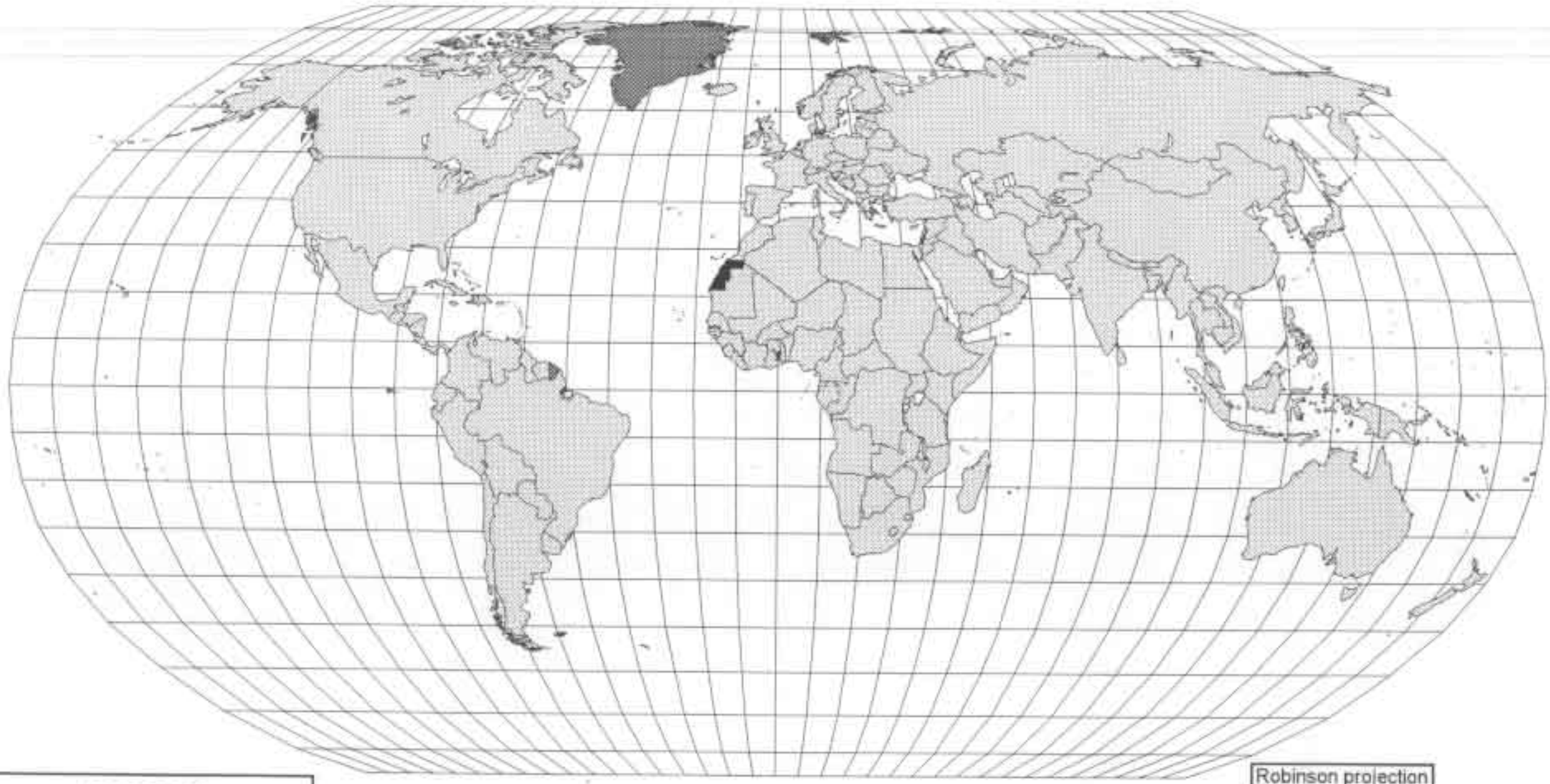
Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Political status.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

STATUS

- Independent
- Dependent
- Unresolved
- Missing

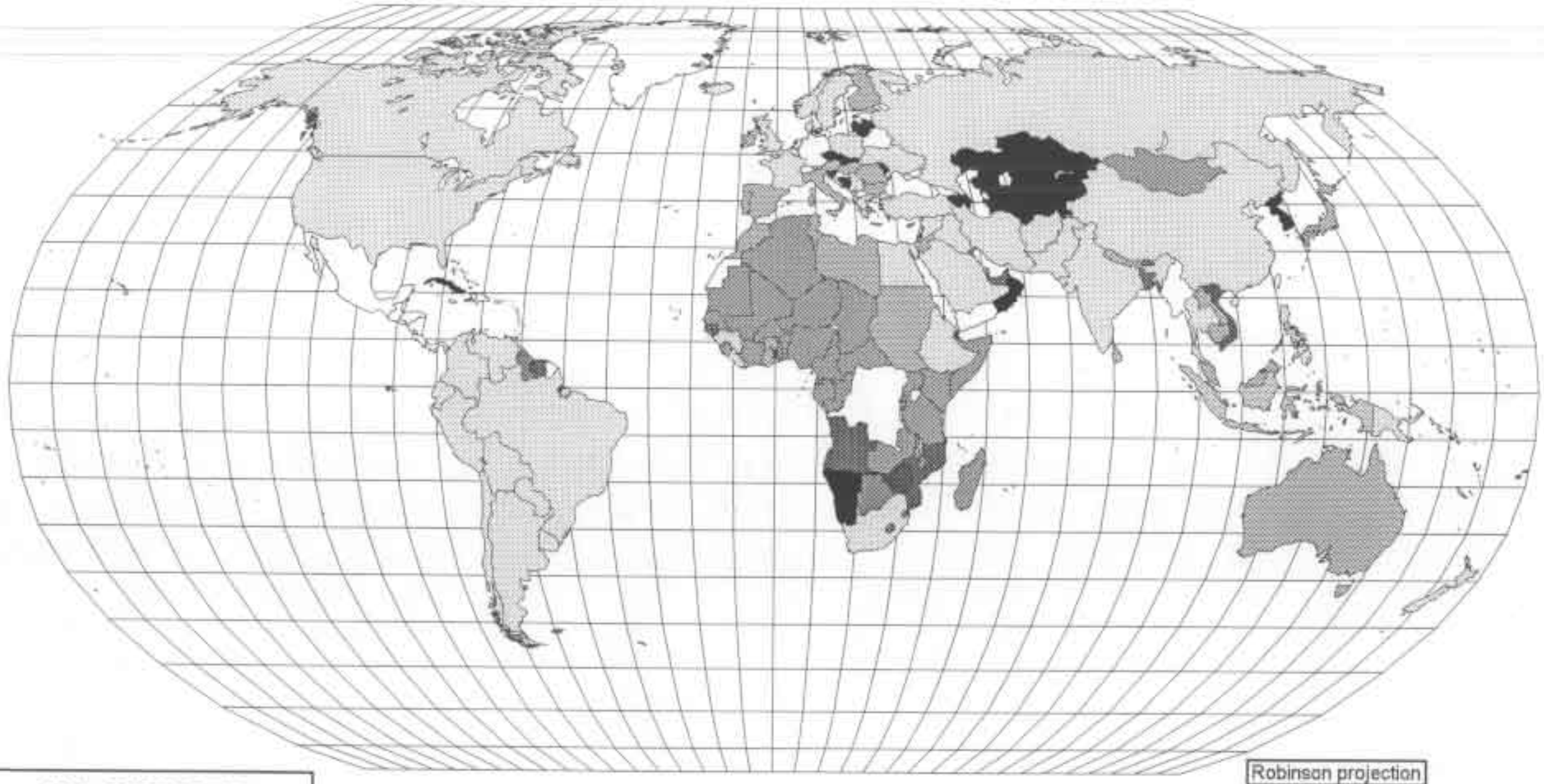
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

United Nations membership (year)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

UN_MEMBER

- 1945, 1946, 1947, 1948, 1949
- 1950, 1951, 1952, 1953, 1954
- 1955, 1956, 1957, 1958, 1959
- 1960, 1961, 1962, 1963, 1964
- 1965, 1966, 1967, 1968, 1969
- 1970, 1971, 1972, 1973, 1974
- 1975, 1976, 1977, 1978, 1979
- 1980, 1981, 1982, 1983, 1984
- 1985, 1986, 1987, 1988, 1989
- 1990, 1991, 1992, 1993, 1994
- Missing

KM

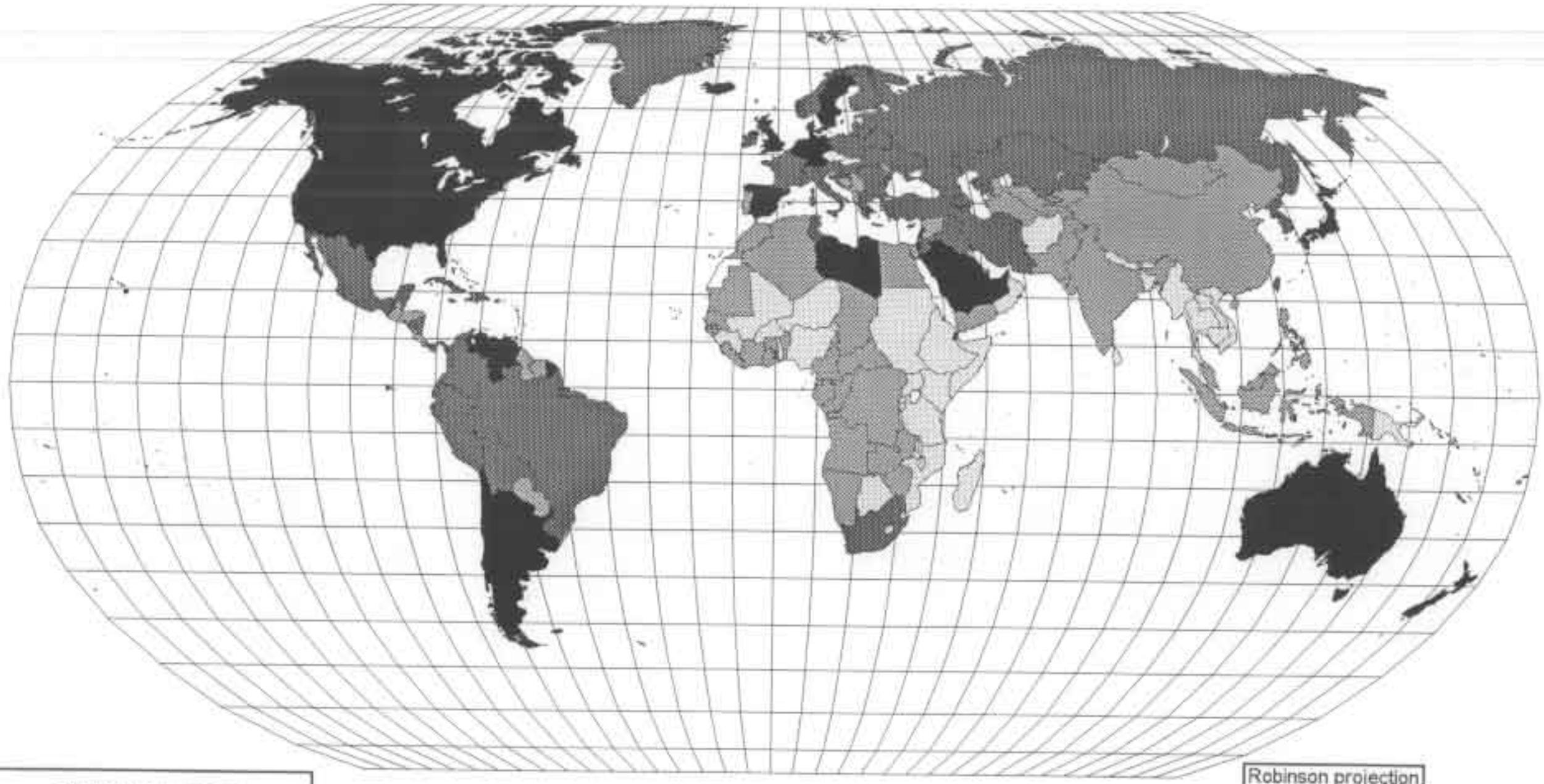
0 2000 4000

02

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Urban population (%)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



URBAN_PCT

.00 to	25.00
25.00 to	50.00
50.00 to	75.00
75.00 to	100.00
Missing	

Robinson projection

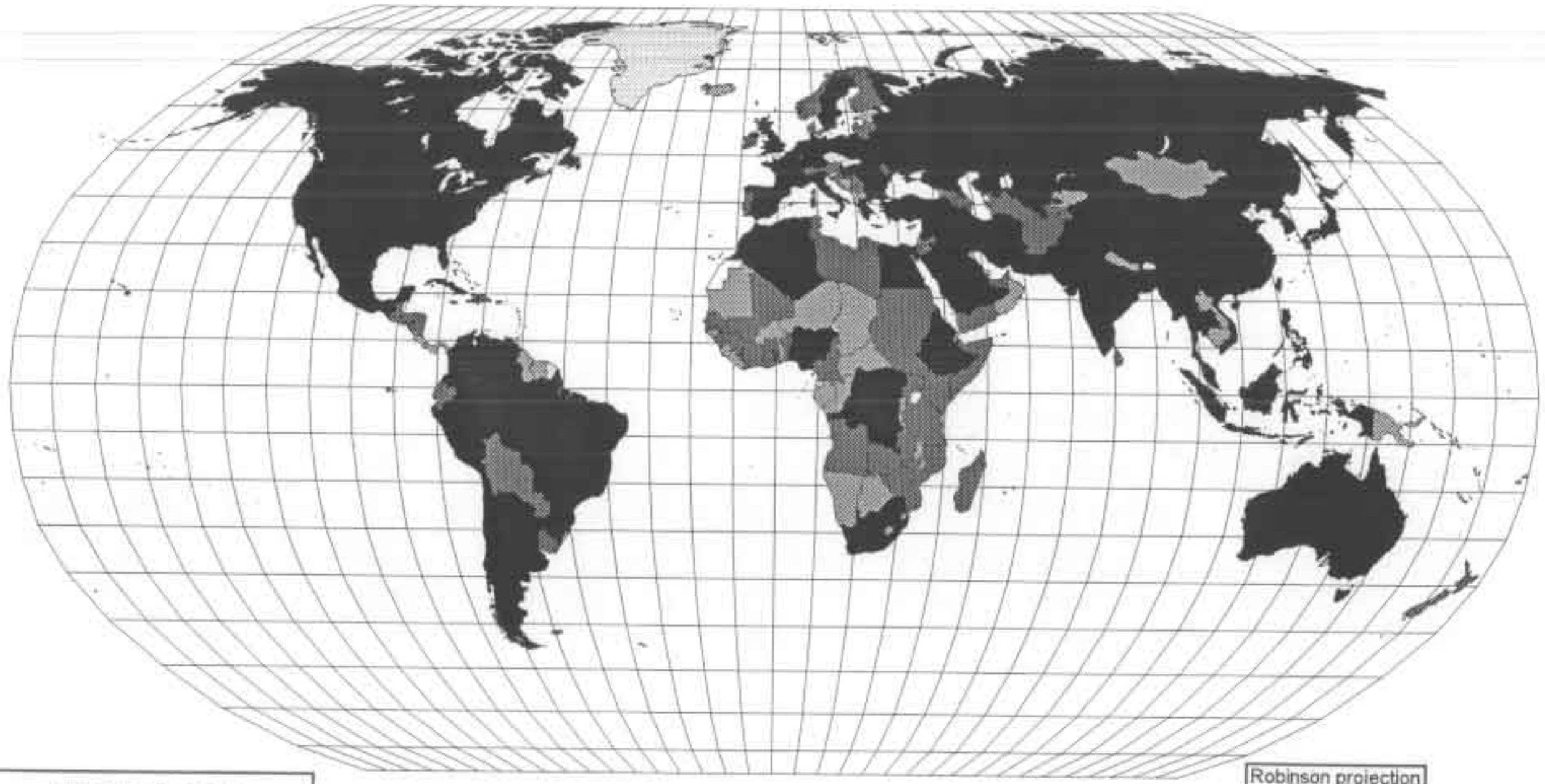
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Urban population (thousands)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

URBAN_POP

.00 to	119.00
119.00 to	1722.00
1722.00 to	5706.00
5706.00 to	305782.00
Missing	

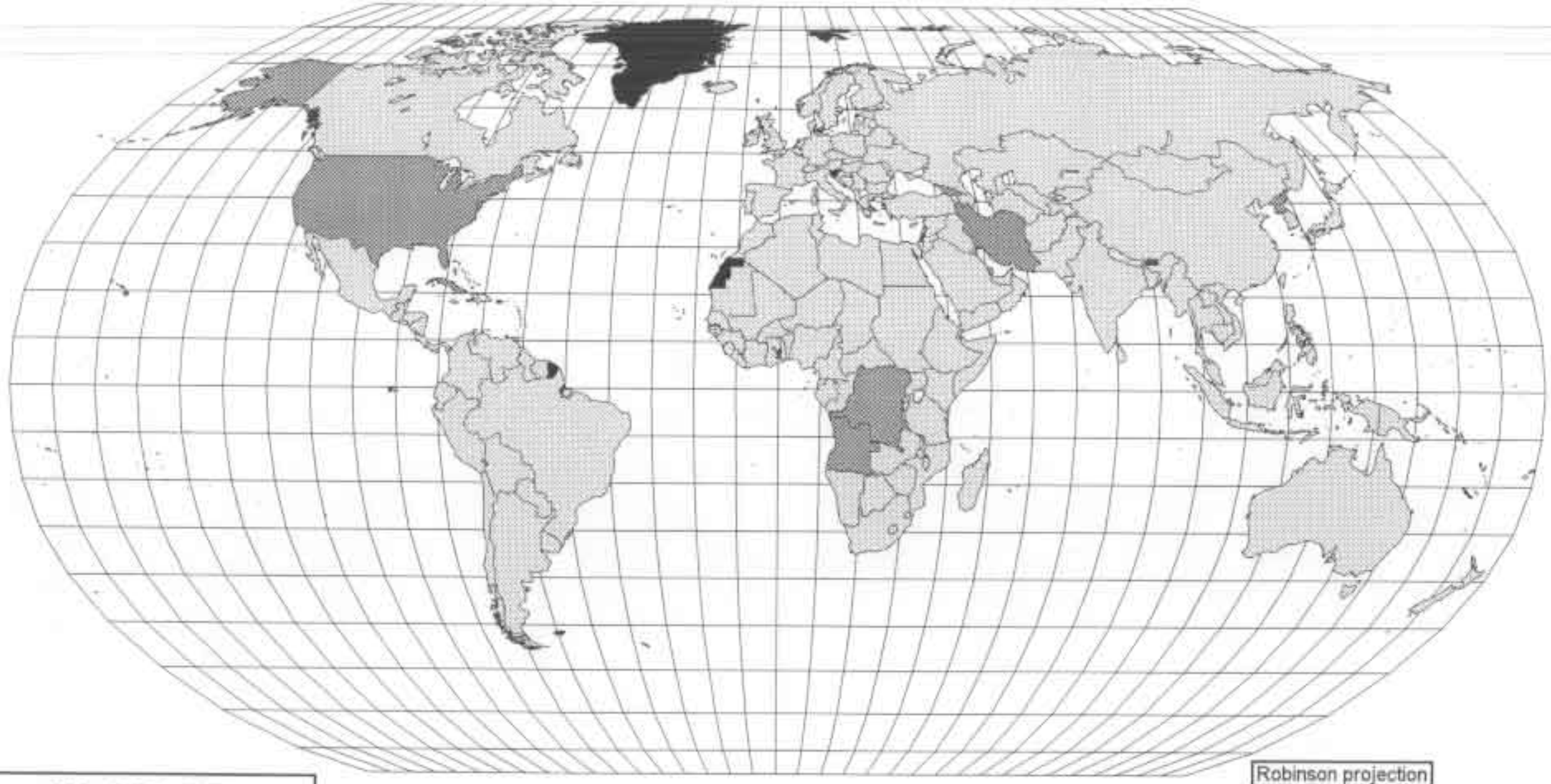
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Diplomatic relations with U.S.A.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

US_DIP_REL

- Yes
- No
- Informal
- With parent
- Missing

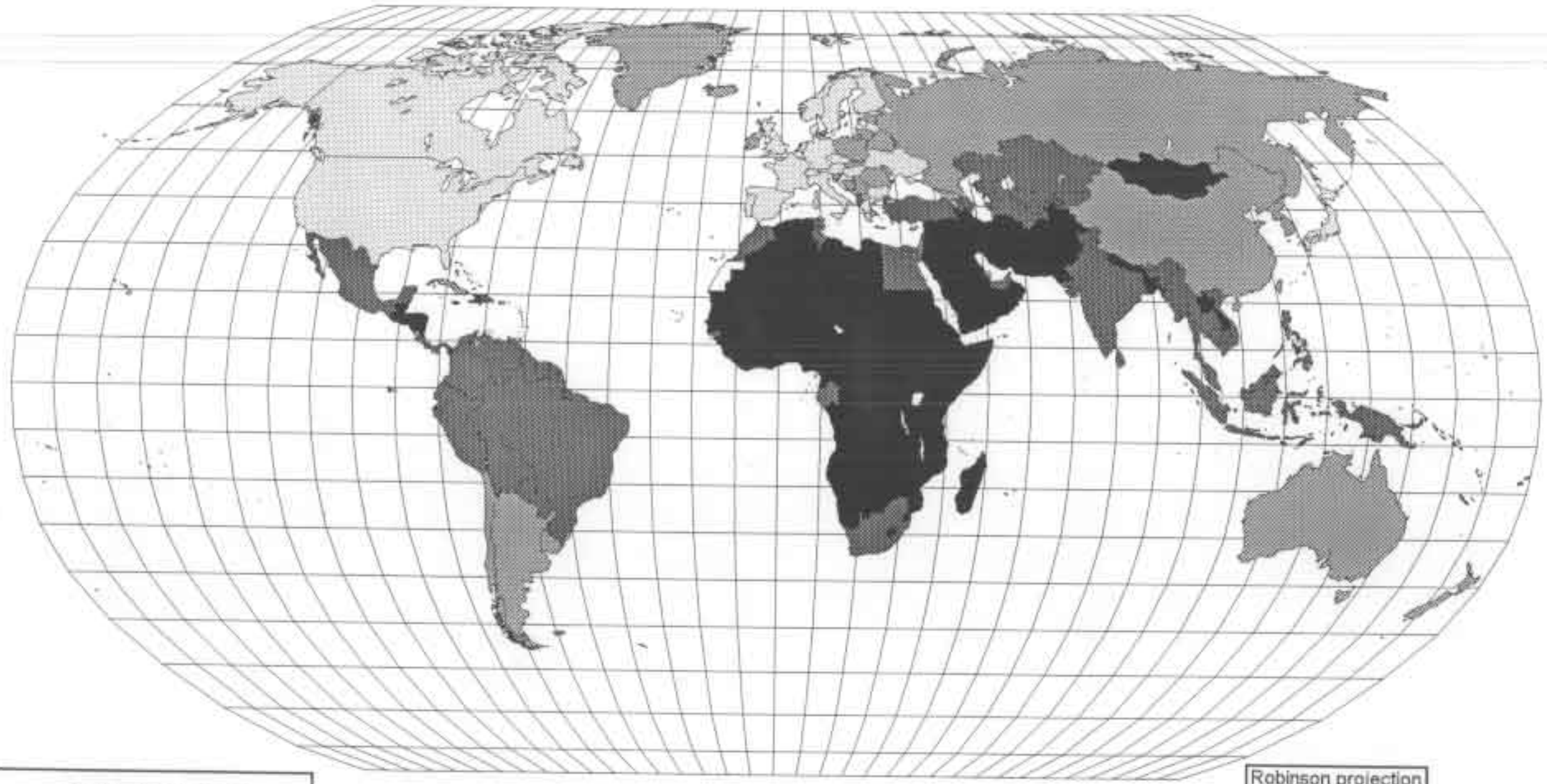
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population under age 15 (%)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



YOUNG_PCT

11.90 to	21.70
21.70 to	31.50
31.50 to	41.30
41.30 to	51.10
Missing	

Robinson projection

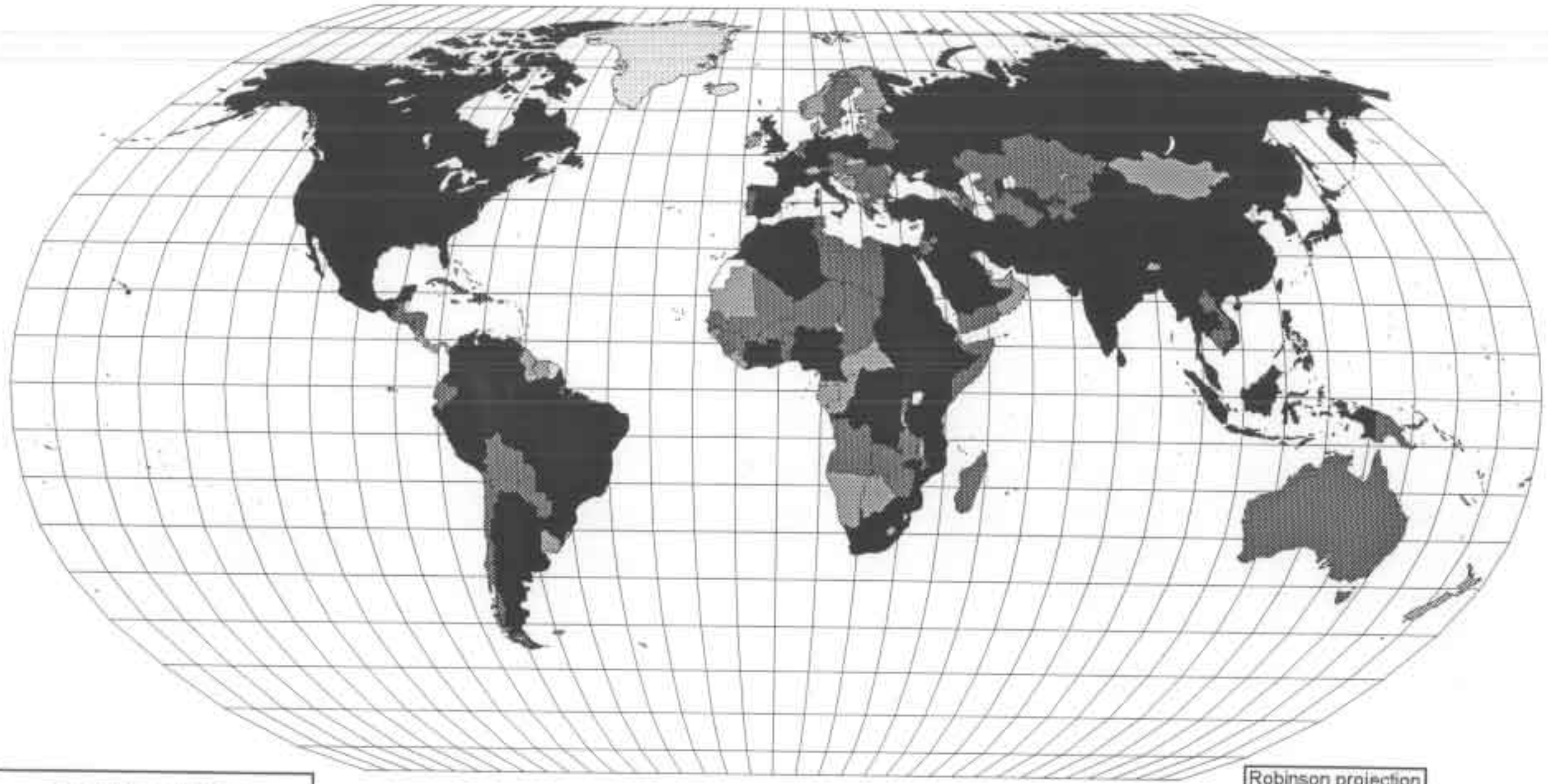
KM

0 2000 4000

ASSESSMENT: GLOBAL VIEW--POPULATION VARIABLES

Population under age 15 (thousands)

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



Robinson projection

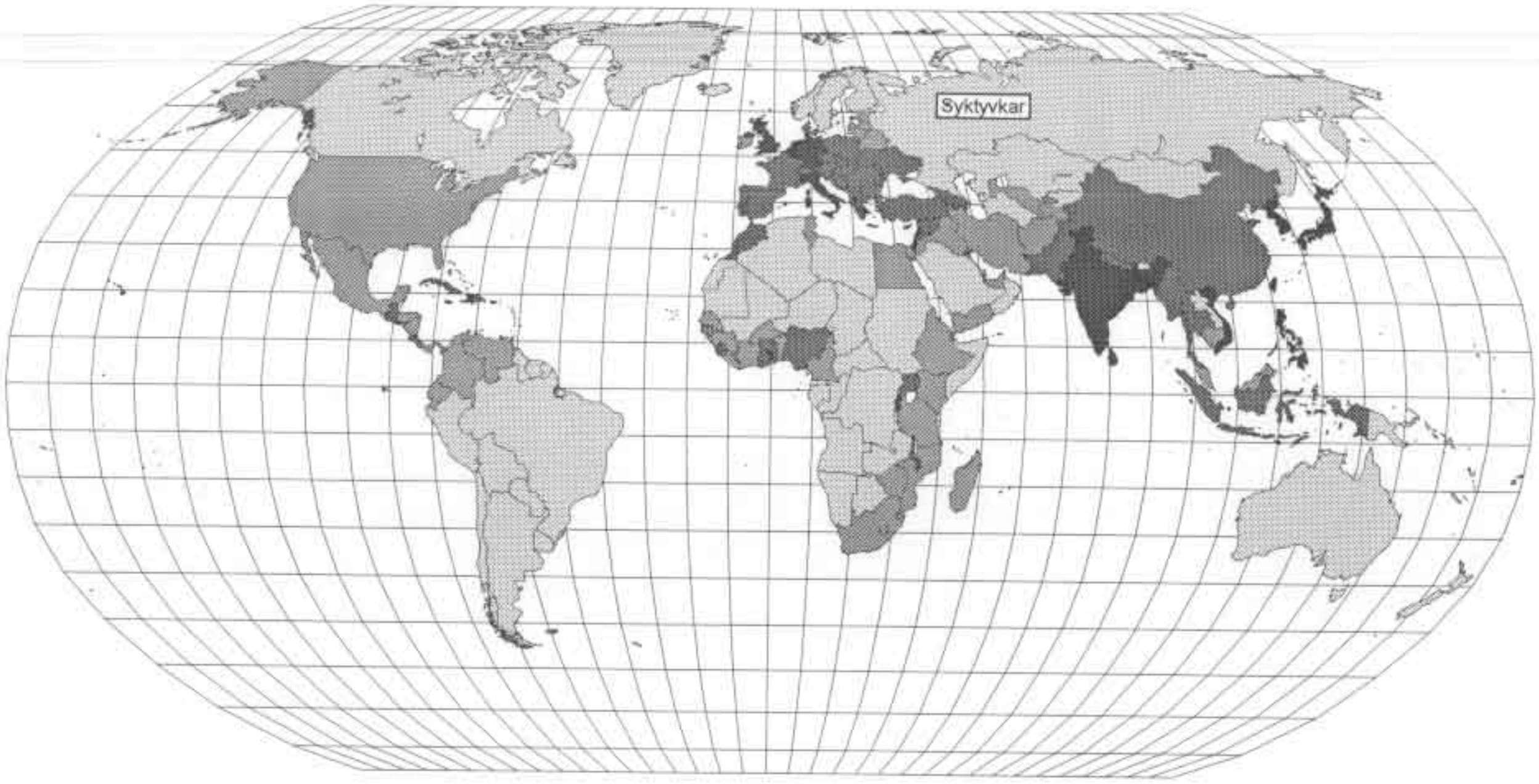
YOUNG_POP

.00 to	119.00
119.00 to	1358.00
1358.00 to	5553.00
5553.00 to	322919.00
Missing	

KM

0 2000 4000

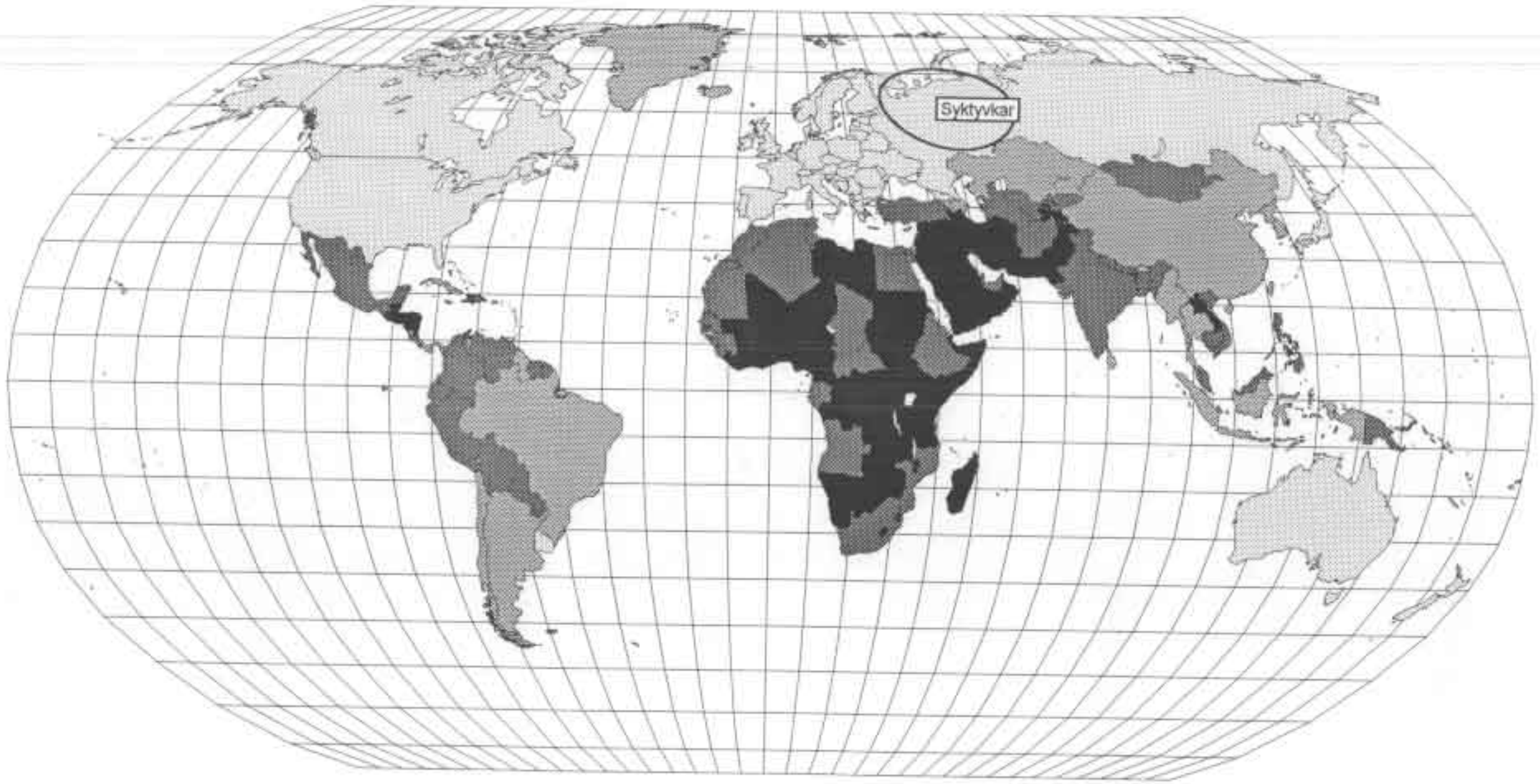
ANALYSIS: POPULATION DENSITY--POPULATION DIVIDED BY AREA BY COUNTRY



ANALYSIS: GLOBAL VIEW

Birthrate minus deathrate, per thousand

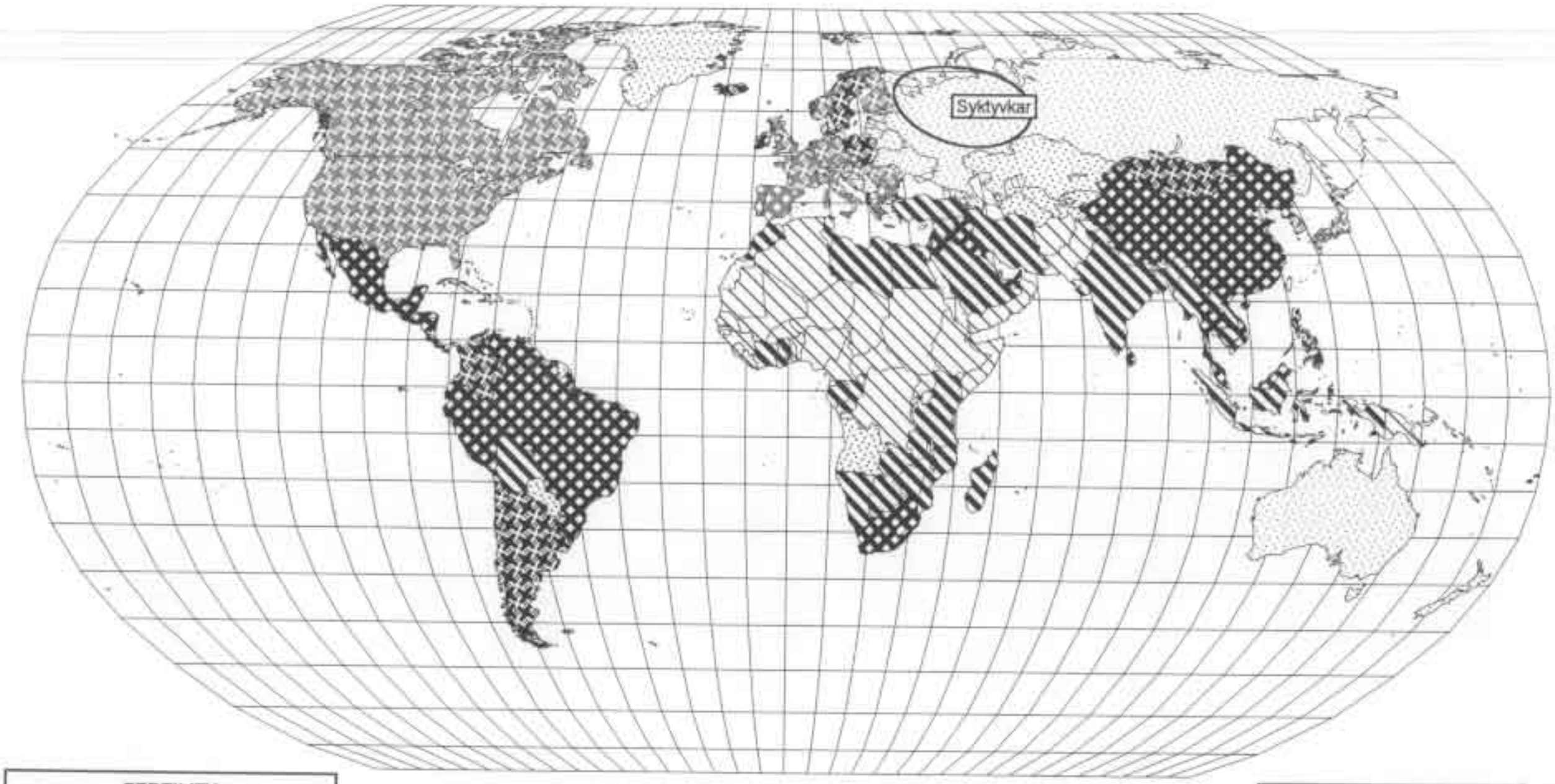
Syktyvkar and thousand km circle noted.



ANALYSIS: GLOBAL VIEW--EDUCATION OF WOMEN AND FERTILITY RATES

Bivariate thematic map--spatial analysis

Syktyvkar and thousand km circle noted.



FERTILITY

.00 to	2.01
2.01 to	3.13
3.13 to	5.49
5.49 to	8.00

EDFEM

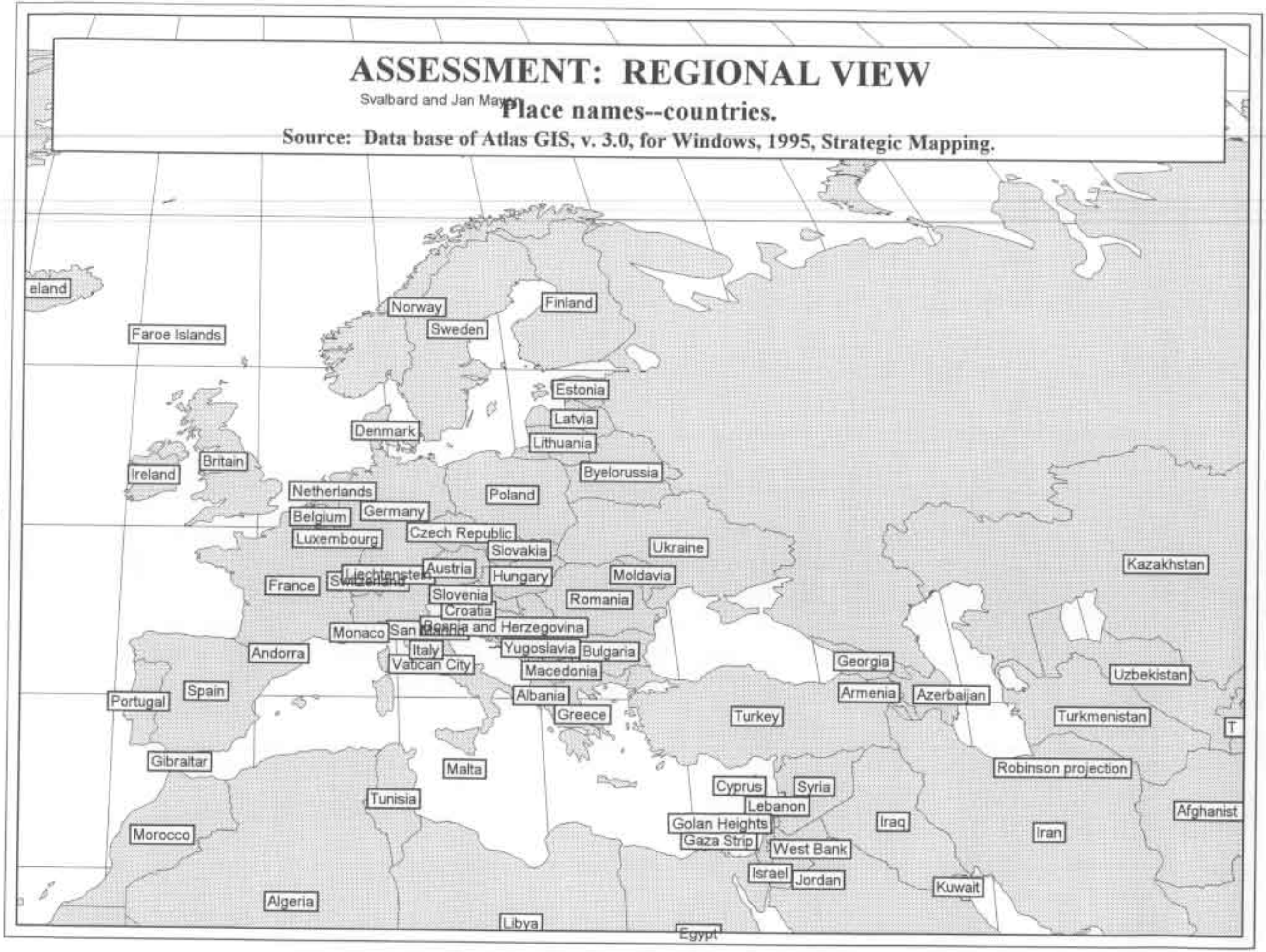
.06 to	.82
.82 to	3.30
3.30 to	6.50
6.50 to	12.40

ASSESSMENT: REGIONAL VIEW

Svalbard and Jan Mayen

Place names--countries.

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



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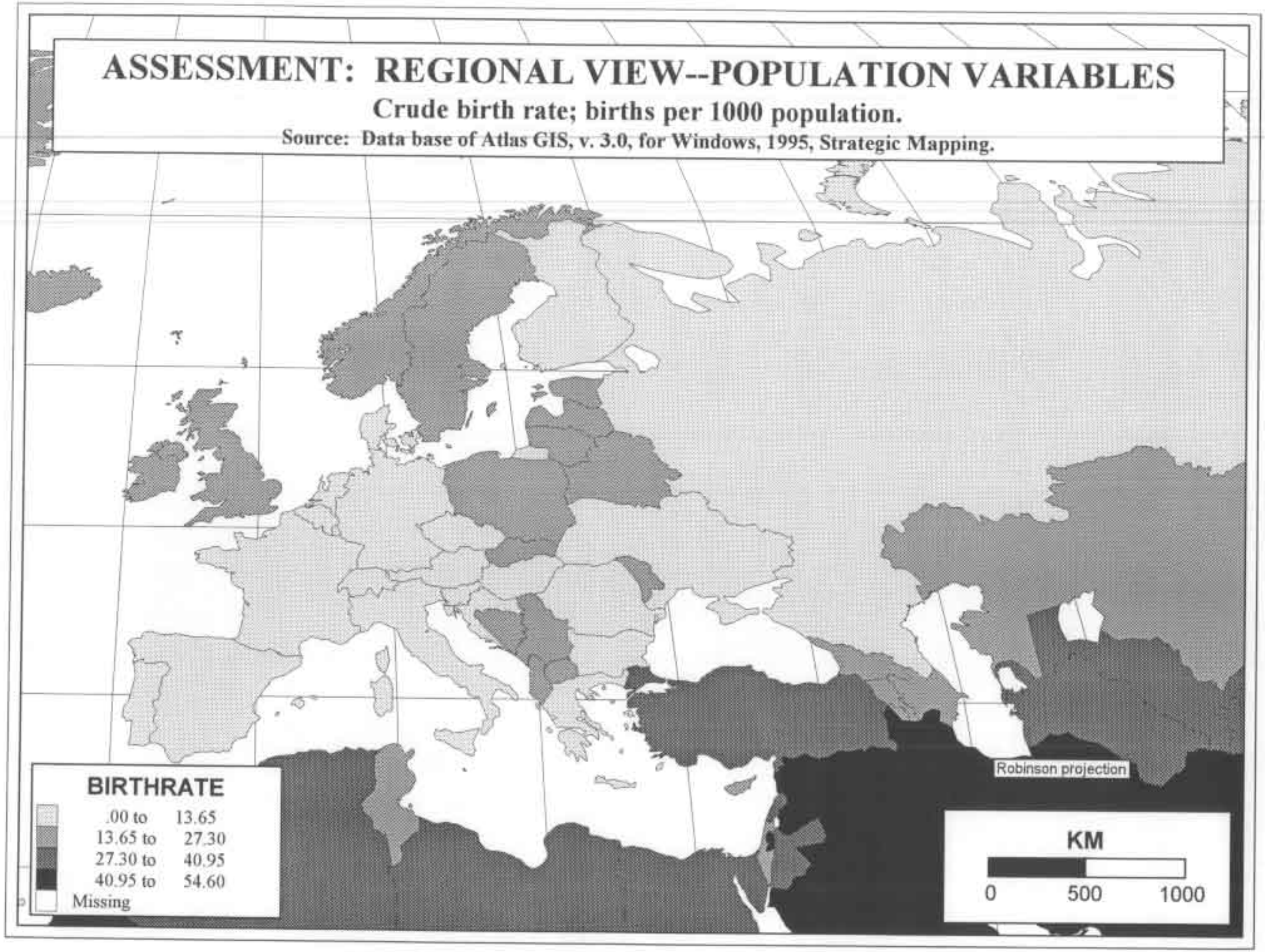
ASSESSMENT: REGIONAL VIEW--POPULATION VARIABLES

Crude birth rate; births per 1000 population.

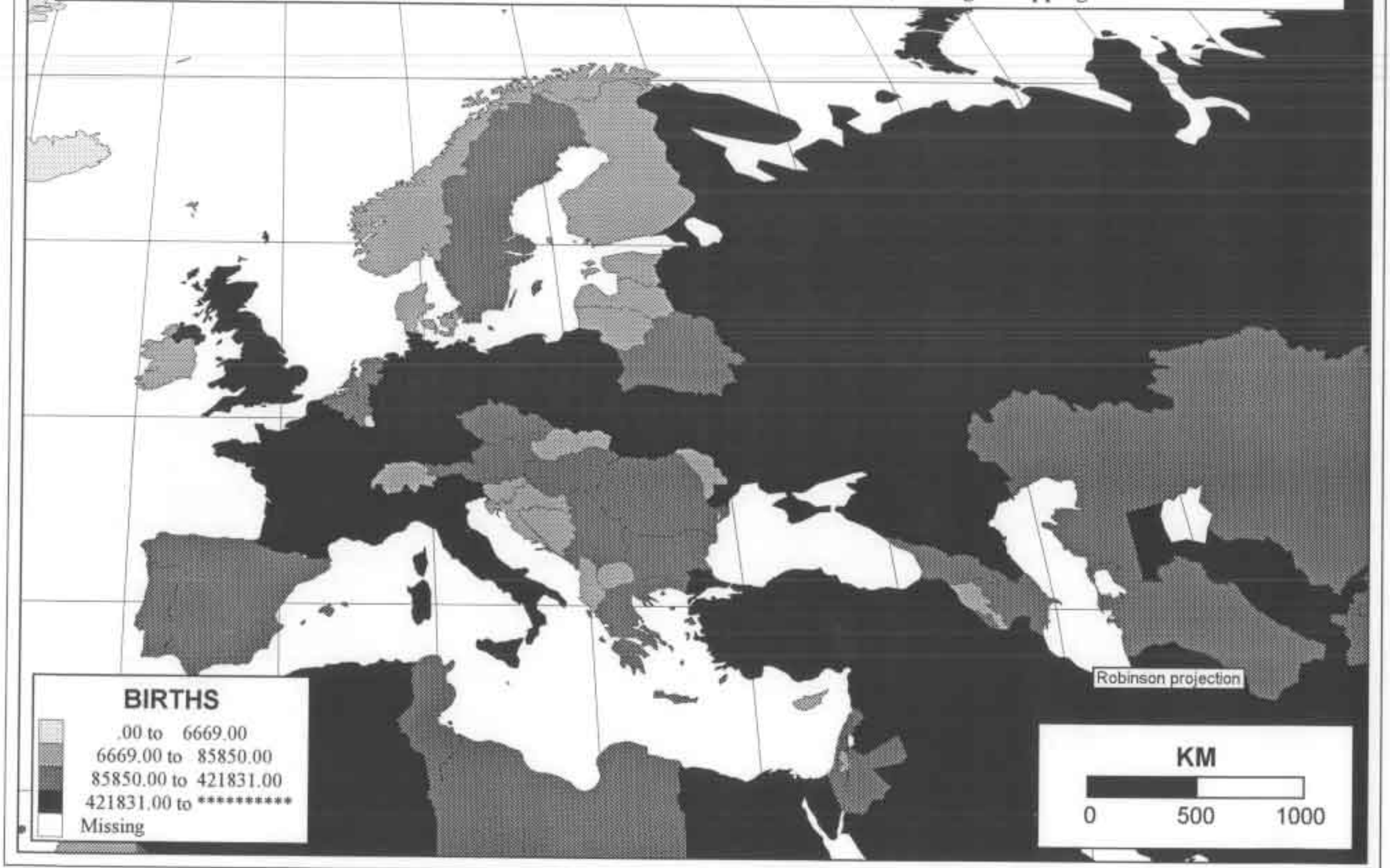
Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



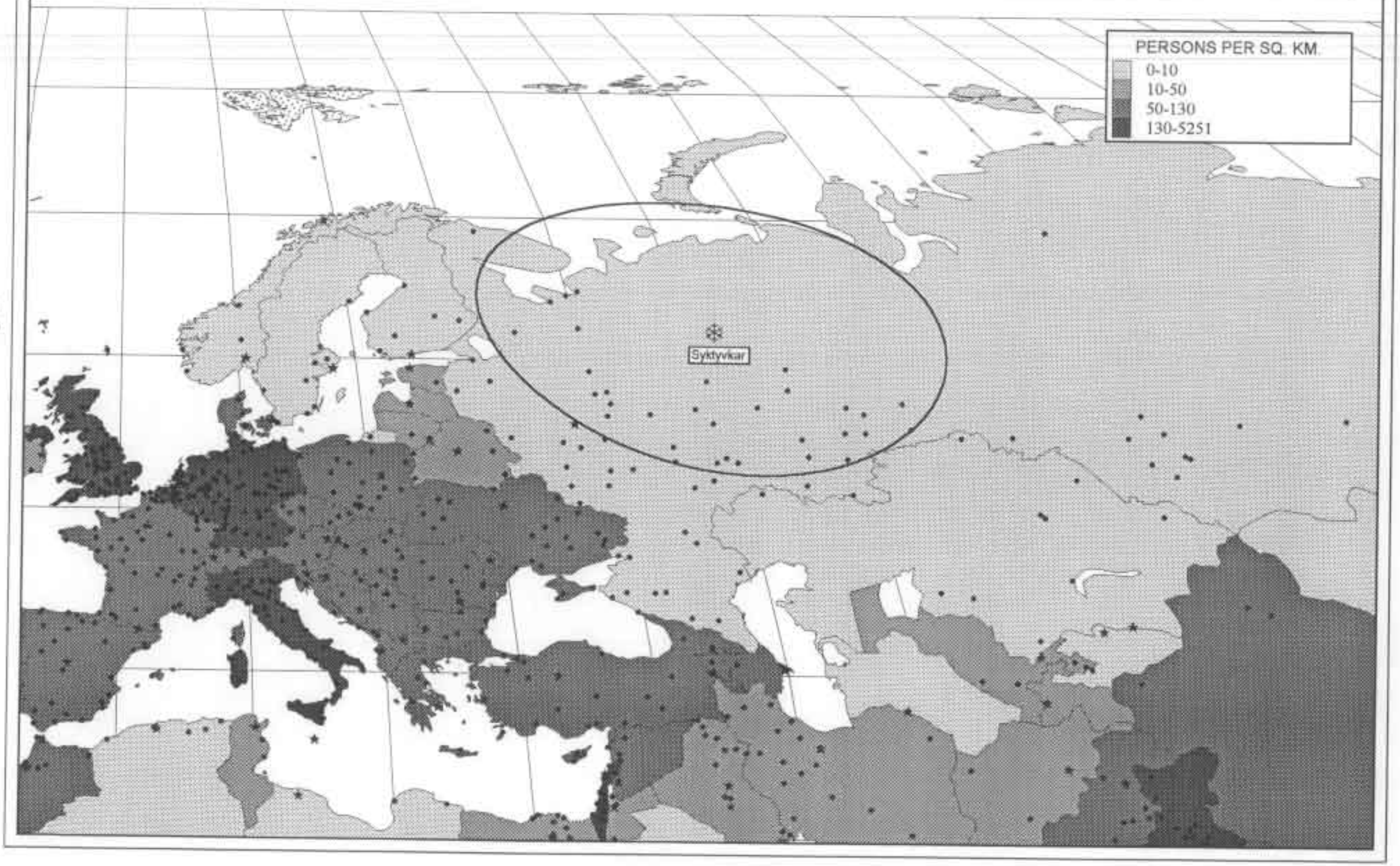
ASSESSMENT: REGIONAL VIEW--POPULATION VARIABLES

Annual number of births

Source: Data base of Atlas GIS, v. 3.0, for Windows, 1995, Strategic Mapping.



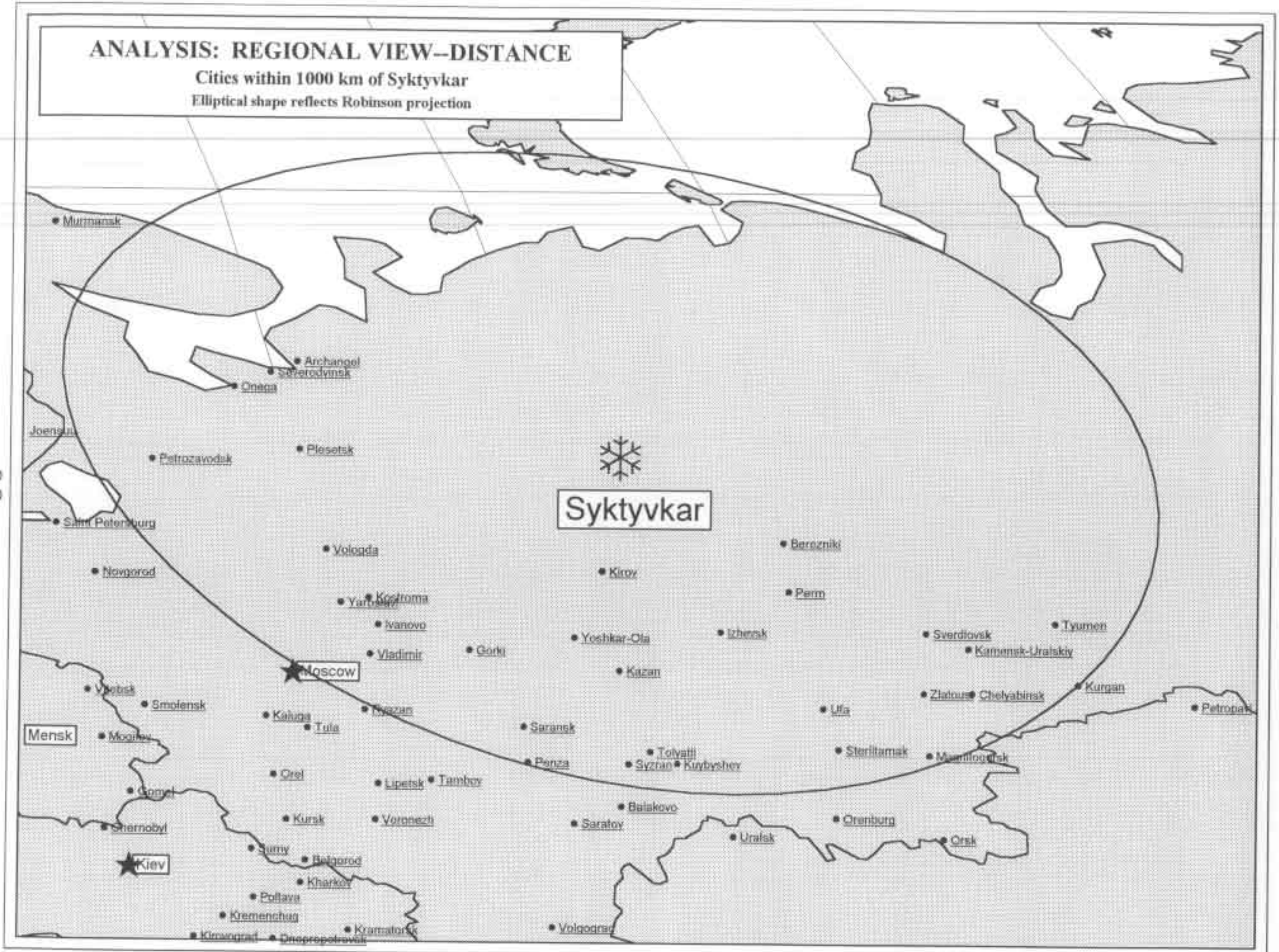
ANALYSIS: POPULATION DENSITY--POPULATION (THOUSANDS) OVER AREA BY COUNTRY



ANALYSIS: REGIONAL VIEW--DISTANCE

Cities within 1000 km of Syktyvkar

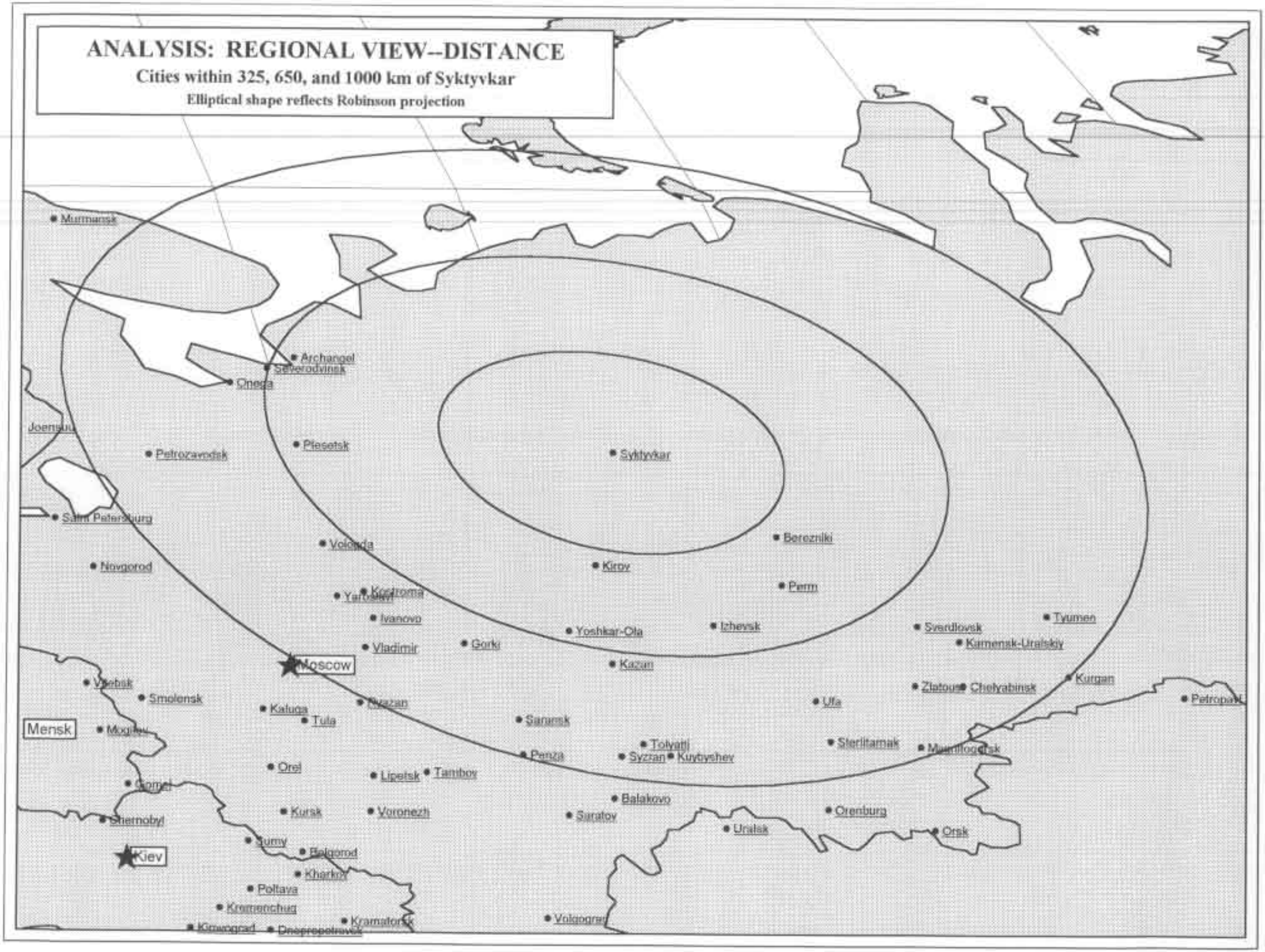
Elliptical shape reflects Robinson projection



ANALYSIS: REGIONAL VIEW--DISTANCE

Cities within 325, 650, and 1000 km of Syktyvkar

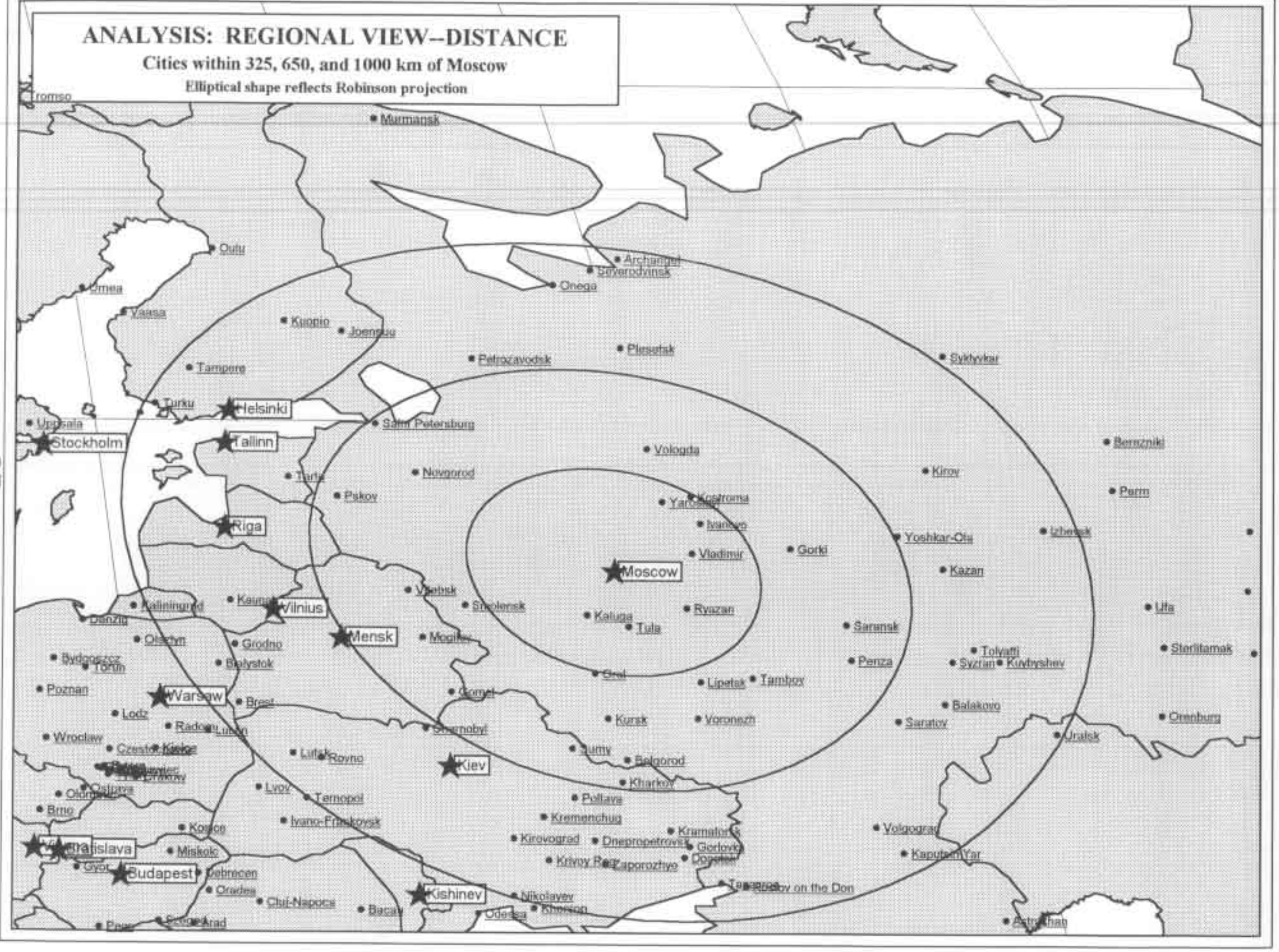
Elliptical shape reflects Robinson projection



ANALYSIS: REGIONAL VIEW--DISTANCE

Cities within 325, 650, and 1000 km of Moscow

Elliptical shape reflects Robinson projection



ANALYSIS: REGIONAL VIEW--DISTANCE

Cities within 325, 650, and 1000 km of Syktyvkar and Moscow

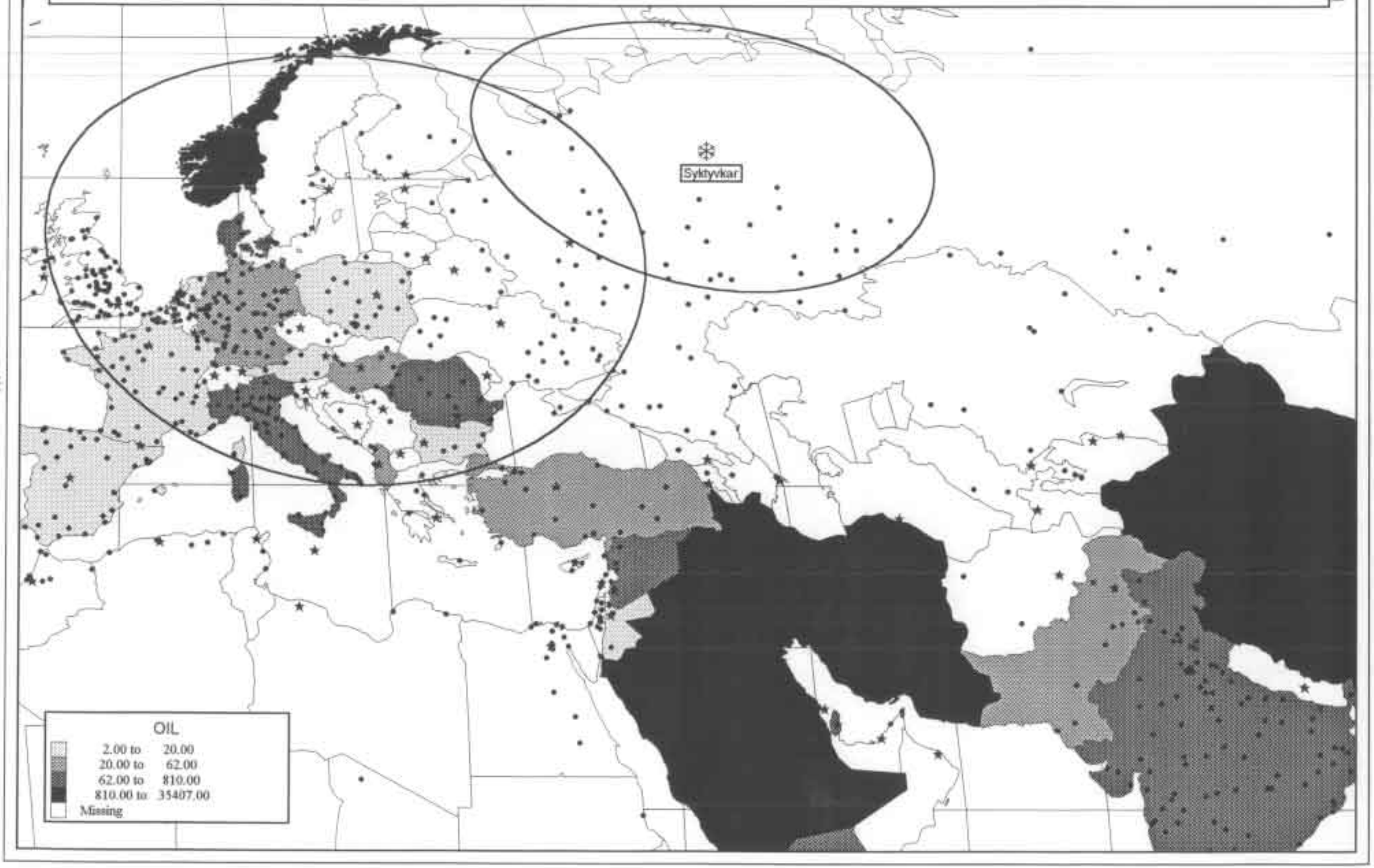
Elliptical shape reflects Robinson projection

Murmansk
Oulu
Archangel
Severodvinsk
Onega
Kuopio
Joensuu
Petrozavodsk
Plesetsk
Syktyvkar
Helsinki
Saint Petersburg
Tallinn
Vologda
Berezniki
Tartu
Novgorod
Kirov
Pskov
Kostroma
Perm
Yaroslavl
Riga
Ivanovo
Izhevsk
Tyumen
Yoshkar-Ola
Sverdlovsk
Vladimir
Gorki
Kamensk-Uralskiy
Moscow
Kazan
Vitebsk
Kaunas
Vilnius
Smolensk
Ufa
Kurgan
Kaluga
Ryazan
Zlatoust
Chelyabinsk
Tula
Saransk
Mensk
Mogilev
Grodno
Penza
Tolyatti
Sterlitamak
Magnitogorsk
Bialystok
Syzran
Kuybyshev
Orel
Lipetsk
Tambov
Gomel
Brest
Balakovo
Kursk
Voronezh
Saratov
Orenburg
Lutsk
Sumy
Orsk
Rovno
Belgorod
Kiev
Kharkov
Lvov
Tarnopol
Poltava
Ivano Frankivsk
Kremenchug

ENVIRONMENT: OIL RESERVES, MILLION MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

Right circle: region within 1000 km of Syktyvkar



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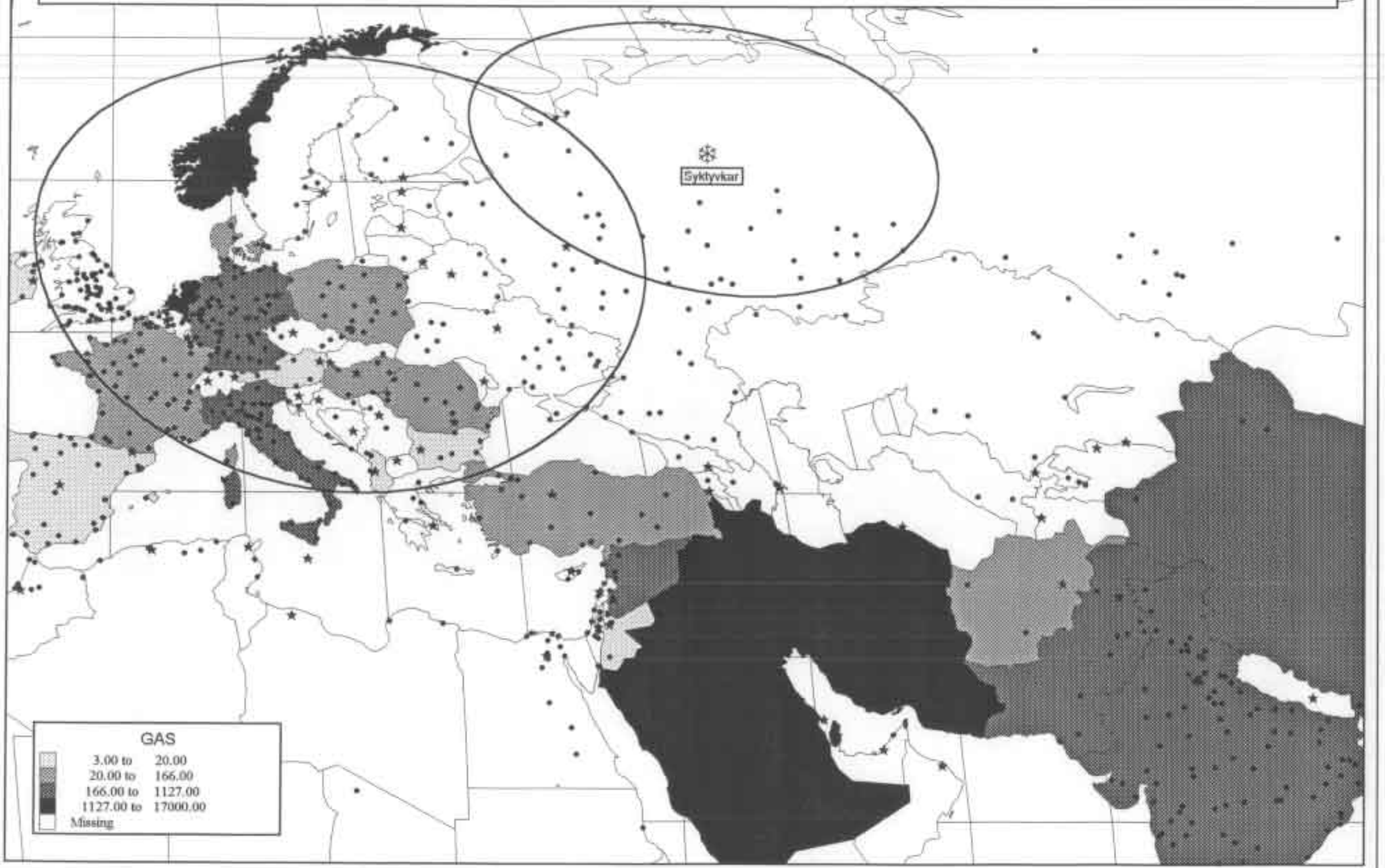
RAW NATURAL GAS RESERVES, BILLION MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

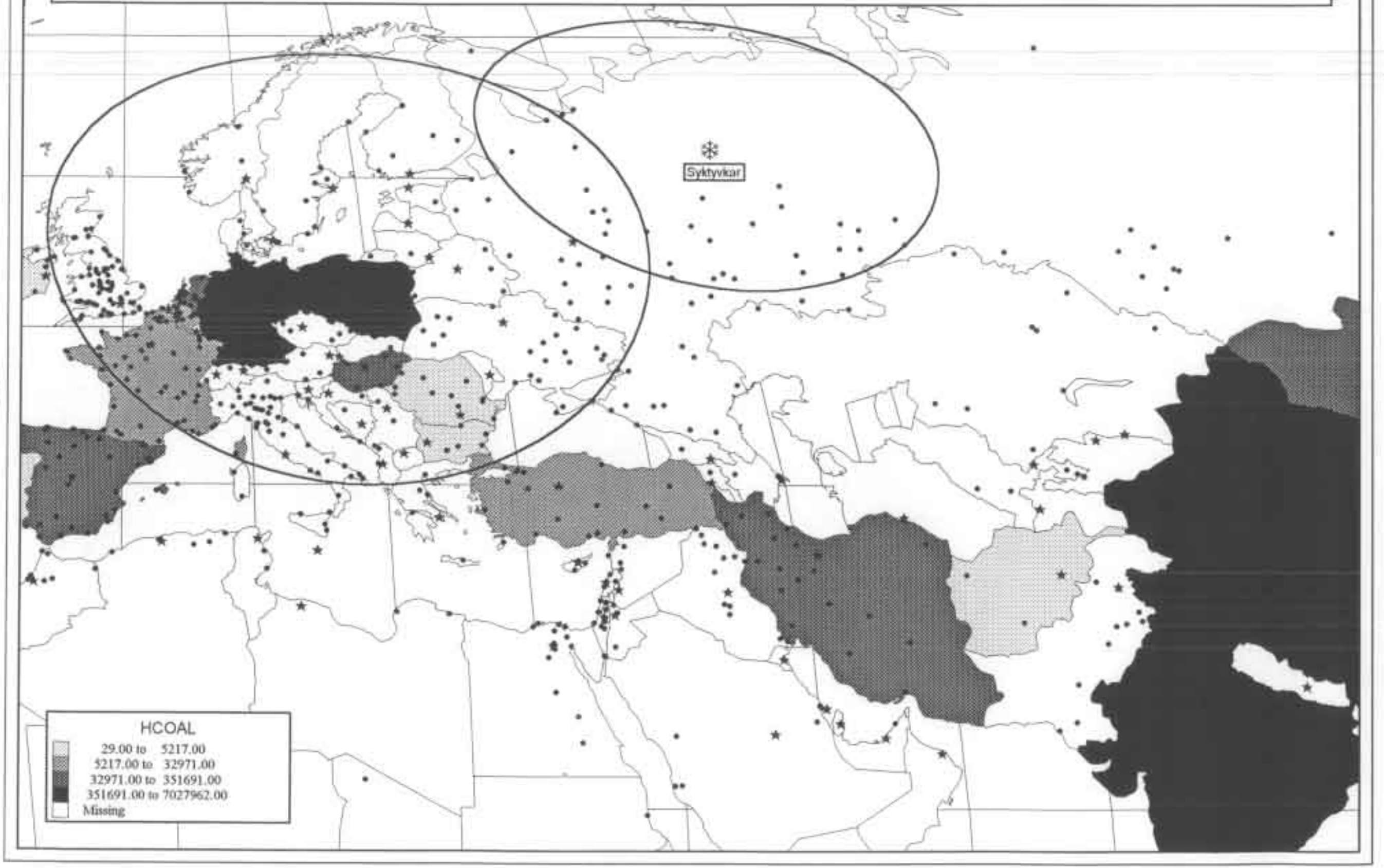
Right circle: region within 1000 km of Syktyvkar



HARD COAL RESERVES, TERAJOULES--WRD DATABASE

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

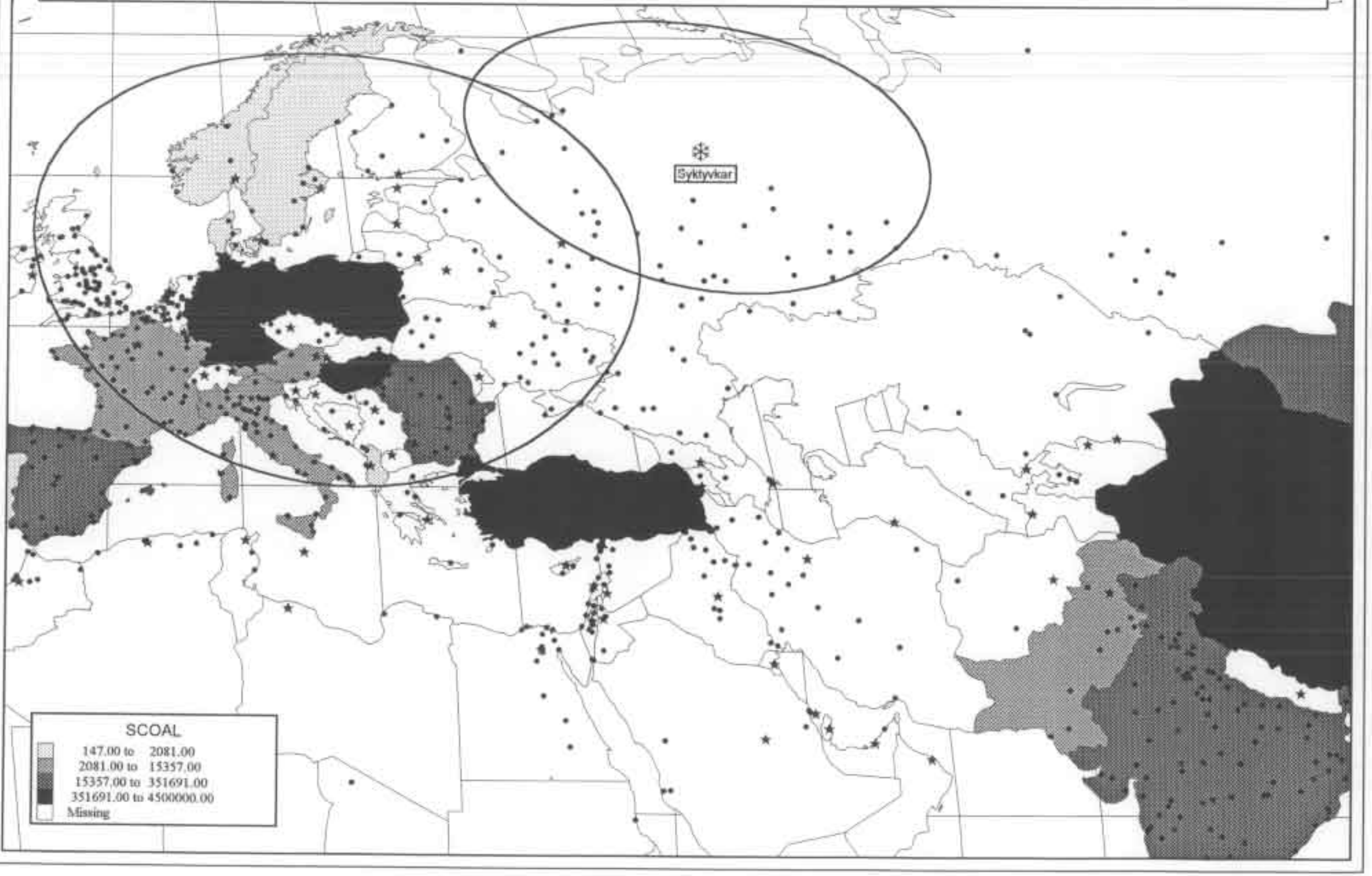
Right circle: region within 1000 km of Syktyvkar



SOFT COAL RESERVES, TERAJOULES

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

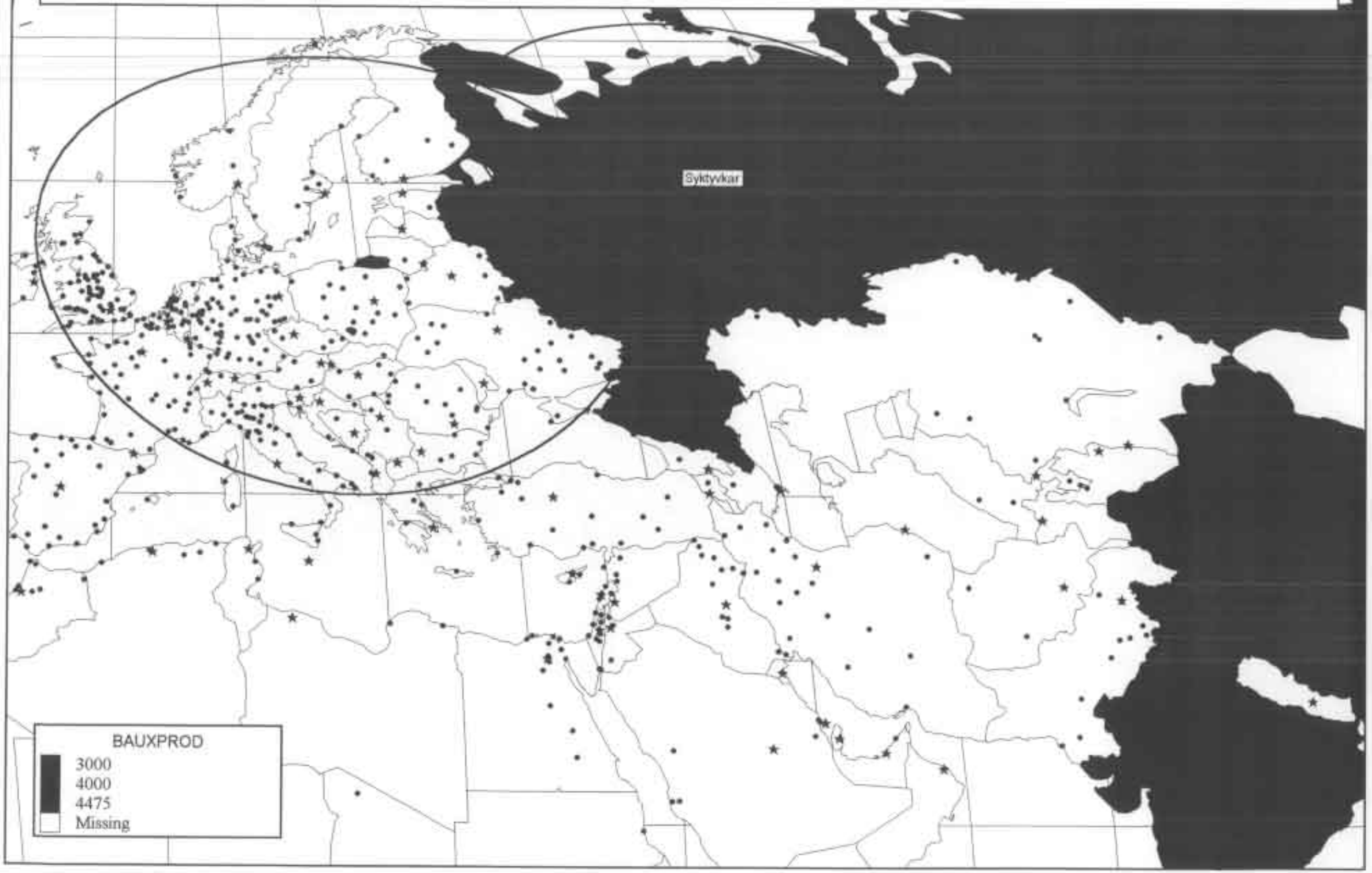
Right circle: region within 1000 km of Syktyvkar



BAUXITE PRODUCTION, THOUSAND MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

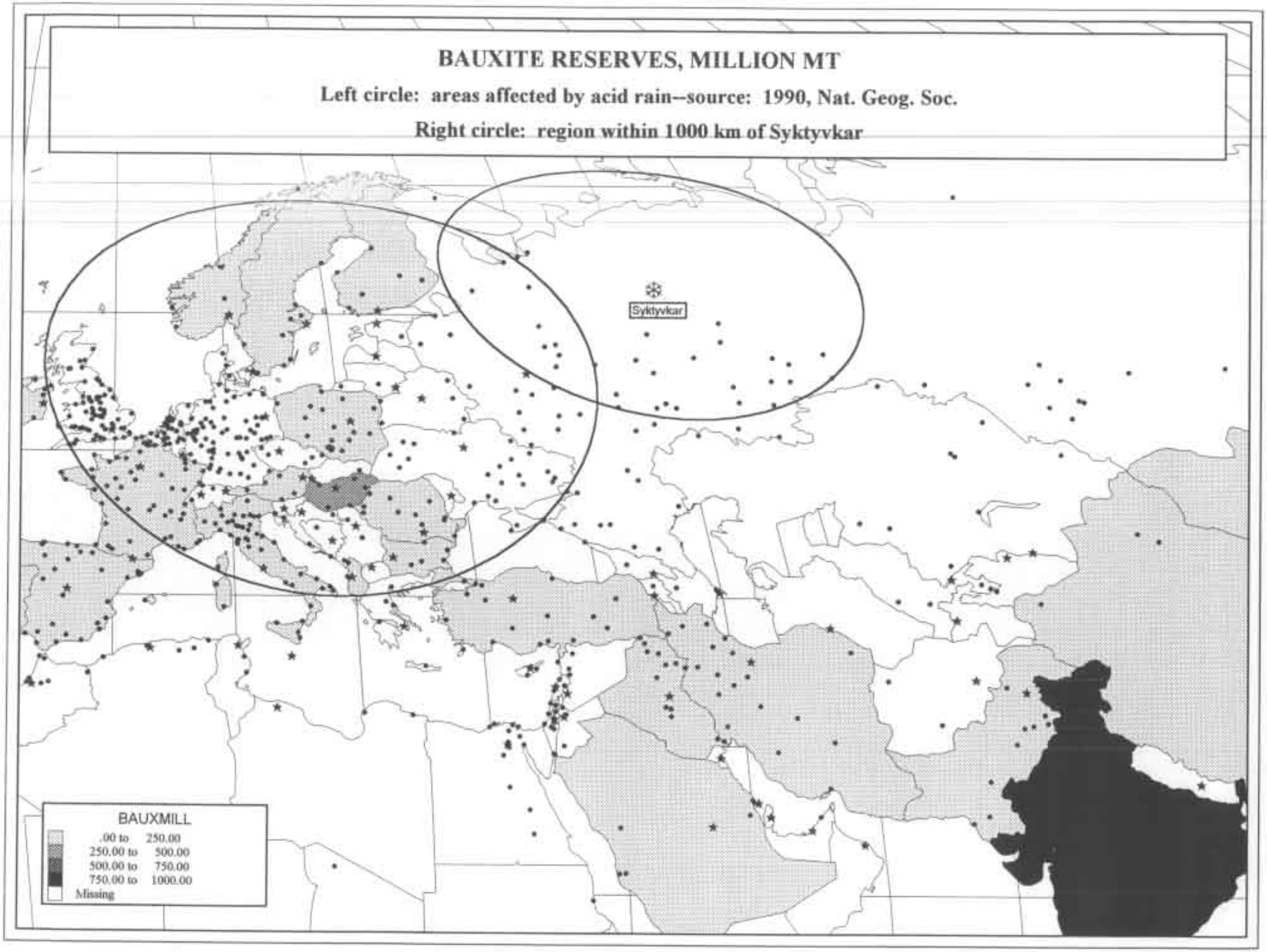
Right circle: region within 1000 km of Syktyvkar



BAUXITE RESERVES, MILLION MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

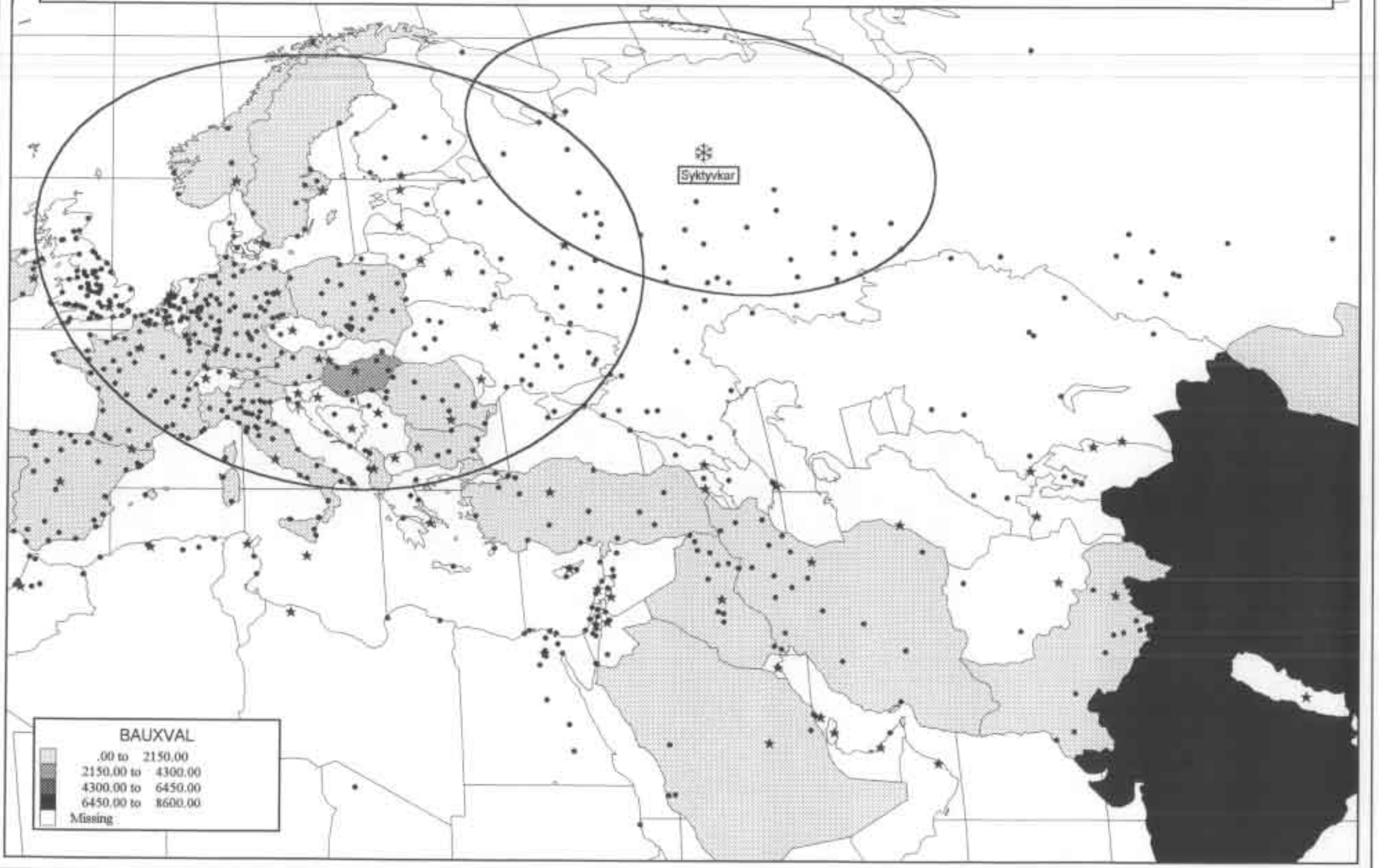
Right circle: region within 1000 km of Syktyvkar



BAUXITE RESERVES (VALUE), MILLION $ US

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

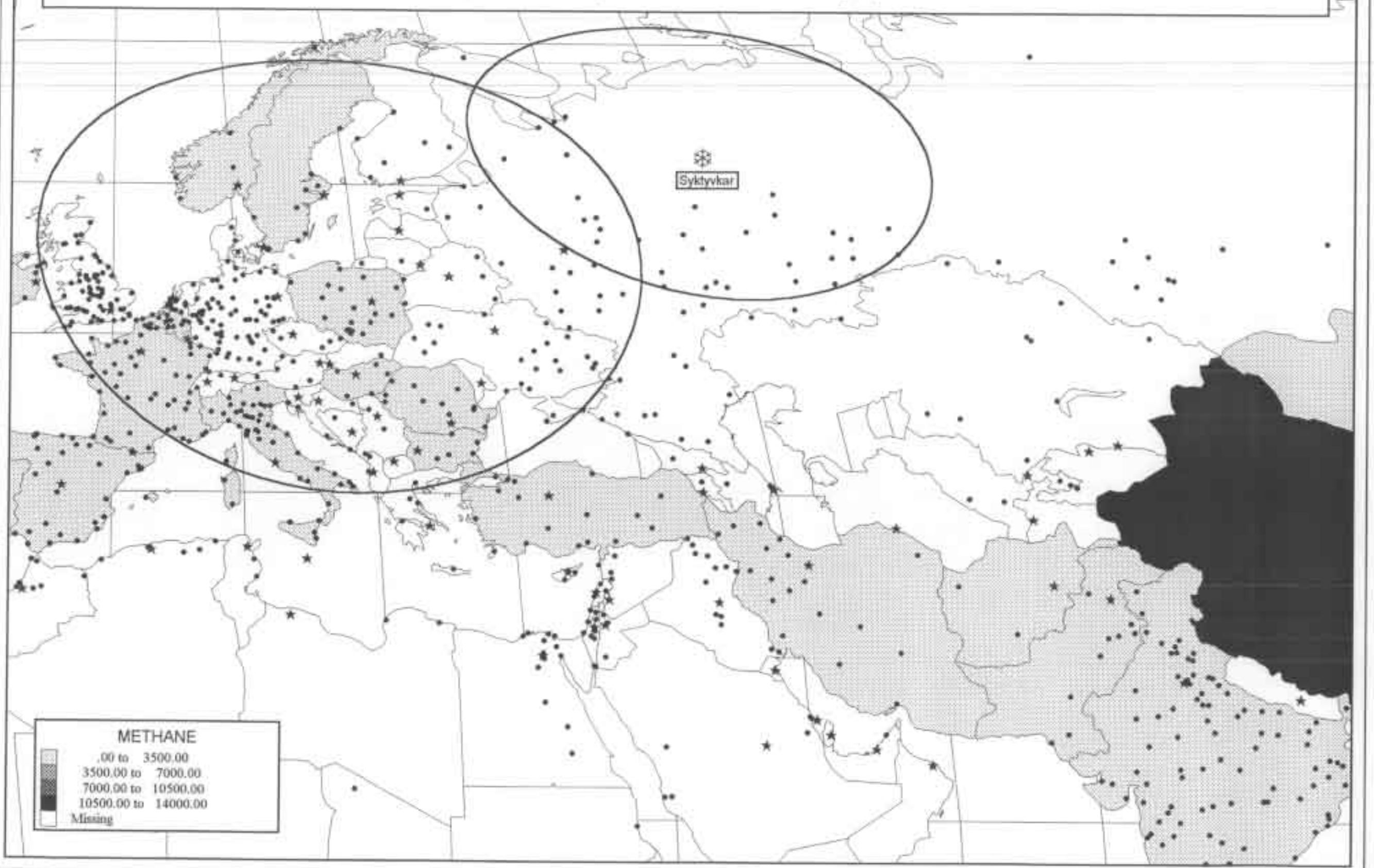
Right circle: region within 1000 km of Syktyvkar



METHANE EMISSIONS--COAL MINING, THOUSAND MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

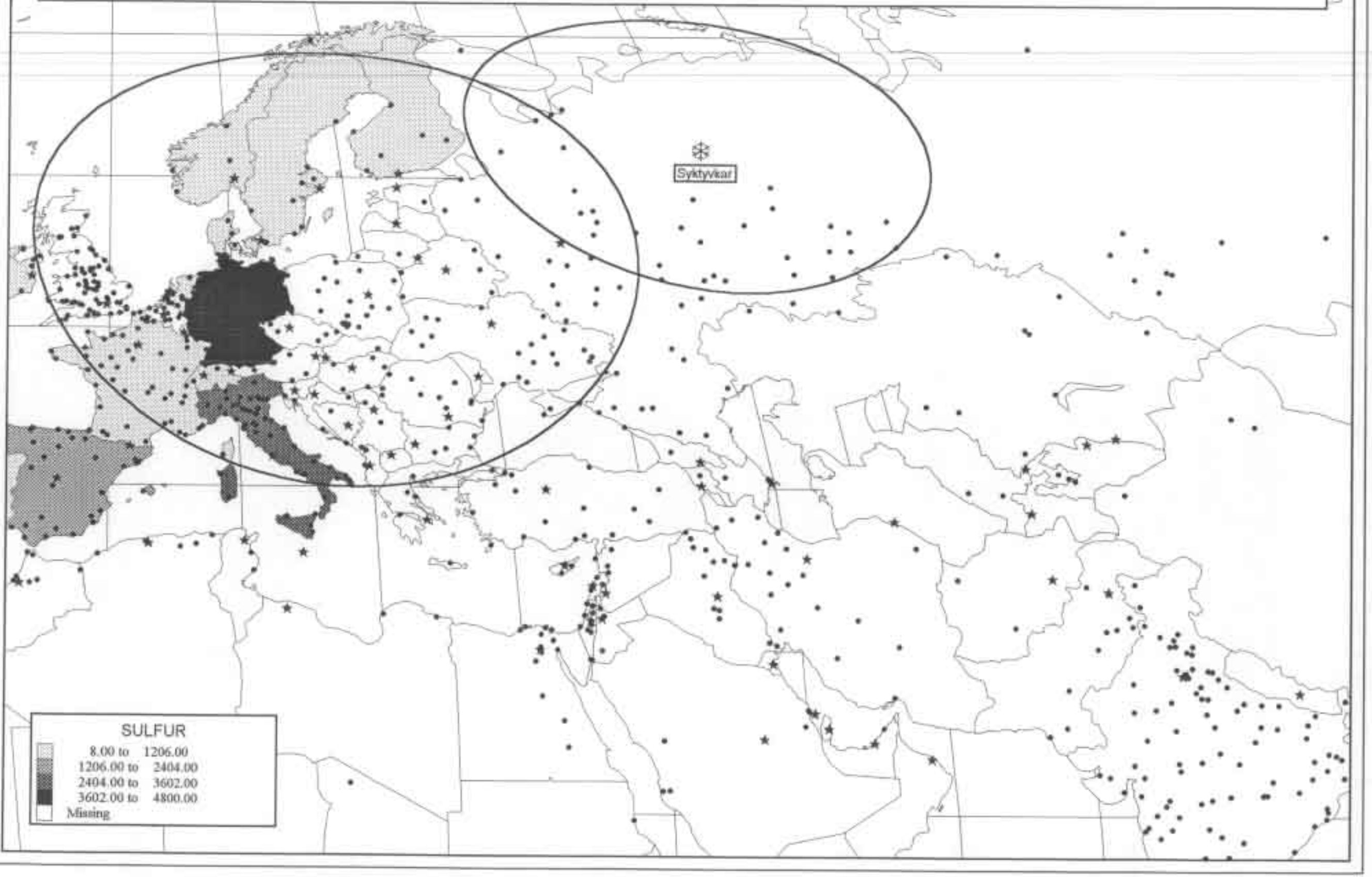
Right circle: region within 1000 km of Syktyvkar



SULFUR EMISSIONS, THOUSAND MT

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

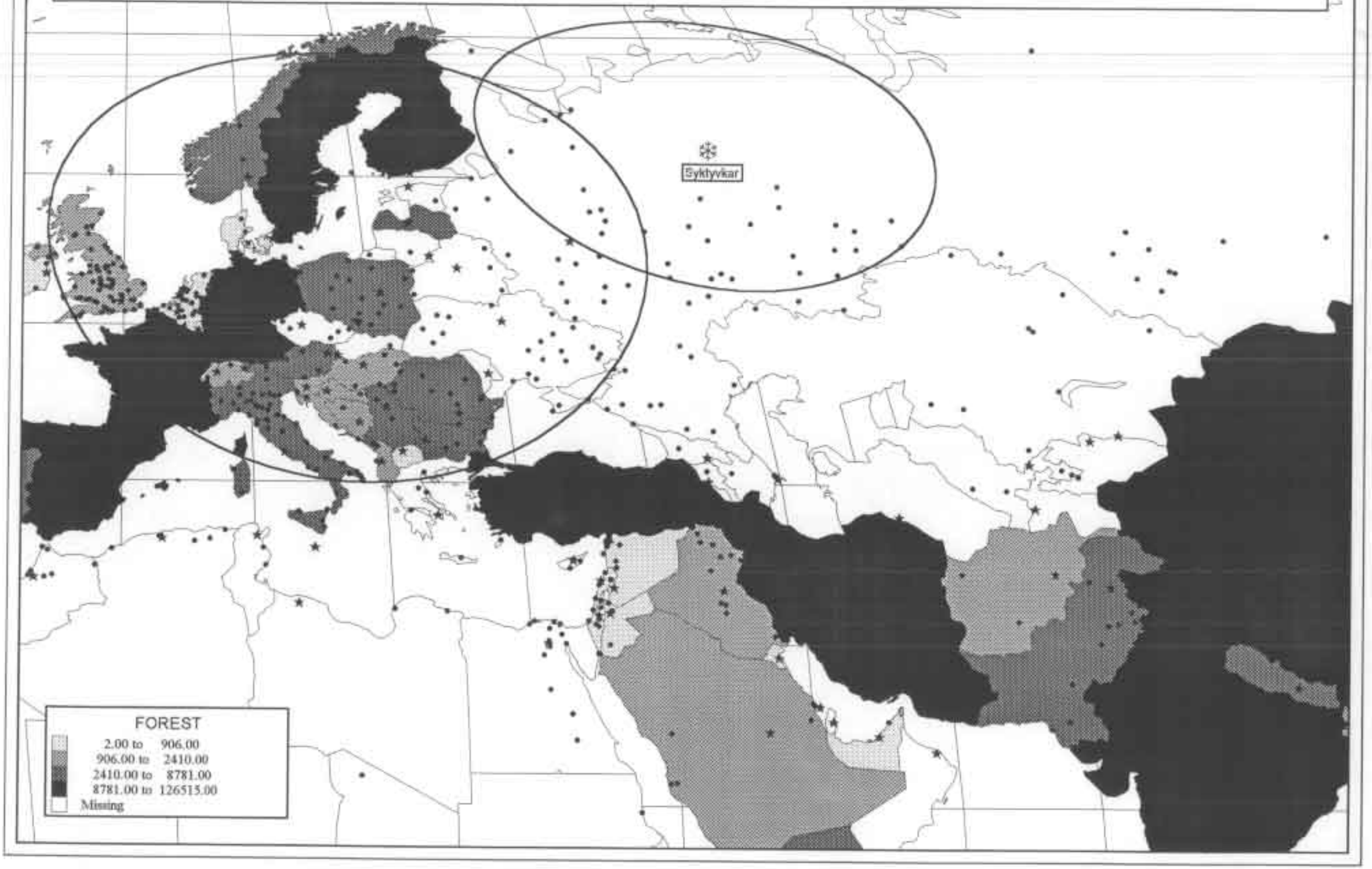
Right circle: region within 1000 km of Syktyvkar



NATURAL FOREST, 1991 WRD DATA--BASELINE STUDY

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

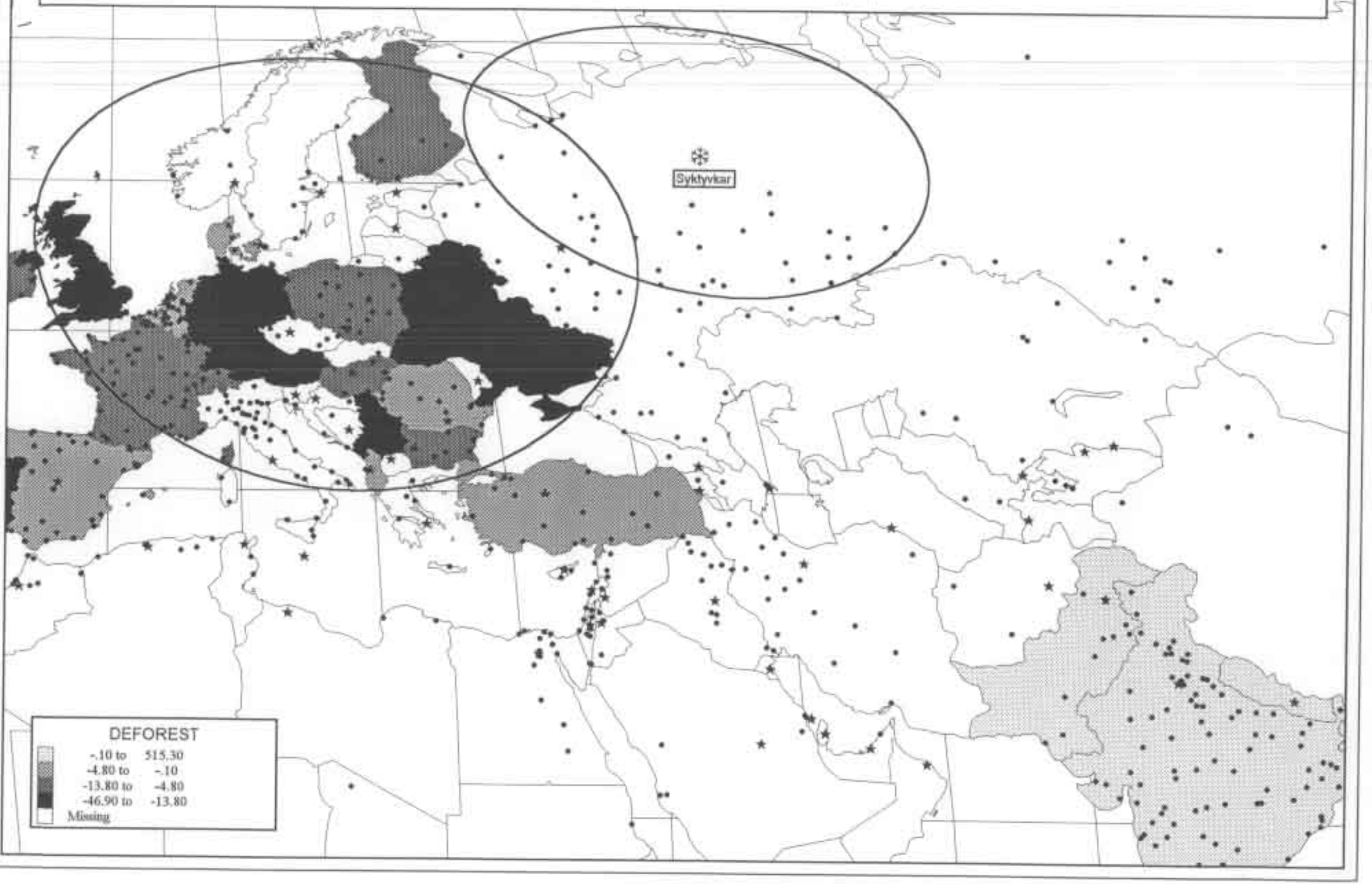
Right circle: region within 1000 km of Syktyvkar



DEFORESTATION, 1981-1990, ANNUAL AVE., THOUSAND HA

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

Right circle: region within 1000 km of Syktyvkar



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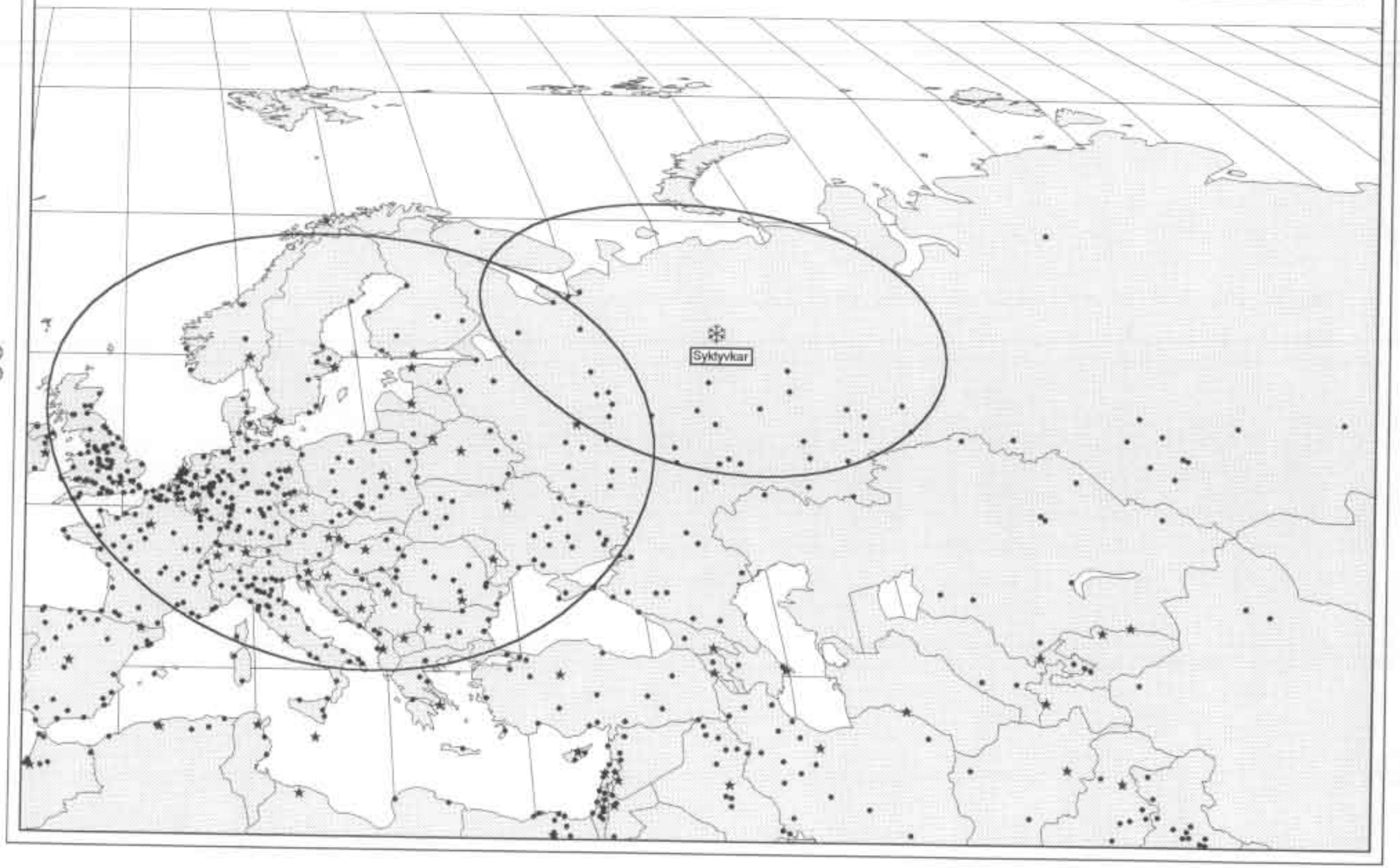
ANALYSIS: REGIONAL--ENVIRONMENTAL STRESS--spatial analysis using Venn diagrams

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

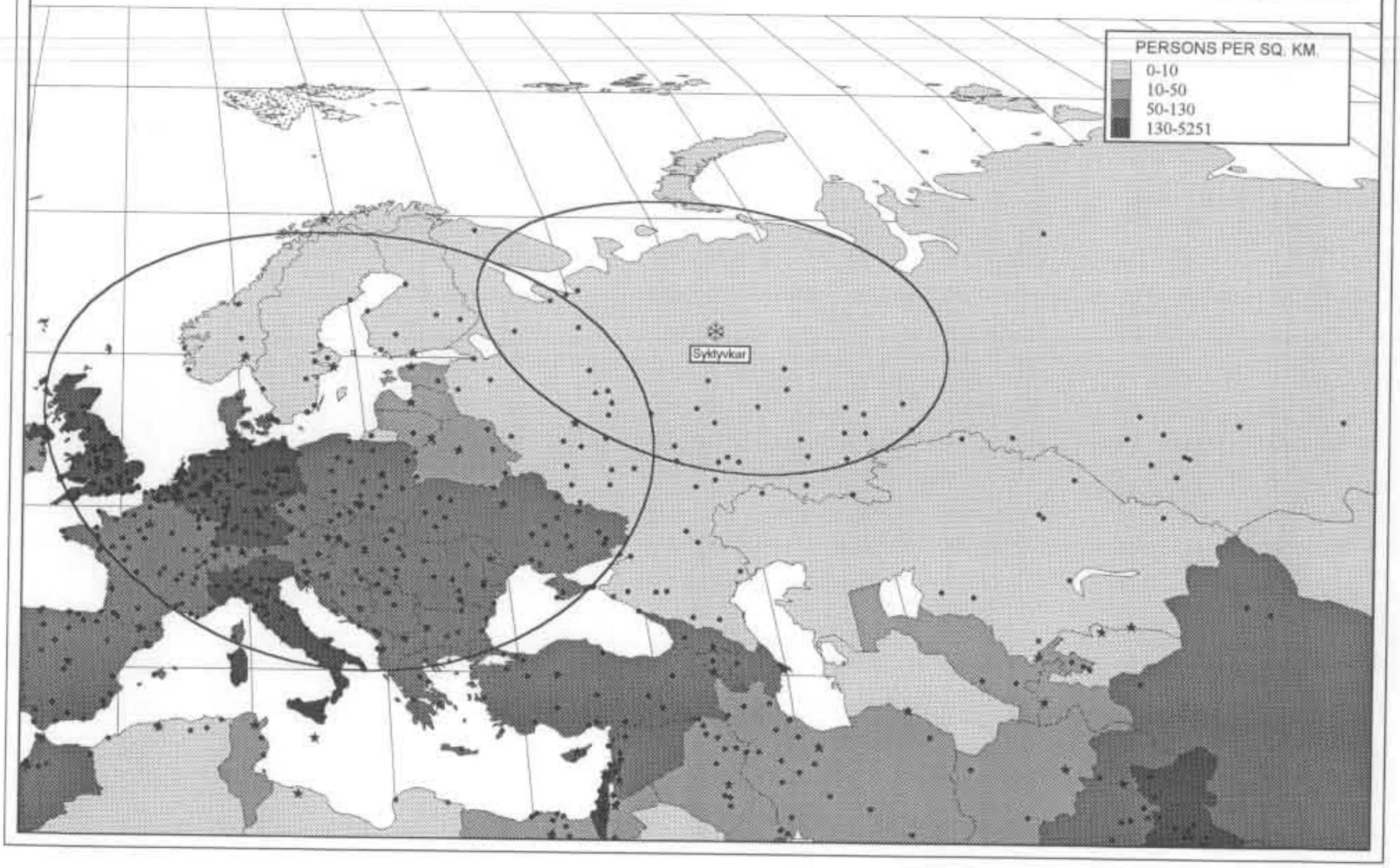
Right circle: region within 1000 km of Syktyvkar



ANALYSIS: POPULATION DENSITY--POPULATION (THOUSANDS) OVER AREA BY COUNTRY

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

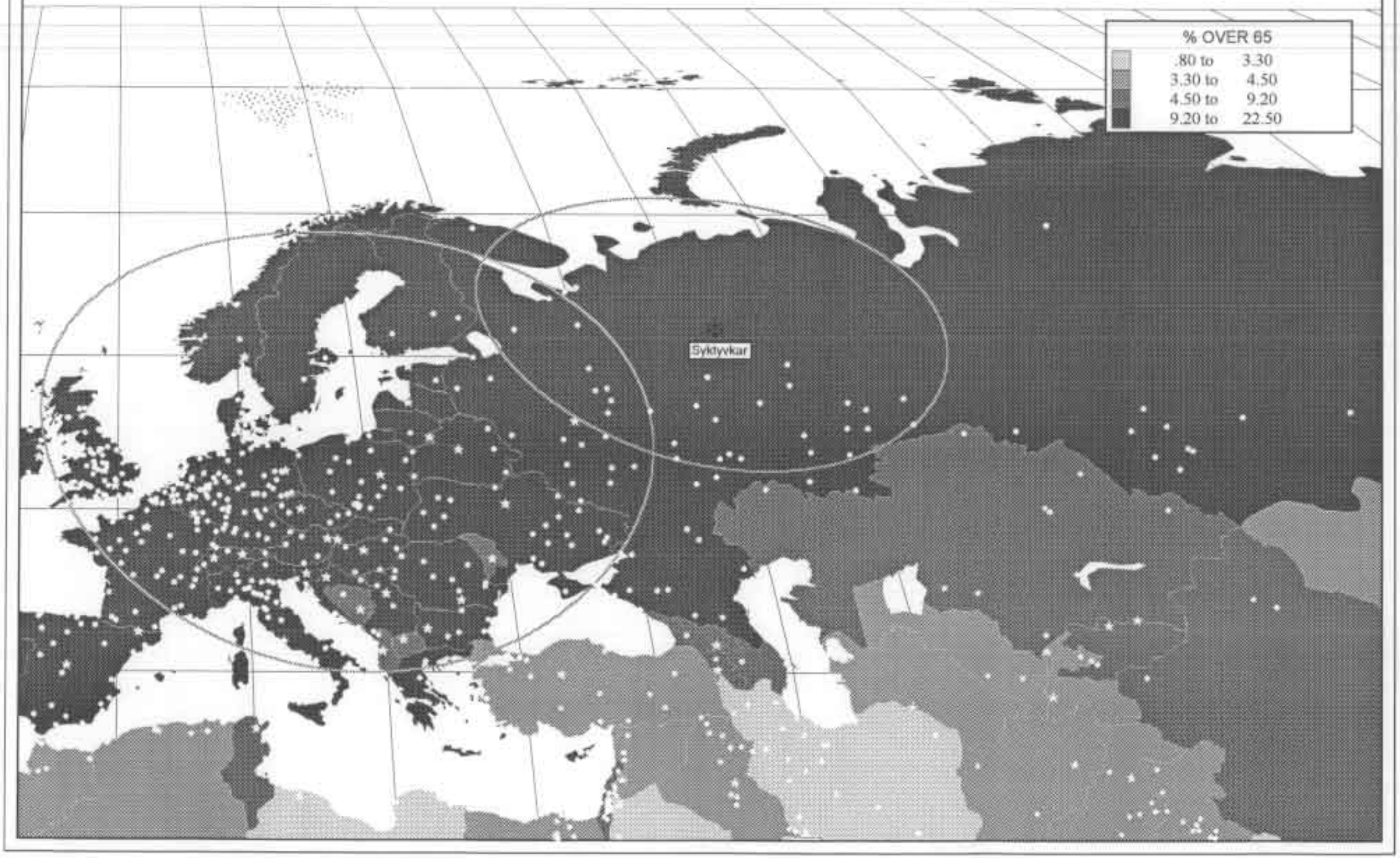
Right circle: region within 1000 km of Syktyvkar



ASSESSMENT: PERCENTAGE OF POPULATION OVER AGE 65

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

Right circle: region within 1000 km of Syktyvkar



ACTION: TARGET AREA FOR REGIONAL ACTION--IN ADVANCE OF THE PLUME

Left circle: areas affected by acid rain--source: 1990, Nat. Geog. Soc.

Right circle: region within 1000 km of Syktyvkar