#### The Democracy Ranking 2008/2009 of the Quality of Democracy: Method and Ranking Outcome

David F. J. Campbell

#### Georg Pölzlbauer

February 23, 2009

David F. J. Campbell Research Fellow University of Klagenfurt Faculty for Interdisciplinary Studies (IFF) Institute of Science Communication and Higher Education Research (WIHO) A-1070 Vienna, Austria david.campbell@uni-klu.ac.at http://www.uni-klu.ac.at/wiho

Georg Pölzlbauer Vienna University of Technology Institute of Software Technology and Interactive Systems Information and Software Engineering Group A-1040 Vienna, Austria <u>poelzlbauer@ifs.tuwien.ac.at</u> <u>http://www.ifs.tuwien.ac.at/~poelzlbauer</u>

*Recommended citation:* Campbell, David F. J. / Georg Pölzlbauer (2009). The Democracy Ranking 2008/2009 of the Quality of Democracy: Method and Ranking Outcome. Vienna: Democracy Ranking.

© Copyright by David F. J. Campbell & Georg Pölzlbauer, 2009. All rights reserved.

#### **Table of Contents**

1. Method of the Democracy Ranking 2008/2009 of the Quality of
Democracy
2. References
3. Ranking Outcome of the Democracy Ranking 2008/2009: Scoreboards10
4. Appendix: Overview and Definition of the Indicators Assigned per
Dimension for the Democracy Ranking 2008/2009 20

## 1. Method of the Democracy Ranking 2008/2009 of the Quality of Democracy

The Democracy Ranking 2008/2009 refers to a unique quantitative model. This model is governed by the following methodic principles:

- 1. Conceptual and methodic source: The Democracy Ranking 2008/2009 is based on the originally developed "Feasibility Study" (Campbell and Sükösd, 2002) and early experiences gained from the "Pilot Ranking 2000" (Campbell and Sükösd, 2003). The feasibility study developed the general framework and conceptual architecture of the "dimensions" of the Democracy Ranking 2008/2009 and suggested furthermore a specific assignment of quantitative indicators to the different dimensions. In the "Pilot Ranking 2000" this general framework was tested empirically for the first time. Emphasizing the need for a permanent learning process and in reflection of discussions and discourse, the Democracy Ranking 2008/2009 moderately modified and adapted the set of assigned indicators and their weighting. Future Democracy Rankings might continue these procedures of indicator and weight adjustment.<sup>1</sup> However, the past ranking years then always will be recalculated, thus enabling a steady and continuous comparison across time, reaching back to the first ranking years as initial benchmark. The "Basic Concept for the Democracy Ranking" (Campbell 2008) provides further conceptual and theoretical evidence for the Democracy Ranking 2008/2009 and the successively planed democracy rankings. The Democracy Ranking 2008/2009, furthermore, continues and updates the ranking data of the previous Democracy Ranking 2008 (Campbell and Pölzlbauer, 2008).
- 2. *Objectives:* The Democracy Ranking 2008/2009 creates a comparative ranking of the quality of democracy for two two-year periods of all

<sup>&</sup>lt;sup>1</sup>) This also underscores the premise that a "perfect" model for democracy ranking does not exist. Or to phrase it differently: there never will be unanimous consensus about what such a perfect model would have to be. Modifications of indicator usage thus leverage the opportunity of creating alternative insights in democracy.

democracies (country-based democracies) world-wide. The scope and format of the ranking is global. As democracies all countries are classified that are "free" or at least "partly free".<sup>2</sup> "Not free" countries are not considered as being democratic and thus are not included in the democracy ranking.<sup>3</sup> The Democracy Ranking 2008/2009 is interested in displaying the (average) ranking scores for each two-year period specifically as well as in demonstrating ranking score increases and decreases by contrasting these two two-year periods. This encourages that in addition to the actual ranking placement also changes over time are reflected and acknowledged. The results and scores of the Democracy Ranking 2008/2009 may be interpreted as a general orientation how the democracies compare and rank to each other in a global format with regard to the quality of democracy. The Democracy Ranking 2008/2009 wants to encourage discussion and discourse. More focused country case studies can reveal how plausible or implausible these ranking scores are for specific democracies.

3. *Country sample (covered democracies):* All countries are covered by the current ranking that fulfill the following criteria; (a) are classified by Freedom House as "free" or at least "partly free" during the whole years 2005-2007<sup>4</sup>; (b) have a population of at least one million; (c) and where a maximum number of indicators with missing values<sup>5</sup> per dimension was not exceeded. Furthermore, not covered countries (because they are not systematically represented by the used sources)

<sup>&</sup>lt;sup>2</sup>) This decision makes explicit that only free or partly free countries should be included in a democracy ranking. A democracy ranking is not the proper location for non-free countries.

<sup>&</sup>lt;sup>3</sup>) For assessments of how free or not free countries (democracies) are, we refer to Freedom House as key source.

<sup>&</sup>lt;sup>4</sup>) Freedom House released findings of the "Map of Freedom 2009", referring to the year 2008, on January 12, 2009. At that time most of the data groundwork for the early release of the Democracy Ranking 2008/2009 already was completed. Of course the effect could occur that some of the countries that Freedom House listed as free or partly free during 2005-2007 may be re-categorized as "not free" in 2008 or 2009. For further details on the "Map of Freedom 2009", see: http://www.freedomhouse.org/template.cfm?page=445

<sup>&</sup>lt;sup>5</sup>) Because of this "missing" rule it was decided not to cover the following countries by the Democracy Ranking 2008/2009: Afghanistan, Liberia, Lesotho, and Serbia.

are: Hong Kong, Puerto Rico, Taiwan, West Bank and Gaza. In total, this results in a sample of 103 countries for the Democracy Ranking 2008/2009.

- 4. *Covered years (2002-2003 and 2005-2006):* The ranking consists of two rankings, focusing on average values of the two two-year periods 2002-2003 and 2005-2006. This adds in a dynamic component, allowing for a comparison and tracking of changes and shifts of ranking positions over time.<sup>6</sup>
- The individual dimensions as a basis for the final comprehensive 5. (aggregated) ranking: In conceptual terms, the Democracy Ranking 2008/2009 is based on the following six individual dimensions (one political dimension, five non-political dimensions); (a) politics (political system); (b) gender (socioeconomic gender equality); (c) economy (economic system); (d) knowledge (knowledge-based information society, education and research); (e) health (health status and health system); and (f) environment (environmental sustainability).
- 6. Assignment of indicators per dimension and the ranking aggregation procedure: The following procedures are applied; (a) per dimension, a specific set of quantitative indicators has been assigned; (b) for 2002-2003 as well as 2005-2006 average indicator values are being calculated; (c) for the whole two two-year period 2002-2006 (2002-2003 and 2005-2006) all assigned indicators are "numerically proportionally" transformed into a value range of "1-100". "1" represents the weakest (poorest) value<sup>7</sup>, and "100" the strongest (best) value, with regard to the quality of democracy; (d) per dimension, specific ranking scores are calculated for all the covered democracies for 2002-2003 and 2005-2006; (e) finally, on the basis of the ranking

<sup>&</sup>lt;sup>6</sup>) The previous Democracy Ranking 2008 covered the years 2001-2002 and 2004-2005 (Campbell and Pölzlbauer, 2008).

<sup>&</sup>lt;sup>7</sup>) The decision to use "1", and not "0", as the lowest value should deliver the symbolic message that in context of a democracy ranking every democracy ranks above zero and thus falls in a "positive" value range.

scores (indicator values) of the individual dimensions and in accordance with a specific weighting of those dimensions, the six dimensions are being aggregated to the comprehensive Democracy Ranking 2008/2009.

- 7. Documentation of the indicators assigned per dimension: In the Appendix, the indicators are being exactly documented that have been used and assigned per dimension. In total, the Democracy Ranking 2008/2009 is based on 45 indicators.
- 8. Weighting of the individual dimensions: The following weight measures are assigned to the dimensions for the procedure of the comprehensive ranking aggregation for the periods 2002-2003 and 2005-2006; (a) politics 50%; (b) gender 10%; (c) economy 10%; (d) knowledge 10%; (e) health 10%; and (f) environment 10%.
- 9. Weighting of indicators in context of the dimensions: Possible weight measures of the indicators for the ranking of democracies in the context of individual dimensions are revealed in the Appendix. Weights should indicate the potential influence of different indicators on the concept of the quality of democracy.
- 10. *Treatment of missing values for the indicators:* In case of missing values for indicators of the five non-political dimensions, the year 2001 was leveraged as an estimator for 2002-2003 and the year 2004 as an estimator for 2005-2006. For the political dimension the years 2001 and 2004 were not used as estimators, because normally there were no values for 2001 and 2004, when also no values were available for 2002-2003 and 2005-2006. Further specifications for the political dimension and five non-political dimensions are, with regard to the treatment of missing values for the individual country-based democracies; (a) in case of missing values for the whole period 2002-2003 (and 2001), the transformed (1-100) average value of 2005-2006 was taken; (b) in case of missing values for the whole period 2005-2006 (and 2004), the transformed (1-100) average value of 2002-2003 was taken; (c) in case of missing values for the total period 2001-

2006, the transformed (1-100) average score of that country (democracy) for that specific dimension (2002-2003 and 2005-2006) was taken.

- *Comprehensive gender dimension:* Gender indicators with a political 11. orientation are assigned to the political dimension, thus the political dimension already contains gender information. The gender dimension of the Democracy Ranking 2008/2009 falls more in line with socioeconomic gender equality, where the socioeconomic status of women is being compared across different democracies. To know what a possible ranking pattern of a broader gender dimension might be, the Democracy Ranking 2008/2009 calculates a "comprehensive gender dimension" (a so-called seventh dimension). The ranking scores of that comprehensive gender dimension are also documented; however, they do not impact the aggregated ranking of the Democracy Ranking 2008/2009 (only the socioeconomic gender dimension does). The comprehensive gender dimension results from the dimension of socioeconomic gender equality and the political indicators P1-P4 (see the Appendix for an exact definition), where the following weight measures are being assigned: "socioeconomic gender equality" 50%, P1 15%, P2 15%, P3 15%, and P4 5%.
- 12. Empirical source of the indicators for the Democracy Ranking 2008: All indicators for the five non-political dimensions (gender [socioeconomic gender equality], economy, knowledge, health, and environment) are taken from the World Bank CD-ROM publication "World Development Indicators '08" (World Bank, 2008). In that context it should be mentioned that these World Development Indicators frequently are pooled by the World Bank from other renowned sources. For each indicator, the World Bank always cites precisely the original data source. Concerning the political dimension, reference is being made to Freedom House (most prominently the "Freedom in the World"<sup>8</sup> country ranking database) as key source for the political indicators. Additional sources for the political dimension are the United Nations Development Program (e.g., "Human

<sup>&</sup>lt;sup>8</sup>) See: <u>http://www.freedomhouse.org/uploads/AggregateScores\_2003-2008.xls</u>

Development Report 2007/2008"9), Transparency International (such as the "TI 2006 Corruption Perceptions Index",10) and subsequent editions of the "Political Handbook of the World" (for example, Banks et al., 2007). In the Appendix, the source for every indicator is always acknowledged.

The ranking scores of the Democracy Ranking 2008/2009 of the 13. Quality of Democracy: In Chapter 3, the ranking scores for the comprehensive Democracy Ranking and for the individual dimensions are documented in a series of scoreboards.

<sup>&</sup>lt;sup>9</sup>) See:

<sup>.</sup> http://hdr.undp.org/xmlsearch/reportSearch?y=\*&c=\*&t=\*&k=&orderby=year

<sup>&</sup>lt;sup>10</sup>) See: http://www.transparency.org/publications/annual\_report

#### 2. References

Banks, Arthur S. / Thomas C. Muller / William R. Overstreet (eds.) (2007). Political Handbook of the World 2007. Washington, D.C.: Congressional Quarterly Press (CQ Press).

Campbell, David F. J. (2008). The Basic Concept for the Democracy Ranking of the Quality of Democracy. Vienna: Democracy Ranking. <u>http://www.democracyranking.org/downloads/basic\_concept\_democracy\_ranking\_2008\_A4.pdf</u> and

http://www.democracyranking.org/downloads/basic concept democracy ranking 2008 letter.pdf

Campbell, David F. J. / Georg Pölzlbauer (2008). The Democracy Ranking 2008 of the Quality of Democracy: Method and Ranking Outcome. Vienna: Democracy Ranking.

Campbell, David F. J. / Miklós Sükösd (eds.) (2002). Feasibility Study for a Quality Ranking of Democracies. Vienna: Global Democracy Award. http://www.democracyranking.org/downloads/feasibility\_study-a4-e-01.pdf and http://www.democracyranking.org/downloads/feasibility\_study-letter-e-01.pdf

Campbell, David F. J. / Miklós Sükösd (eds.) (2003). Global Quality Ranking of Democracies: Pilot Ranking 2000. Vienna: Global Democracy Award.

http://www.democracyranking.org/downloads/folder\_a4-e-03.pdf and http://www.democracyranking.org/downloads/folder\_letter-e-03.pdf

World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

					Democracy	Democracy
	Total Score	Rank	Total Score	Rank	Loss/Gain	Loss/Gain
	2002-2003	2002-2003	2005-2006	2005-2006	Rating	Score
Sweden	88.69	1	89.54	1	84	0.8
Norway	86.77	2	87.72	2	80	1.0
Denmark	86.08	3	87.13	3	79	1.0
Finland	83.78	4	85.82	4	50	2.0
Switzerland	82.59	6	85.39	5	34	2.8
Netherlands	83.42	5	84.90	6	64	1.5
New Zealand	81.47	7	82.78	7	69	1.3
Austria	80.89	9	82.75	8	53	1.9
Australia	80.92	8	82.00	9	76	1.1
Belgium	79.82	11	81.89	10	49	2.1
Germany	80.25	10	81.38	11	75	1.1
United Kingdom	78.82	12	80.50	12	56	1.7
Canada	78.57	13	80.21	13	59	1.6
Ireland	76.82	15	79.54	14	36	2.7
Spain	75.57	17	78.72	15	30	3.2
United States	77.01	14	78.22	16	70	1.2
France	75.87	16	76.94	17	77	1.1
Portugal	75.09	18	75.74	18	85	0.7
Japan	73.05	19	74.41	19	68	1.4
Slovenia	71.10	20	72.51	20	67	1.4
Israel	70.68	22	72.44	21	54	1.8
Italy	70.71	21	72.35	22	58	1.6
Estonia	66.47	24	71.69	23	9	5.2
Costa Rica	69.16	23	71.54	24	43	2.4
Greece	66.19	27	70.69	25	17	4.5
Lithuania	66.35	25	70.63	26	19	4.3
Latvia	65.69	28	69.29	27	25	3.6
Uruguay	64.37	32	69.17	28	12	4.8
Czech Republic	64.69	31	68.96	29	20	4.3
Chile	65.52	29	68.92	30	28	3.4
Hungary	66.26	26	68.65	31	42	2.4
Korea, Rep.	63.54	34	68.31	32	14	4.8
Poland	65.45	30	67.08	33	60	1.6
Slovak Republic	62.44	36	66.66	34	21	4.2
Mauritius	63.74	33	65.68	35	52	1.9
Argentina	59.76	39	64.59	36	11	4.8
Croatia	60.88	37	64.44	37	27	3.6
Bulgaria	62.74	35	63.88	38	72	1.1
Panama	60.05	38	62.70	39	37	2.7
Mexico	58.74	41	60.38	40	57	1.6
Peru	59.09	40	60.22	41	74	1.1

#### 3. Ranking Outcome of the Democracy Ranking 2008/2009: Scoreboards

G:	54.40	47	50.15	40	1.5	4.7
Singapore	54.48	47	59.15	42	15	4.7
Brazil	56.84	42	58.27	43	65	1.4
Romania	55.80	43	57.29	44	63	1.5
El Salvador	54.30	48	56.71	45	40	2.4
Dominican	52.96	50	56.42	10	29	2.6
Republic Trinidad and	53.86	50	56.43	46	38	2.6
Tobago	53.19	52	56.28	47	32	3.1
Ecuador	52.68	54	56.28	48	26	3.6
Jamaica	55.02	45	56.16	49	73	1.1
South Africa	53.78	51	55.52	50	55	1.7
Bolivia	55.17	44	54.74	51	94	-0.4
Mongolia	54.02	44	54.61	52	87	0.6
Philippines	54.55	46	54.10	53	95	-0.4
Ghana	47.06	66	52.11	54	10	5.0
Colombia	48.52	63	51.73	55	29	3.2
Albania	52.39	55	51.72	56	98	-0.7
Namibia	50.18	57	51.59	57	66	1.4
India	48.52	62	51.48	58	33	3.0
Botswana	52.82	53	51.39	59	100	-1.4
Ukraine	42.51	75	51.26	60	4	8.8
Honduras	48.67	60	51.14	61	39	2.5
Senegal	48.56	61	50.84	62	46	2.3
Nicaragua	50.53	56	50.82	63	91	0.3
Mali	49.41	58	49.85	64	88	0.4
Macedonia, FYR	48.50	64	49.37	65	83	0.9
Turkey	43.29	74	48.75	66	7	5.5
Georgia	44.69	71	48.45	67	22	3.8
Moldova	47.31	65	48.20	68	81	0.9
Bosnia and						
Herzegovina	41.64	79	47.41	69	6	5.8
Paraguay	46.33	68	47.39	70	78	1.1
Indonesia	42.48	76	46.93	71	18	4.4
Papua New						
Guinea	49.31	59	46.42	72	101	-2.9
Guatemala	44.63	72	46.17	73	62	1.5
Benin	43.86	73	46.10	74	47	2.2
Sri Lanka	46.58	67	46.04	75	96	-0.5
Malaysia	42.07	77	45.79	76	24	3.7
Venezuela, RB	45.18	70	45.09	77	93	-0.1
Madagascar	45.61	69	44.93	78	99	-0.7
Tanzania	41.30	80	42.46	79	71	1.2
Kuwait	39.99	82	42.38	80	41	2.4
Niger	35.92	90	41.23	81	8	5.3
Lebanon	30.62	96	40.39	82	2	9.8
Bangladesh	38.16	83	40.39	83	48	2.2
Jordan	34.60	92	39.37	84	13	4.8
Malawi	36.90	88	39.23	85	45	2.3
Kenya	31.89	94	39.21	86	5	7.3
· · · · ·						

Morocco	37.42	86	39.01	87	61	1.6
Uganda	36.05	89	38.82	88	35	2.8
Guinea-Bissau	29.53	98	38.67	89	3	9.1
Kyrgyz Republic	34.62	91	38.35	90	23	3.7
Burkina Faso	37.99	84	38.33	91	89	0.3
Armenia	41.94	78	38.08	92	102	-3.9
Mozambique	37.17	87	37.77	93	86	0.6
Gambia, The	37.94	85	37.37	94	97	-0.6
Gabon	40.26	81	35.93	95	103	-4.3
Burundi	25.02	102	35.75	96	1	10.7
Sierra Leone	34.58	93	35.45	97	82	0.9
Mauritania	30.66	95	32.68	98	51	2.0
Ethiopia	28.78	99	31.12	99	44	2.3
Central African						
Republic	26.27	101	30.91	100	16	4.6
Zambia	30.57	97	30.87	101	90	0.3
Nigeria	26.46	100	29.59	102	31	3.1
Yemen, Rep.	24.50	103	24.49	103	92	0.0
	Green:		Green:			
	Within the	Green:	Within the	Green:	Green:	
	highest third	Country is	highest third	Country is	Country is	Green: Gain
	of all countries	among the 10 best	of all countries	among the 10 best	among the 10 best	-
		10 Dest		10 Dest	Dest	score
	Blue: Within		Blue: Within			
	the medium third of all		the medium third of all			
	countries		countries			
	Red: Within	Red:	Red: Within	Red:		
	the lowest	Country is	the lowest		Red: Country	Red: Loss of
	third of all	among the	third of all	among the	is among the	democracy
	countries	10 worst	countries	10 worst	10 worst	score

			Politi	cal Sys	tem Sc	ores		
	2002-	2005-	-	2002-			2002-	2005-
	2003	2006		2003	2006		2003	2006
Sweden	97.87	99.02	Panama	61.57	63.87	Guatemala	37.24	38.71
Finland	94.87	97.13	Namibia	61.59	63.55	Sri Lanka	40.29	38.06
Norway	96.20	96.62	Mexico	60.69	62.89	Venezuela, RB	41.14	37.54
Denmark	95.90	95.36	Peru	59.72	61.29	Malaysia	29.75	35.79
Netherlands	92.63	93.82	Dominican Republic	59.00	60.81	Burundi	14.50	35.24
Belgium	88.16	91.62	Botswana	65.09	59.77	Uganda	30.51	34.81
New Zealand	91.11	91.00	Senegal	56.56	59.45	Zambia	36.27	34.56
Austria	87.84	90.18	Jamaica	58.56	59.09	Bangladesh	29.96	33.92
Germany	88.41	89.53	Benin	56.35	59.06	Nigeria	26.52	32.35
Australia	89.07	89.19	Mongolia	59.95	59.00	Gambia, The	34.17	30.60
Canada	88.47	89.05	India	54.06	58.20	Lebanon	12.51	29.91
						Central African		
Switzerland		88.68				Republic		29.26
Spain			Romania			Jordan		28.44
United Kingdom		85.91				Kuwait		28.26
Portugal	82.66	83.47	El Salvador	52.92	55.56	Morocco	26.14	27.75
Ireland	81.49	82.89	Philippines			Ethiopia	22.47	25.60
United States	80.83	81.00	Bolivia	1		Kyrgyz Republic	17.61	24.41
Costa Rica	77.76	80.77	Ecuador	49.59	53.70	Mauritania	20.95	24.13
Estonia	73.82	80.45	Nicaragua	52.13	51.66	Armenia	32.57	23.47
France	79.57	79.84	Ukraine	33.79	49.44	Gabon	32.11	22.39
Chile	71.93	77.15	Mozambique	48.31	49.18	Yemen, Rep.	14.43	13.86
South Africa	77.14	76.83	Macedonia, FYR	48.24	48.95			
Lithuania	71.28	76.21	Honduras	45.28	48.89			
Uruguay	70.08	75.53	Tanzania	45.55	47.45	Green: Within the		
Slovenia	74.95	75.09	Indonesia	39.00	46.49	highest third of all		
Slovak Republic	69.01	74.18	Singapore	39.85	46.22	countries		
Latvia	70.66	74.16	Papua New Guinea	53.24	45.97			
Czech Republic	67.92	74.14	Niger	36.05	45.80	Blue: Within the		
Poland	73.02	74.13	Guinea-Bissau	27.66	45.76	medium third of		
Italy	72.21	73.51	Albania	47.79	44.80	all countries		
Japan	72.42	72.99	Colombia	41.54	44.79			
Hungary	69.40	72.84	Turkey	36.69	44.34	Red: Within the		
			Bosnia and			lowest third of all		
Bulgaria			Herzegovina			countries		
Israel			Kenya		44.02			
Greece			Moldova		43.82			
Mauritius			Madagascar		43.08			
Argentina			Malawi		42.28			
Korea, Rep.			Sierra Leone		41.43			
Croatia			Paraguay		41.07			
Ghana	58.91	66.63	Georgia	33.74	41.01			
Trinidad and	(C) (C)			20.75	20.11			
Tobago	63.29	66.36	Burkina Faso	39.75	39.44			

			Gender Equali	ity (Soc	cioecon	omic) Scores		
	2002-	2005-	•	2002-	2005-		2002-	2005-
	2003	2006		2003	2006		2003	2006
Norway	87.00	87.77	Chile	69.52	71.02	Uganda	45.19	47.60
New Zealand	84.84	87.60	Slovak Republic	68.71	70.51	Mali	43.94	47.11
Finland	86.39	86.63	Kyrgyz Republic	68.55	69.97	Gambia, The	43.16	45.84
Sweden	90.07	86.49	Brazil	67.95	69.31	Mauritania	42.46	44.49
Australia	85.72	86.34	Colombia	63.17	69.11	Ethiopia	38.41	43.17
Denmark	84.16	85.56	Malaysia	67.43	69.09	Kenya	38.55	41.72
United States	82.91	84.11	Georgia	71.51	69.01	Burundi	35.85	39.36
Slovenia	82.63	84.10	Costa Rica	66.21	68.60	Botswana	38.84	39.22
United Kingdom	82.86	83.78	Mexico	66.98	68.40	South Africa	31.04	38.04
Canada	82.07	83.61	Bolivia	67.83	68.06	Malawi	34.94	37.59
France	81.08	82.67	Panama	63.46	67.72	Namibia	36.88	36.66
Lithuania	79.59	82.31	Philippines	64.22	67.16	Burkina Faso	30.32	33.38
Ireland	79.92	82.31	Sri Lanka	65.54	67.14	Benin	28.51	31.57
Bosnia and								
Herzegovina			El Salvador			Yemen, Rep.		31.11
Estonia			Albania			Mozambique		30.02
Netherlands		81.58				Zambia		29.92
Japan	80.18	81.49	Honduras	63.75	66.42	v	26.35	28.97
Dalainna	02.22	01 40	Verenale DD	(2.97	<i>cc</i> 10	Central African	27.00	29.10
Belgium			Venezuela, RB			Republic		28.19
Israel			Jamaica			Nigeria Guinea-Bissau		24.59 21.11
Switzerland			Paraguay Mongolia			Sierra Leone		19.52
Austria			Mongona Mauritius	62.61		Sterra Leone	18.70	19.52
Spain	/0.44	80.00	Trinidad and	62.85	63.52			
Latvia	77.43	80.05	Tobago	60.70	61.53			
Germany			Kuwait	58.74		Green: Within the		
Portugal			Lebanon		60.10	highest third of all		
Korea, Rep.			Nicaragua			countries		
Italy			Jordan		57.53			
Hungary			Indonesia			Blue: Within the		
Ukraine			Madagascar	55.53	56.82	medium third of		
Greece			Guatemala			all countries		
Singapore			Turkey	56.11				
Poland			Papua New Guinea			Red: Within the		
Czech Republic			Tanzania	53.66	55.54	lowest third of all		
Argentina			Dominican Republic		1			
Romania	72.71		Macedonia, FYR		55.37			
Bulgaria			Bangladesh		54.11			
Uruguay			Gabon		52.88			
Croatia		73.16		47.34				
Armenia			Morocco		49.12			
Moldova			Senegal		48.89			
Ecuador			Ghana		47.69			

			Ec	onomy	Score	s		
	2002-	2005-		2002-	1		2002-	2005-
	2003	2006		2003	2006		2003	2006
Norway	89.49	93.35	Romania	38.26	45.35	Armenia	23.26	26.36
Kuwait	83.44	91.16	Ecuador	38.47	44.74	Namibia	23.28	25.40
United States	82.40	86.35	Bangladesh	45.39	44.72	Macedonia, FYR	22.87	22.77
Ireland	79.75	84.97	Brazil	40.85	44.59	Lebanon	18.03	20.04
Singapore	74.75	83.96	Colombia	41.02	44.38	Gambia, The	14.47	20.01
Switzerland	80.84	82.73	Morocco	41.91	44.27	Central African Republic	19.26	19.46
Australia	76.69	80.69	Panama	40.27	44.24	Benin	20.79	19.45
Denmark	75.57	80.68	Bulgaria	38.11	44.11	Burkina Faso	20.36	19.32
Netherlands	77.02	79.39	Guatemala	43.90	43.82	Guinea-Bissau	20.76	19.26
Canada	74.22	78.64	Argentina	31.98	43.76	Niger	20.64	18.79
Austria	75.66	77.44	India	42.97	43.36	Mauritania	19.98	17.79
Japan	72.95	77.00	Turkey	32.64	43.06	Burundi	18.67	15.97
United Kingdom	72.43	75.40	Uruguay	30.11	42.90	Mozambique	12.53	15.46
Sweden	70.88	73.56	Bolivia	43.37	42.72	Kenya	18.77	15.42
Finland	68.47	73.20	Honduras	41.56	42.33	Nigeria	14.65	15.28
Germany	72.56	72.53	Peru	42.05	42.13	Sierra Leone	19.62	14.97
Belgium	67.00	69.79	Gabon	41.04	41.72	Ghana	10.16	14.70
New Zealand	67.16	69.17	Moldova	39.82	40.86	Yemen, Rep.	16.96	14.54
France	67.44	68.98	Ukraine	41.22	40.47	Zambia	9.58	14.36
						Bosnia and		
Spain			Philippines			Herzegovina		13.04
Korea, Rep.	61.77		Georgia			Malawi	14.20	12.91
Slovenia	59.17		Indonesia	39.71				
Czech Republic	61.92	64.03	Venezuela, RB	30.06	38.11	Green: Within the		
Greece	58.68		Paraguay	36.02	38.08	highest third of all		
Israel	58.07	63.22	Kyrgyz Republic	35.75	37.11	countries		
Italy	60.19	62.60	Nicaragua		36.98			
Estonia	56.19	61.97	Ethiopia	37.28	36.26	Blue: Within the		
Portugal	60.16	59.47	Madagascar	38.44	36.01	medium third of		
Lithuania	51.67	58.15	Albania	33.73	35.86	all countries		
Latvia	52.43	57.41	Botswana	34.44	35.80			
Hungary	55.23	55.97	Sri Lanka	34.04	34.75			
Mexico	52.77	53.79	Jordan	32.66	34.41	Red: Within the		
Trinidad and Tobago	47.78	52.52	Mongolia	35.44	34.01	lowest third of all countries		
Slovak Republic	46.05	52.52	Jamaica	32.84	33.14			
Chile	48.26	51.06	Dominican Republic	25.32	30.49			
Costa Rica	48.04	48.16	Uganda	31.71	30.12			
Poland	43.77	47.60	Mali	30.26	29.40			
El Salvador			Tanzania		29.35			
Mauritius	46.42	47.46	South Africa		28.41			
Malaysia	45.66	47.21	Papua New Guinea	21.99	27.33			
Croatia	42.91		Senegal		27.17			
			-					

			Kn	owledg	e Scor	es		
	2002-	2005-			2005-		2002-	2005-
	2003	2006		2003	2006		2003	2006
Sweden	83.41	84.18	Dominican Republic	30.86	36.91	Ghana	13.88	15.73
Israel	71.85	78.37	Malaysia	33.66	36.74	Nigeria	14.55	15.36
Switzerland	71.81	75.25	Panama	34.71	36.11	Senegal	11.50	14.41
Finland	74.79	74.68	Brazil	33.06	36.11	Yemen, Rep.	13.14	14.20
Denmark	71.46	74.01	Moldova	31.36	35.49	Mauritania	12.11	13.83
United States	67.47	70.69	Romania	30.61	35.29	Sierra Leone	13.51	13.52
Australia	63.72	67.48	Jordan	32.24	34.93	Bangladesh	12.56	13.29
			Trinidad and					
Norway			Tobago		34.86			12.31
Netherlands	60.27		Kuwait			Zambia		10.98
United Kingdom			Uruguay			Uganda	9.01	10.63
New Zealand	61.40					Guinea-Bissau	8.39	9.00
Japan	60.91		Mongolia		32.75	Ũ	7.56	8.42
Korea, Rep.			Bolivia		32.66		6.20	8.20
Canada	56.77	1	Kyrgyz Republic			Burkina Faso	7.47	7.65
Singapore	58.12		Turkey			Madagascar	7.79	7.26
Belgium			Venezuela, RB			Malawi	7.47	6.95
Germany	57.39		El Salvador			Burundi	6.69	6.80
France	57.67		Costa Rica			Ethiopia	4.57	5.99
Austria			South Africa			Tanzania	4.47	5.55
Slovenia	53.54	56.21	Georgia	27.96	29.32	Mozambique	3.58	4.88
T. 1	52.00		D	26.06	20.26	Central African	1.07	0.11
Italy		55.66				Republic	1.87	2.11
Ireland			Colombia		29.20			
Estonia			Ecuador		29.04			
Spain G			Mexico	25.76	28.86	Green: Within the		
Greece			Armenia			highest third of all		
Hungary			Botswana			countries		
Lithuania		1	Guatemala		26.33			
Czech Republic	42.72		Gabon	20.18	25.61	Blue: Within the medium third of		
Portugal	45 16		Bosnia and Herzegovina	15 10	25 51	all countries		
Poland			Philippines		25.21			
Jamaica			Namibia					
Croatia			Morocco	19.28	22.88	Red: Within the lowest third of all		
Ukraine			Honduras			countries		
Latvia			Paraguay		22.80			
Bulgaria			Sri Lanka		21.51			
Argentina			Indonesia		21.31			
Slovak Republic			Nicaragua		20.91			
Macedonia, FYR			Gambia, The		19.80			
Albania	33.81				17.05			
Mauritius	33.07		Kenya		16.16			
Lebanon			Papua New Guinea		15.94			
	54.00	50.77		14.70	13.74			
L	I		l					

			F	Health :	Scores			
	2002-	2005-		1	2005-		2002-	2005-
	2003	2006		2003	2006		2003	
Switzerland	86.99	89.62	Estonia	65.91	68.28	Gabon	37.99	37.55
Japan	86.74	88.11	Lithuania	69.32	68.00	Madagascar	35.14	37.32
Sweden	85.48	87.07	Jordan	65.14	67.48	Benin	30.26	33.11
France	83.68	86.37	Brazil	65.55	67.33	Namibia	31.73	32.38
Norway	83.01	85.72	Mexico	67.05	67.30	Niger	27.46	30.00
Austria	82.91	85.08	Latvia	65.97	67.27	South Africa	24.43	29.86
United States	82.98	84.93	Georgia	66.09	67.11	Kenya	26.56	29.82
Germany	82.87	84.38	Venezuela, RB	66.08	66.96	Mali	26.25	28.78
Greece	82.20	84.25	Sri Lanka	65.48	66.96	Tanzania	24.92	28.62
Belgium	81.98	84.11	Lebanon	66.47	66.44	Ethiopia	25.88	27.86
Italy	82.28	83.97	Armenia	65.54	66.01	Burkina Faso	23.99	26.57
Netherlands	84.49	83.47	Romania	64.52	65.79	Uganda	22.90	26.56
Australia	81.31	83.45	Malaysia	64.20	65.61	Botswana	20.41	25.78
Spain	79.64	82.51	Dominican Republic	63.79	65.15	Malawi	21.54	25.61
Canada	81.03	82.41	Mauritius	63.09	65.00	Burundi	17.80	20.24
Ireland	77.67	82.38	Colombia	63.70	64.84	Nigeria	18.82	18.48
Israel	81.92	82.22	El Salvador	62.24	63.86	Guinea-Bissau	16.08	17.21
						Central African		
New Zealand			Turkey			Republic		14.14
Finland			Paraguay	63.11		Mozambique	15.19	12.85
Denmark			Nicaragua	61.23		Zambia	8.18	11.00
Portugal	77.38			61.27		Sierra Leone	5.41	6.88
United Kingdom	77.25		Ukraine	62.49				
Slovenia	75.31		Honduras	60.66				
Costa Rica	76.30	76.95	Moldova	60.87	62.25			
Argentina	71 16	76 97	Trinidad and Tobago	59.87	60.05			
Korea, Rep.			Jamaica			Green: Within the		
Czech Republic	74.00		Guatemala	59.22		highest third of all countries		
Singapore			Philippines		60.32	countries		
Chile	73.22		Morocco					
Uruguay			Kyrgyz Republic	59 51	58.72	Blue: Within the medium third of		
Croatia	71.91		Mongolia			all countries		
Panama	71.31		Indonesia		56.00			
Slovak Republic	70.32		Bolivia			Red: Within the		
Kuwait	70.32			46.83	48.57	Red: Within the lowest third of all		
Poland	70.76		Senegal			countries		
Albania	70.21		Bangladesh		45.68			
Hungary	70.21		Mauritania	41.91				
Macedonia, FYR	69.05		Yemen, Rep.		43.62			
Bosnia and	07.00	,						
Herzegovina	68.46	69.92	Papua New Guinea	39.84	40.48			
Bulgaria	68.59	69.81	Ghana	38.60	40.27			
Ecuador	68.29	69.45	Gambia, The	36.69	38.38			

			Environmen	tal Sus	tainab	ility Scores		
	2002-	2005-			2005-		2002-	2005-
	2003	2006		2003	2006		2003	2006
Mali	99.85	99.98	Portugal	74.87	73.73	Macedonia, FYR	60.81	62.32
Uganda	99.18	99.17	Denmark	71.79	73.31	Mongolia	58.17	61.30
Burkina Faso	99.02	99.16	Honduras	74.73	72.97	Venezuela, RB	60.13	60.97
Burundi	98.69	98.96	Spain	73.33	72.47	Poland	59.63	60.92
Central African								
Republic			Argentina			Nigeria	59.81	
Malawi			Dominican Republic			Malaysia	61.01	60.26
Niger	96.93	97.07	Yemen, Rep.	74.30	72.11	Norway	64.79	59.85
Gambia, The	96.30	96.70	Philippines	70.54	71.79	Korea, Rep.	58.70	59.28
Madagascar	96.49	96.47	Turkey	69.90	71.47	Bulgaria	55.93	58.00
Peru	96.27	95.10	France	70.95	71.33	Jordan	56.51	57.15
Papua New								
Guinea			Croatia			Finland	54.88	
Sierra Leone			Mexico			Australia	56.46	
Guinea-Bissau	90.98	1	Lebanon			Czech Republic	54.47	
Mauritius	91.10	91.14	Armenia	70.40	70.54	Moldova	52.05	52.35
Gabon	89.40	89.57	United Kingdom	69.11	70.08	United States	50.15	51.13
Uruguay	89.44	89.52	Ethiopia	69.25	69.90	Canada	49.29	49.29
Panama	82.86	87.69	Zambia	69.55	69.68	Estonia	47.48	47.99
Costa Rica	85.82	87.67	Nicaragua	69.19	69.59	South Africa	46.35	45.16
Botswana	83.80	87.30	Ghana	67.79	69.55	Ukraine	38.65	42.19
Mauritania	85.42	86.21	Benin	69.71	69.23	Kuwait	30.10	24.95
						Trinidad and		
Colombia			Lithuania			Tobago	17.77	21.16
Switzerland			Sweden	67.74	68.99			
Albania	82.16	81.56	Kenya	70.18	68.91			
Brazil	80.98	81.15	Mozambique		68.64			
Guatemala	81.13	81.01	Netherlands	67.98	68.59	Green: Within the		
El Salvador			New Zealand	66.45	68.37	highest third of all		
Sri Lanka	79.62	79.81	Hungary	67.18	68.34	countries		
Ecuador	80.61	79.63	Tanzania	70.56	68.30			
Namibia	79.19	79.33	Germany	67.53	68.01	Blue: Within the		
Paraguay	77.42	78.70	Japan	67.65	67.84	medium third of		
Bolivia	78.78	77.73	Romania	64.44	67.41	all countries		
Greece	76.06	77.66	Israel	63.98	66.85			
Bangladesh	76.08	76.49	Slovenia	65.61	66.65	Red: Within the		
Ireland	72.53			63.15	64.86	lowest third of all		
Latvia	73.59		Belgium			countries		
Morocco			Kyrgyz Republic		64.25			
Austria	75.30		Jamaica		63.58			
Italy	75.55		Indonesia	61.23				
			Bosnia and	51.20	00.00			
Georgia	74.65	74.54	Herzegovina	63.36	62.73			
Chile			Singapore		62.62			
	-1						1	
Senegal	73.22	73.77	Slovak Republic	60.09	62.32			

		Gender Comprehensive Scores									
	2001-	2004-		2001-	2004-		2001-	2004-			
	2002	2005		2002	2005		2002	2005			
Sweden	93.50	93.02	Peru	62.65	65.72	Kenya	39.03	45.29			
Norway	92.53	92.94	Ukraine	55.95	65.44	Bangladesh	41.51	44.96			
			Trinidad and								
Finland			Tobago			Kuwait		44.48			
Denmark			Ecuador	58.49		Jordan		43.75			
New Zealand	-		Jamaica			Uganda		41.72			
Australia	87.42		Brazil	61.93		Malawi	37.63	40.28			
Netherlands	87.04	88.12	El Salvador	59.67		Gambia, The	40.55	39.90			
Belgium	86.47	87.46	Philippines	61.65		Mozambique	39.32	39.16			
Canada	85.63	87.29	Mongolia	61.34	62.70	Niger	30.78	38.48			
			Bosnia and								
Germany			Herzegovina	54.77		Burundi		38.06			
Austria	84.91		Singapore			Morocco		37.66			
United Kingdom	-		Bolivia			Zambia		36.37			
Spain	79.57		Dominican Republic					35.32			
United States	-		Moldova			Ethiopia		35.05			
Switzerland			Honduras			Burkina Faso		34.96			
Ireland	81.12		Ghana			Mauritania	31.42				
Portugal	81.42		Albania	59.75		Sierra Leone		32.40			
France	81.21		Colombia	53.20		Guinea-Bissau		31.19			
Estonia	76.02	81.02	Senegal	53.27	57.22	Nigeria	25.14	28.43			
			~			Central African					
Lithuania			South Africa			Republic		27.58			
Slovenia	78.67		Nicaragua			Yemen, Rep.	16.39	18.82			
Italy			Georgia	53.43							
Latvia	74.51			52.49							
Czech Republic	-		Paraguay	53.53	55.12	Green: Within the					
Israel			Indonesia		54.84	highest third of all					
Argentina			Venezuela, RB	52.77		countries					
Poland			Macedonia, FYR		54.21						
Costa Rica			Malaysia	50.99	53.64	Blue: Within the					
Hungary	73.39	75.86	Tanzania	50.73	53.21	medium third of					
Greece		75.60		51.28	52.94	all countries					
Japan	74.24	75.44	Namibia		51.91						
Uruguay			Madagascar	50.67	51.24	Red: Within the					
Bulgaria			Sri Lanka	50.90	50.86	lowest third of all					
Korea, Rep.	68.69	73.53	Papua New Guinea	56.05	50.38	countries					
Slovak Republic	69.78	73.47	Botswana	52.33	49.93						
Chile	68.34	73.13	Guatemala	47.22	49.75						
Croatia	68.16	72.43	Armenia	54.46	49.23						
Panama	63.52	68.02	Turkey	45.12	48.76						
Mauritius	65.91	67.69	Kyrgyz Republic	42.95	47.74						
Mexico	65.19	67.56	Benin	43.75	47.29						
Romania	66.00	67.33	Lebanon	35.04	46.21						

# 4. Appendix: Overview and Definition of the Indicators Assigned per Dimension for the Democracy Ranking 2008/2009<sup>11</sup>

4.1 Dimension of Politics (Political System): Definition of Assigned Indicators<sup>12</sup>

**P1:** Political rights (aggregated scores): Freedom House (minimum = 1, maximum = 100), source: Freedom House (http://www.freedomhouse.org/uploads/AggregateScores\_2003-2008.xls).

**P2:** Civil liberties (aggregated scores): Freedom House (minimum = 1, maximum = 100), source: Freedom House (http://www.freedomhouse.org/uploads/AggregateScores\_2003-2008.xls).

**P3:** Gender Empowerment Measure/GEM (UNDP HDI) (minimum = 1, maximum = 100), source: United Nations Development Program (Human Development Report Office) (http://hdr.undp.org/xmlsearch/reportSearch?y=\*&c=\*&t=\*&k=&orderby= year). Comment: For the year 2002 was taken the "Human Development Report 2004", for 2003 the "Human Development Report 2005", and for 2005 the "Human Development Report 2007/2008". The reason for this is that there exists at least a two-year time lag of the most recently available data for 3 of the 4 key indicators of GEM when compared with the release date of the report.

<sup>&</sup>lt;sup>11</sup>) We want to acknowledge all organizations that provided the sources, from which indicators were taken to input the quantitative model of the Democracy Ranking 2008/2009. Without these fine sources, the computation of this democracy ranking would not have been possible. That these organizations make their data sources public and transparent, and thus globally available to all communities, demonstrates mature responsibility and leadership.

<sup>&</sup>lt;sup>12</sup>) In case of missing values, for the political dimension, the year 2001 did not serve as an estimator for 2002-2003 and 2004 was not used as an estimator for 2005-2006. Missing values thus were treated differently for the political and the five non-political dimensions. Reasoning for this was pragmatic; because of the data structure of the used sources, missing values for politics for 2002-2003 and 2005-2006 mostly implied that data for 2001 and 2004 also were not available. There is a tendency for political indicators to cover more countries with every new year.

P4: Seats in parliament held by women (UNDP HDI) (minimum = 1, maximum = 100), source: United Nations Development Program (Human Development Report Office) (http://hdr.undp.org/xmlsearch/reportSearch?y=\*&c=\*&t=\*&k=&orderby= year). Comment: For the year 2002 was taken the "Human Development Report 2002", for 2003 the "Human Development Report 2003", for 2005 the "Human Development Report 2005", and for 2006 the "Human Development Report 2006".

**P5:** Press Freedom: Freedom House (minimum = 100, maximum = 1),source:Freedom(http://www.freedomhouse.org/uploads/fop/historical/SSGlobal.xls).

**P6:** Corruption Perceptions Index: Transparency International (minimum = 1, maximum = 100), source: Transparency International (http://www.transparency.org/publications/annual\_report). Comment: For the year 2002 was taken the "TI 2002 Corruption Perceptions Index", for 2003 the "TI 2003 Corruption Perceptions Index", for 2005 the "TI 2005 Corruption Perceptions Index", and for 2006 the "TI 2006 Corruption Perceptions Index".

**P7:** Change of the head of government (last 13 years) (minimum = no = 1, maximum = yes = 100), source: successive volumes of "Political Handbook of the World" (for example: Banks, Arthur S. / Thomas C. Muller / William R. Overstreet [eds.] [2007]. Political Handbook of the World 2007. Washington, D.C.: Congressional Quarterly Press). Comment: As benchmarks served the years 2002 and 2006, thus reference was made to the two periods 1990-2002 and 1994-2006. In case of no change ("no"), the value "1" was assigned; in case of change ("yes") the value "100". Because of interpretation ambiguities, Bosnia and Herzegovina and Serbia and Montenegro were omitted.

**P8:** Party change of the head of government (last 13 years) (last 13 years) (minimum = no = 1, maximum = yes = 100), source: successive volumes of "Political Handbook of the World" (for example: Banks, Arthur S. / Thomas C. Muller / William R. Overstreet [eds.] [2007]. Political

Handbook of the World 2007. Washington, D.C.: Congressional Quarterly Press). Comment: As benchmarks served the years 2002 and 2006, thus reference was made to the two periods 1990-2002 and 1994-2006. In case of no change ("no"), the value "1" was assigned; in case of change ("yes") the value "100". Changes to or from "non-party heads or independents" to or from "party-based heads of government" were interpreted with the value "50". Because of interpretation ambiguities were omitted: Afghanistan, Armenia, Bosnia and Herzegovina, Georgia, Kyrgyz Republic, Lebanon, and Serbia and Montenegro.

Weighting of the indicators in context of the dimension of politics (political system): The following weight measures are assigned; P1 = 25%, P2 = 25%, P3 = 12.5%, P4 = 12.5%, P5 = 10%, P6 = 10%, P7 = 2.5%, and P8 = 2.5%.

### **4.2 Dimension of Gender (Socioeconomic Gender Equality): Definition of Assigned Indicators**

**SEGE1:** Labor force, female (% of total labor force) (minimum = 1, maximum = 100).

**SEGE2:** Unemployment, female (% of female labor force) (minimum = 100, maximum = 1).

**SEGE3:** Primary education, pupils (% female) (minimum = 1, maximum = 100).

**SEGE4:** School enrollment, secondary, female (% gross) (minimum = 1, maximum = 100).

**SEGE5:** School enrollment, secondary, female (% net) (minimum = 1, maximum = 100).

**SEGE6:** School enrollment, tertiary, female (% gross) (minimum = 1, maximum = 100).

**SEGE7:** Life expectancy at birth, female (years) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of gender (socioeconomic gender equality): World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of gender (socioeconomic gender equality): The following weight measures are assigned to three clusters of indicators; "labor force" (SEGE1-SEGE2) = 33.33%, "education" (SEGE3-SEGE6) = 33.33%, and "life expectancy" (SEGE7) = 33.33%. Within these three clusters, no indicator-specific weighting is being applied to the indicators.

### **4.3 Dimension of the Economy (Economic System): Definition of Assigned Indicators**

**E1:** GDP per capita, PPP (constant 2005 international \$) (minimum = 1, maximum = 100).

**E2:** GDP per capita, PPP (current international \$) (minimum = 1, maximum = 100).

**E3:** Central government debt, total (% of GDP) (minimum = 100, maximum = 1).

**E4:** Inflation, consumer prices (annual %) (minimum = 100, maximum = 1).

**E5:** Unemployment, total (% of total labor force) (minimum = 100, maximum = 1).

**E6:** Unemployment, youth total (% of total labor force ages 15-24) (minimum = 100, maximum = 1).

Source for all indicators of the dimension of the economy (economic system): World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of the economy (economic system): The following weight measures are assigned; E1 = 25%, E2 = 25%, and all the other indicators (E3-E6) are weighted equally with 12.5%.

#### **4.4 Dimension of Knowledge (Knowledge-Based Information Society, Education and Research): Definition of Assigned Indicators**

**K1:** School enrollment, secondary (% gross) (minimum = 1, maximum = 100).

**K2:** School enrollment, secondary (% net) (minimum = 1, maximum = 100).

**K3:** School enrollment, tertiary (% gross) (minimum = 1, maximum = 100).

**K4:** Pupil-teacher ratio, primary (minimum = 100, maximum = 1).

**K5:** Telephone mainlines (per 100 people) (minimum = 1, maximum = 100).

**K6:** Personal computers (per 100 people) (minimum = 1, maximum = 100).

**K7:** Internet users (per 100 people) (minimum = 1, maximum = 100).

**K8:** Mobile phone subscribers (per 100 people) (minimum = 1, maximum = 100).

**K9:** Information and communication technology expenditure (% of GDP) (minimum = 1, maximum = 100).

**K10:** Research and development expenditure (% of GDP) (minimum = 1, maximum = 100).

**K11:** Scientific and technical journal articles (per 1,000 people) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of knowledge (knowledge-based information society, education and research): World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of knowledge (knowledge-based information society, education and research): The following weight measures are assigned to three clusters of indicators; "education" (K1-K4) = 33.33%, "technology" (K5-K9) = 33.33%, and "research" (K10-K11) = 33.33%. Within these three clusters, no indicator-specific weighting is being applied to the indicators.

## **4.5 Dimension of Health (Health Status and Health System): Definition of Assigned Indicators**

H1: Life expectancy at birth, total (years) (minimum = 1, maximum = 100).

**H2:** Health expenditure per capita (current US\$) (minimum = 1, maximum = 100).

**H3:** Health expenditure, public (% of GDP) (minimum = 1, maximum = 100).

**H4:** Health expenditure, private (% of GDP) (minimum = 1, maximum = 100).

**H5:** Hospital beds (per 1,000 people) (minimum = 1, maximum = 100).

**H6:** Physicians (per 1,000 people) (minimum = 1, maximum = 100).

**H7:** Mortality rate, infant (per 1,000 live births) (minimum = 100, maximum = 1).

**H8:** Mortality rate, under-5 (per 1,000) (minimum = 100, maximum = 1).

Source for all indicators of the dimension of health (health status and health system): World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the dimension of health (health status and health system): The following weight measures are assigned; H1 = 65%, and all the other indicators (H2-H8) are weighted equally with 5%.

### **4.6 Dimension of the Environment (Environmental Sustainability):** Definition of Assigned Indicators

**EN1:** CO2 emissions (kg per 2005 PPP \$ of GDP) (minimum = 100, maximum = 1).

**EN2:** CO2 emissions (metric tons per capita) (minimum = 100, maximum = 1).

**EN3:** GDP per unit of energy use (constant 2005 PPP \$ per kg of oil equivalent) (minimum = 1, maximum = 100).

**EN4:** Electric power consumption (kWh per capita) (minimum = 100, maximum = 1).

**EN5:** Electricity production from hydroelectric sources (% of total) (minimum = 1, maximum = 100).

Source for all indicators of the dimension of the environment (environmental sustainability): World Bank (2008). World Development Indicators '08 (CD-ROM). Washington DC: World Bank.

Weighting of the indicators in context of the environment (environmental sustainability): The following weight measures are assigned; EN1 = 30%, EN2 = 30%, EN3 = 30%, EN4 = 5%, and EN5 = 5%.

#### 4.7 Dimension of Gender "Comprehensive": Definition of Assigned Indicators

For the conceptual and methodic design of a comprehensive gender dimension, see again paragraph 11 in Chapter 1.