

# Information Technology and Development 2005

Sources: International Telecommunications Union (ITU), United Nations Educational Scientific, and Cultural Organization (UNESCO), World Bank.

EarthTrends  
Data Tables:  
Institutions and  
Governance



	Digital Access Index (1-100, 100 = most access) 2002	Annual Investment in Telecommunications (Million \$US) 2001	Internet			Telephone			Traditional Media			Education & Literacy		
			% of Homes with Personal Computers 1996-2002	Internet Users (per 1000 people) 2002	Subscribers to Broadband Internet (1000's) 2002	% of Homes with tele-phones 1996-2003 (a)	Main Telephone Lines (per 1000 people) 2002	Mobile Telephones Subscribers (per 1000 people) 2002	Waiting List For Main Telephone Lines 1996-2002	Television Sets (per 1000 people) 2001	Radios (per 1000 people) 1997-2003(a)	Daily Newspapers (per 1000 people) 2001(a)	Secondary Net Enrollment 1999-2001 (a)	Adult Literacy Rate 2000-2004 (a)
<b>World</b>	..	<b>206,670</b>	..	<b>100</b>	<b>58,407</b>	..	<b>174</b>	<b>184</b>	..	<b>273</b>	<b>423</b>	<b>76</b>	..	..
<b>Asia (Excl. Middle East)</b>	..	<b>76,030</b>	..	<b>55</b>	..	..	<b>112</b>	<b>116</b>	..	<b>211</b>	<b>256</b>	<b>64</b>	..	..
Armenia	30	18	..	16	..	54.3	143	19	64,107	229	224	..	85	99.4
Azerbaijan	24	26	24.6	37	0	..	113	107	0	313	233	10	76	..
Bangladesh	18	70	..	2	0	1.2	5	8	211,111	50	64	..	44	41.1
Bhutan	13	3	5.0	14	0	..	28	0	2,000	27	340	..	..	..
Cambodia	17	..	..	2	0	3.6	3	28	..	8	127	..	21	69.4
China	43	30,836	..	46	..	12.8	167	161	812,000	312	333	59	..	90.9
Georgia	37	..	..	15	1	..	131	102	138,806	354	507	5	..	..
India	32	3,512	..	16	74	9.1	40	12	1,648,845	83	121	60	..	61.3
Indonesia	34	1,703	..	21	38	..	37	55	..	153	156	23	47	87.9
Japan	75	24,618	71.7	449	9,092	..	477	637	0	731	956	566	100	..
Kazakhstan	41	93	..	16	0	41.4	130	64	168,255	338	393	..	84	99.4
Korea, Dem People's Rep	..	..	..	..	0	..	39	0	..	56	149	..	..	..
Korea, Rep	82	6,372	60.1	551	9,218	91.8	540	679	0	402	1,053	..	89	..
Kyrgyzstan	32	2	..	30	0	..	77	10	37,666	49	112	..	..	..
Lao People's Dem Rep	15	..	..	3	0	..	11	10	5,921	52	150	..	31	66.4
Malaysia	57	1,180	13.5	320	19	..	190	377	65,884	202	420	95	69	88.7
Mongolia	35	2	5.0	21	0	17.0	53	89	37,760	72	41	18	71	97.8
Myanmar	17	6	0.4	1	0	..	7	1	93,456	8	59	9	35	85.3
Nepal	19	21	..	3	0	2.5	14	1	317,293	8	39	..	..	44.0
Pakistan	24	140	..	10	0	2.2	25	8	214,000	77	73	39	..	41.5
Philippines	43	1,055	12.0	44	..	14.2	42	191	..	173	189	67	56	92.6
Singapore	75	370	68.4	504	270	97.9	463	796	0	300	672	273	..	92.5
Sri Lanka	38	50	..	11	1	22.9	47	49	311,766	117	215	29	..	92.1
Tajikistan	21	1	..	1	0	..	37	2	6,081	357	178	..	79	99.5
Thailand	48	1,295	5.8	78	..	27.7	105	260	768,092	279	232	197	..	92.6
Turkmenistan	37	3	..	..	0	41.9	77	2	36,770	182	276	7	..	98.8
Uzbekistan	31	41	..	11	0	30.7	66	7	38,927	280	458	..	..	99.3
Viet Nam	31	..	..	18	0	..	48	23	..	186	107	6	65	90.3
<b>Europe</b>	..	<b>65,149</b>	..	<b>235</b>	<b>13,701</b>	..	<b>423</b>	<b>529</b>	..	..	<b>732</b>	..	..	..
Albania	39	22	1.4	4	0	10.5	71	276	98,500	..	584	..	74	98.7
Austria	75	1,353	45.0	415	407	88.0	482	836	0	630	763	309	88	..
Belarus	49	54	..	82	0	..	299	47	341,497	362	201	154	78	99.7
Belgium	74	1,261	44.6	328	872	84.0	494	786	..	543	792	153	..	..
Bosnia and Herzegovina	46	64	..	26	0	15.0	237	196	70,000	..	245	..	..	94.6
Bulgaria	53	0	4.0	81	0	84.6	368	333	145,787	..	543	173	86	98.6
Croatia	59	..	..	180	12	79.6	417	535	0	..	336	134	86	98.1
Czech Rep	66	1,224	21.4	256	15	68.7	362	849	25,096	538	803	..	89	..
Denmark	83	1,302	72.0	513	440	..	689	833	0	859	1,401	283	89	..
Estonia	67	73	..	328	46	..	351	650	4,100	469	1,192	192	92	99.8
Finland	79	812	56.0	510	274	99.0	523	867	0	678	1,623	445	95	..
France	72	6,405	37.0	314	1,644	97.0	572	647	0	632	950	143	92	..
Germany	74	10,268	57.2	436	3,205	98.5	650	716	0	676	559	291	88	..
Greece	66	1,514	..	135	0	..	491	845	7,575	519	477	..	85	..
Hungary	63	750	22.0	158	75	28.0	361	676	7,775	475	689	162	92	..
Iceland	82	37	61.1	648	24	92.2	653	906	0	..	1,076	322	82	..
Ireland	69	..	32.4	280	5	85.0	502	763	..	395	697	148	82	..
Italy	72	7,289	27.2	352	850	96.9	481	939	0	..	880	109	88	..
Latvia	54	86	15.0	133	10	77.0	301	394	14,261	840	686	138	89	99.7
Lithuania	56	92	..	144	..	74.0	270	475	3,921	450	500	31	92	99.6
Macedonia, FYR	48	..	..	48	0	65.0	271	177	40,000	..	206	54	..	..
Moldova, Rep	37	17	..	41	0	..	199	93	107,257	358	890	153	68	99.0
Netherlands	79	2,633	..	506	1,170	90.0	618	745	0	553	977	279	90	..
Norway	79	..	65.0	307	198	..	742	844	0	884	3,316	569	95	..
Poland	59	..	23.1	230	..	61.0	301	360	501,638	422	297	102	91	..
Portugal	65	1,720	37.0	194	259	78.0	421	825	25,608	413	303	102	85	..
Romania	48	..	6.0	101	21	..	193	235	542,060	..	653	..	80	97.3
Russian Federation	50	732	..	41	0	..	242	120	5,809,600	..	417	..	..	99.6
Serbia and Montenegro	45	80	..	60	0	81.3	233	257	143,000	..	297	..	..	..
Slovakia	59	126	12.4	160	0	69.5	268	544	6,967	409	964	14	87	99.7
Slovenia	72	366	46.0	376	57	93.0	405	835	503	366	406	168	96	99.7
Spain	67	7,313	36.1	193	1,244	90.3	434	824	4,308	564	333	98	94	..
Sweden	85	1,482	75.0	573	577	100.0	736	889	0	965	2,795	410	99	..
Switzerland	76	1,643	64.2	351	455	..	733	788	0	552	999	372	88	..
Ukraine	43	394	..	19	0	81.6	226	77	2,158,700	..	884	175	91	99.6
United Kingdom	77	15,942	54.0	423	1,814	95.0	591	841	0	950	1,432	326	95	..
<b>Middle East &amp; N. Africa</b>	..	..	..	<b>42</b>	<b>324</b>	..	<b>139</b>	<b>136</b>	..	<b>219</b>	..	..	..	..
Afghanistan	..	..	..	0	0	..	1	1	..	14	131	..	..	..
Algeria	37	96	..	16	0	37.6	61	13	727,000	161	230	27	62	68.9
Egypt	40	658	3.0	28	1	60.0	115	67	206,056	231	..	31	81	55.6
Iran, Islamic Rep	43	..	3.2	48	16	67.0	187	33	1,480,547	171	490	..	..	..
Iraq	..	..	..	1	0	..	28	1	..	..	229	..	33	..
Israel	70	443	40.7	301	207	96.0	453	955	22,000	330	520	..	89	95.3
Jordan	45	265	9.8	58	3	71.0	127	229	1,378	177	361	74	80	90.9
Kuwait	51	..	..	106	11	..	204	519	0	418	569	..	77	82.9
Lebanon	48	..	..	117	35	..	199	227	..	357	269	63	..	..
Libyan Arab Jamahiriya	42	..	..	23	0	..	130	13	80,000	..	243	14	..	81.7
Morocco	33	735	..	24	0	24.9	38	209	5,022	167	333	30	31	50.7
Oman	43	109	..	71	0	..	92	183	2,141	583	591	..	68	74.4
Saudi Arabia	44	1,395	..	65	2	70.0	151	228	73,576	276	324	..	53	77.9
Syrian Arab Rep	28	175	..	13	0	50.0	123	23	2,805,907	172	275	..	39	82.9
Tunisia	41	213	3.0	52	0	38.0	117	59	129,518	207	158	23	68	73.2
Turkey	48	361	12.3	62	21	81.8	272	336	142,894	309	542	..	..	86.5
United Arab Emirates	64	502	29.6	271	16	..	291	647	431	224	284	..	72	77.3
Yemen	18	49	..	5	0	..	28	21	704,801	282	64	..	35	49.0

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<b>Sub-Saharan Africa</b>	..	..	..	9	4	..	15	38	..	60	233	..	..	..
Angola	11	..	..	3	0	..	6	9	21,149	19	85	11	..	..
Benin	12	26	..	7	0	3.7	9	32	23,000	33	157	5	20	39.8
Botswana	43	25	..	35	0	..	83	253	19,624	44	756	25	55	78.9
Burkina Faso	8	19	2.0	2	0	1.7	5	9	12,436	12	114	1	8	12.8
Burundi	10	30	0.0	1	0	0.3	3	7	4,692	29	164	2	8	50.4
Cameroon	16	44	..	4	0	1.8	7	44	50,000	35	128	6	..	67.9
Central African Rep	10	0	..	1	0	0.9	2	3	1,200	5	109	2	..	48.6
Chad	10	..	..	2	0	0.3	2	4	600	5	116	0	8	45.8
Congo	17	..	..	2	0	..	7	67	..	13	122	6	..	82.8
Congo, Dem Rep	12	..	..	1	0	..	0	11	..	2	380	3	..	..
Côte d'Ivoire	13	113	..	5	0	17.4	20	62	17,201	61	146	16	..	..
Equatorial Guinea	20	..	..	4	0	..	17	63	1,900	..	429	5	26	..
Eritrea	13	1	0.2	2	0	..	9	0	38,496	39	475	..	21	..
Ethiopia	10	46	..	1	0	1.3	5	1	145,938	6	184	0	15	41.5
Gabon	34	4	2.0	19	0	12.8	25	215	3,456	135	169	29	..	..
Gambia	13	7	1.0	19	0	..	29	75	10,611	15	155	2	28	..
Ghana	16	38	..	8	0	2.0	13	21	154,782	53	129	14	32	73.8
Guinea	10	1	1.9	5	0	1.7	3	12	1,420	17	93	..	..	..
Guinea-Bissau	10	..	..	11	0	22.4	9	0	5,098	36	47	5	..	..
Kenya	19	51	0.5	13	0	2.7	10	38	110,066	41	218	8	24	84.3
Lesotho	19	22	..	10	0	5.6	13	45	21,051	32	58	9	22	81.4
Liberia	..	..	..	..	..	..	2	..	2,400	..	274	14	18	55.9
Madagascar	15	..	..	3	0	2.0	4	10	1,842	16	131	5	..	..
Malawi	15	..	20.0	3	0	..	7	8	17,430	6	310	2	29	61.8
Mali	9	18	..	2	0	2.4	5	5	..	26	153	1	..	19.0
Mauritania	14	53	0.0	4	0	2.9	12	92	47,780	40	138	..	15	41.2
Mozambique	12	47	..	3	0	1.0	5	14	12,658	13	255	3	11	46.5
Namibia	39	23	..	27	0	17.0	65	80	2,578	77	212	17	38	83.3
Niqr	4	..	..	1	0	0.6	2	1	..	10	66	0	5	17.1
Nigeria	15	..	..	3	0	1.8	6	13	42,000	68	222	25	..	66.8
Rwanda	15	..	..	3	0	1.1	3	14	8,000	8	151	1	..	69.2
Senegal	14	66	..	10	1	17.0	22	45	9,836	37	118	..	..	39.3
Sierra Leone	10	..	..	2	0	..	5	14	25,000	13	264	..	..	..
Somalia	..	..	..	9	0	..	10	4	..	15	48	..	..	..
South Africa	45	1,394	8.6	68	3	24.4	107	301	50,000	159	248	26	62	86.0
Sudan	13	108	0.2	3	0	10.0	20	6	444,000	384	461	..	..	59.9
Tanzania, United Rep	15	9	..	2	0	2.0	5	22	7,968	45	418	..	..	77.1
Toqo	18	23	0.9	41	0	7.0	10	35	27,496	84	410	2	27	59.6
Uganda	17	..	..	4	0	2.7	2	16	9,161	14	163	3	14	68.9
Zambia	17	5	..	5	0	3.8	8	13	11,631	57	148	22	20	79.9
Zimbabwe	29	..	..	43	0	7.1	25	30	158,918	64	426	..	40	90.0
<b>North America</b>	..	34,617	56.8	547	21,356	95.5	646	477	..	914	2,079	194	..	..
Canada	78	4,981	59.9	513	3,515	97.0	643	378	0	691	1,080	168	98	..
United States	78	29,620	56.5	551	17,841	95.3	646	488	0	938	2,079	196	85	..
<b>C. America &amp; Caribbean</b>	..	..	..	86	..	..	133	205	..	246	319	..	..	..
Belize	47	11	4.6	109	0	42.0	114	188	1,123	175	599	..	60	76.9
Costa Rica	52	233	14.1	193	0	54.3	251	111	15,788	..	774	70	51	95.8
Cuba	38	144	..	..	0	12.0	..	2	..	251	185	54	83	96.9
Dominican Rep	42	288	..	61	0	33.4	110	207	..	..	180	28	41	84.4
El Salvador	38	163	..	46	81	16.0	103	138	38,247	233	478	29	46	79.7
Guatemala	38	..	..	33	0	15.6	71	131	..	145	79	..	29	69.9
Haiti	15	..	..	10	0	4.3	16	17	100,000	50	55	..	..	51.9
Honduras	29	26	3.7	25	0	16.0	48	49	342,191	122	395	..	..	80.0
Jamaica	53	137	..	228	..	..	169	533	168,609	359	731	..	75	87.6
Mexico	50	5,738	9.3	98	..	45.3	147	255	137,318	282	325	94	60	90.5
Nicaragua	19	6	..	17	2	..	33	46	108,370	123	277	..	37	76.7
Panama	47	..	..	62	8	40.4	129	175	..	194	299	..	62	92.3
Trinidad and Tobago	53	110	5.3	106	0	78.0	250	278	10,000	345	534	..	72	98.5
<b>South America</b>	..	11,399	..	82	..	..	187	189	..	312	467	42	..	..
Argentina	53	869	25.2	112	..	..	219	178	93,052	326	699	40	81	97.0
Bolivia	38	162	..	32	0	23.7	70	123	7,500	..	675	99	67	86.7
Brazil	50	6,525	..	82	731	58.9	223	201	200,000	349	444	46	72	86.4
Chile	58	968	16.9	238	166	54.0	230	428	32,329	494	821	..	75	95.7
Colombia	45	1,530	9.8	46	20	51.5	179	106	1,174,660	286	552	26	54	92.1
Ecuador	41	..	..	43	..	32.2	115	126	14,492	225	524	98	50	91.0
Guyana	43	..	..	142	0	..	92	99	75,553	98	494	75	75	..
Paraguay	39	82	..	17	1	18.8	47	288	20,075	..	182	..	50	91.6
Peru	44	175	4.3	90	36	20.4	62	86	33,000	149	273	23	66	85.0
Suriname	46	20	10.0	42	0	..	164	225	5,736	261	727	67	63	..
Uruguay	54	..	17.4	..	..	73.4	280	193	0	..	607	..	72	97.7
Venezuela	47	1,068	..	51	114	35.6	113	256	392,005	186	294	..	57	93.1
<b>Oceania</b>	..	5,032	63.7	398	293	96.8	410	483	..	540	1,451	..	..	..
Australia	74	4,663	67.0	534	249	97.0	555	640	0	732	1,956	161	88	..
Fiji	43	18	..	61	0	..	119	110	4,969	117	678	..	76	92.9
New Zealand	72	350	47.0	484	44	96.0	448	622	0	582	992	202	92	..
Papua New Guinea	26	..	0.4	14	0	..	11	3	200	21	83	..	23	..
Solomon Islands	17	..	..	5	0	..	15	2	36	12	126	..	..	..
<b>Developed</b>	..	131,401	..	320	44,652	..	455	495	..	..	1,032	..	..	..
<b>Developing</b>	..	75,323	..	40	..	..	97	100	..	184	245	..	..	..

a. Data is for the most recent year available within the range of dates shown. b. The most recent assessment was conducted in 2004, and includes data from 2000-2004.

### DEFINITIONS AND METHODOLOGY

It has been recognized that widespread access to information and communication technology can improve people's lives and boost economic development. Because of this, it has been identified as a crucial aspect of development and increased proliferation of these technologies has been included as Target 18 of the United Nations Millennium Development Goals.

#### World Telecommunications Indicators

**The Digital Access Index** is a composite score, developed by the International Telecommunications Union (ITU), which reflects the ability of each country's population to take advantage of internet communication technologies. It ranges from 1 to 100, where 100 equals the most access. The Index is calculated as a weighted average of 8 variables describing infrastructure, affordability, educational level of the population, quality of information and communication technology (ICT) services, and internet usage. The Digital Access Index provides a tool to help measure progress towards this important goal. For more information see [http://www.itu.int/ITU-D/ict/dai/material/DAI\\_ITUNews\\_e.pdf](http://www.itu.int/ITU-D/ict/dai/material/DAI_ITUNews_e.pdf).

**Annual Investment in Telecommunications** refers to the expenditure associated with acquiring the ownership of telecommunication equipment infrastructure for use in a particular country. Totals include supporting land, buildings, and intellectual and non-tangible property such as computer software. These include expenditure on initial installations and additions to existing installations.

#### Internet

All internet datasets are obtained from the ITU, derived from an annual questionnaire sent out by the Telecommunication Development Bureau (BDT) to telecommunication authorities and operating companies, as well as from reports provided by telecommunication ministries, regulators, and operating companies.

**Percent of Homes with Personal Computers** is the percentage of households that own one or more personal computers. **Internet Users (per 1,000 people)** measures the number of people per thousand of a country's population who have used the internet at any point in time during a specific year. The number of internet users is obtained by ITU, who compiles this information from industry associations. The ITU combines its standard telecommunications datasets with population data from the UN Department of International Economic and Social Affairs to calculate internet usage per 100 people. WRI converts these estimates to internet usage per 1,000 people. **Number of Subscribers to Broadband Internet** is the number of internet subscribers with a modem connecting to the internet via Digital Subscriber Line (DSL) technology or cable television lines. WRI calculates the number of broadband internet subscribers by combining the number of cable internet and DSL subscribers obtained from ITU. More information is available at <http://www.itu.int/ITU-D/ict/publications/world/world.html>.

#### Telephones

The telephone datasets are also obtained from ITU. **Percent of Homes with Telephones** is the percentage of households with one or more private telephone lines. **Main Telephone Lines (per 1,000 people)** is the number of telephone lines, per thousand people, connecting a customer's equipment to the Public Switched Telephone Network (PSTN) and which have a dedicated port on a telephone exchange. Note that for most countries, main lines also include public payphones. A main line should be differentiated from a subscriber; subscribers, customers who are billed individually, may share the same line (i.e., party line) or use extensions from a private extension. Thus one main line could serve several subscribers. The **Mobile Telephone Subscriptions (per 1,000 people)** measures the number of people per thousand of a country's population that subscribe to an automatic public mobile telephone service for portable telephones. This includes analog and digital cellular systems, and excludes non-cellular systems. Also excluded are subscribers to fixed wireless, public mobile data services, radio paging services, and telepoint. ITU combines the data for both the Main Lines and Mobile Telephone Subscriptions with population data obtained from the UN Department of International Economic and Social Affairs to calculate the number per 100 people; WRI converts these estimates to main telephone lines per 1,000 people. Size of **Waiting List**

## Technical Notes

**for Telephone Main Lines** refers to the number of unmet applications for connection to the public switched telephone network (PSTN). These data do not include waiting times to other services, e.g., leased lines, mobile communications, or packet switched data communications. More information is available at <http://www.itu.int/ITU-D/ict/publications/world/world.html>.

### *Traditional Media*

**Television Sets (per 1,000 people)** is the ratio of television sets in use by both businesses and households, divided by the country's population in thousands. **Radios (per 1,000 people)** is the ratio of the number of radio receivers used for broadcast to the general public, also divided by the country's population in thousands. Private radio sets installed in public places are also included as well as communal radio receivers. WRI calculates these ratios by dividing the number of television sets and radios per country by the total population for that given country; this quotient is then multiplied by 1,000 to provide the number of television sets and radios per 1,000 people. All datasets for these calculations were provided by ITU in order to maintain consistency with other ITU indicators; ITU obtains population data from the UN Department of International Economic and Social Affairs.

The **Number of Newspapers (per 1,000 people)** is the number of newspapers circulated per 1,000 people, and refer to those published at least four times a week. Newspapers are defined as periodic publications intended for the general public and mainly designed to be a primary source of written information on current events connected with public affairs, international questions, politics, etc. They may also include articles on literary or other subjects as well as illustrations and advertising. Data on the number of newspapers are obtained from the World Bank Development Indicators online.

### *Education and Literacy*

The **Secondary Net Enrollment** is a ratio of the number of enrolled students of the official age-group for secondary school divided by the total population for that same age group and multiplied by 100 to produce the final indicator, a percentage. The theoretical maximum value is 100%. A high NER denotes a high degree of participation of the official school-age population. If the NER is below 100%, users should not assume that the remaining school-aged population is not enrolled in any school; they could be enrolled in school at other grade levels. Secondary Education is defined by the [International Standard Classification of Education \(ISCED\)](#) as the "full implementation of basic skills and the foundation for lifelong learning" and includes courses taught by teachers in their fields of specialization. Programs are typically three years long and represent the end of compulsory education in many countries. This indicator is obtained from UNESCO, who collects enrollment data from national governments through a series of electronic questionnaires, available on-line at [http://www.uis.unesco.org/ev.php?ID=5619\\_201&ID2=DO\\_TOPIC](http://www.uis.unesco.org/ev.php?ID=5619_201&ID2=DO_TOPIC). When data from national governments are not available or are of inferior quality, UNESCO will estimate gross enrollment ratios. Population data used in calculations were obtained from the United Nations Population Division.

The **Adult Literacy Rate** is usually defined as the percentage of the population aged 15 years and over who can both read and write, with understanding, a short, simple statement on their everyday life. This indicator can be used to measure the achievement of literacy programs and the effectiveness of primary education. According to UNESCO, "literacy represents a potential for further intellectual growth and contribution to economic-socio-cultural development of society." Adult literacy correlates with GNP per capita, life expectancy, fertility rates, infant mortality, and urbanization. Most literacy data are collected during national population censuses. Typically, censuses are held only once in a decade, so UNESCO supplements these data with household surveys, labor force surveys, employment surveys, industry surveys, and agricultural surveys when they are available. Standards for the measurement of literacy vary from country to country. For information on how different national census bureau's define literacy, see the UNESCO website at <http://www.uis.unesco.org/>.

### **FREQUENCY OF UPDATE BY DATA PROVIDERS**

All data is updated by annually except for the **Digital Access Index** which was last released by the International Telecommunications Union (ITU) in November, 2003.

## Technical Notes

### **DATA RELIABILITY AND CAUTIONARY NOTES:**

#### **World Telecommunications Indicators**

These data are from a number of reputable sources including ITU's quarterly survey of information and communication technologies around the world and are considered to be the most accurate global dataset available on this topic. However, complete accuracy is difficult to ensure, and the data are often very rough approximations. While the data can illustrate very general trends, rigid comparisons among countries are discouraged.

#### **Secondary Net Enrollment**

While UNESCO keeps the most complete global data set on enrollment levels, problems do remain. The availability and quality of national school enrollment statistics vary widely, particularly for developing countries. Even though UNESCO has applied the same methodology to analyze all of the country data, definitions of "schooling" and "enrollment" are not strictly comparable among countries. Difficulties also arise when a substantial proportion of students begin school earlier than the prescribed age, or when the reference date for entry into secondary education does not coincide with the birthdays of all eligible students. In 1998, UNESCO began using the [ISCED97](#) model for collecting and calculating education data. Users wishing to construct time series using pre-1998 data should do so with caution as they are not necessarily comparable with the 1998-2002 data found here.

#### **Adult Literacy Rate**

The availability and quality of national statistics on literacy varies widely, particularly for developing countries. When census and survey data are not available for a particular country, estimates need to be made based on neighboring countries. Even when census and survey data are available they are typically collected only once every decade. In addition, many industrialized countries have stopped collecting literacy data in recent years, based on the sometimes incorrect assumption that universal primary education means universal literacy. Even though UNESCO has applied the same methodology to analyze all of the country data, actual definitions of adult literacy are not strictly comparable among countries. Some countries equate persons with no schooling for illiteracy, or change definitions between censuses. In addition, UNESCO's definition of literacy does not include people who, though familiar with the basics of reading and writing, do not have the skills to function at a reasonable level in their own society. Practices for identifying literacy and illiteracy during actual census enumeration may also vary, and errors in literacy self-declaration can affect data reliability. Therefore, users should exercise caution when making cross-country comparisons.

### **SOURCES**

#### **The Digital Access Index**

International Telecommunications Union (ITU), 2003. World Telecommunication Development Report. Digital Access Index obtained online at [http://www.itu.int/newsarchive/press\\_releases/2003/30.html](http://www.itu.int/newsarchive/press_releases/2003/30.html).

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International Telecommunications Union (ITU). 2004. World Telecommunications Indicators 2004 (available on-line at <http://www.itu.int/ITU-D/ict/publications/world/world.html>). Geneva: ITU.

#### **Number of Newspapers**

Development Data Group, The World Bank. 2004. World Development Indicators 2004 online (see [http://publications.worldbank.org/e-commerce/catalog/product?item\\_id=631625](http://publications.worldbank.org/e-commerce/catalog/product?item_id=631625)) Washington, D.C.: The World Bank.

#### **Education and Literacy Indicators**

United Nations Educational Scientific, and Cultural Organization (UNESCO) Institute for Statistics. 2002. World Education Indicators . Paris: UNESCO. Data are provided to WRI directly from UNESCO. UNESCO will make these data publicly available in mid-2002 at <http://www.uis.unesco.org/en/stats/stats0.htm>