

The statistical annex presents a coherent, but limited, set of data related to the development of information and communication technologies throughout the world. The objective is to allow the reader both to have a general view of the main data relevant to the field and to set the chapters of the Report in a general context.

No attempt has been made to collect original data; they have been gathered from various sources, mainly from the UNESCO and ITU Statistical Services, but also from others. The authors selected those which they found most significant which explains the variations from one chapter to another. In order to get a more balanced grasp of the world wide situation and to allow for interregional comparison, the annex brings together a selected range of data, presented in four sections. Section One covers basic general variables such as population, GNP and so on, then a series of communication and information variables. Section Two concentrates on trade data for communication and information equipment. Section Three provides some typical data related to Internet development and use. The fourth and last section summarizes UNESCO'S operational activities in the fields of communication, information and informatics.

The chapters in Part Three of the Report include a number of tabular and/or graphic presentations of quantitative data, related to the region concerned and the specific subject matters covered. The contents, type of data and the level of aggregation varies from chapter to chapter, according to data availability, relevance and focus.

The method used to select the variables to be included in the annex can perhaps best be described as one of 'exclusion'. In a first instance, all quantitative variables from all the chapters in the Report were taken into account. Following this, it was decided that in cases where either data for other regions were not available or data generally were not complete enough to make regional estimates possible, or where regional estimates were not applicable, the variables would not be included in the tables.

In general, lack of data or difficult access to data poses a greater problem for developing than for industrialized countries. National data or even regional data may exist, but the difference in research methods etc., make further comparisons impossible. There are also specific areas where the lack of quantitative data is more generalized, for example in the case of libraries, where data are scarce and cannot be compared at a global level. For some other areas, and in particular those related to the commercial world, such as market shares of communication industry, market forecasts for equipment and services, multimedia industry etc., data are available, but not accessible, due to the high costs of purchase. It should also be noted in these areas that the methods employed and the angle of research obviously differ, depending on the targeted users of the research results, and the more detailed research available on the commercial market may not therefore be altogether relevant to the purposes of this Report.

#### Signs used:

- na = not available
- = zero, magnitude nil
- \* = not applicable
- 0 or 0.0 = less than half the unit used

#### Sources for Tables A1 to A6:

- UNESCO Statistical Office, Paris, 1998
- Human Development Report, UNDP, Oxford University Press, 1998
- International Telecommunication Indicators, ITU, Geneva, 1998
- International Trade Centre ([www.intracen.org](http://www.intracen.org)), 1998
- Union Postale Universelle, UPU ([www.upu.org](http://www.upu.org)), 1998
- eMarketer ([www.emarketer.com](http://www.emarketer.com)), 1999.

# SECTION ONE.

## SELECTED GENERAL, COMMUNICATION

## AND INFORMATION INDICATORS

Table A.1 → Selected general, communication and information indicators

	World	Sub-Saharan Africa	Arab States	Southern Asia	Eastern Asia	South-Eastern Asia and Pacific	Latin America and Caribbean	Eastern Europe and CIS	Industrial countries	Developing countries
General indicators										
Est. midyear population 1996 in millions	5,787.4	604.9	260.4	1,337.7	1,805.7	3,516.6	484.3	343.5	1,228.7	4,538.7
GNP/capita	4,880	518	2,162	426	1,323	617	1,533	2,013	18,158	1,141
Human Development Index, 1995	0.772	0.386	0.636	0.462	0.676	0.683	0.831	0.756	0.911	0.586
Est. adult illiteracy rates, in % of population, 1995	22.6	43.2	43.4	59.8	na	16	13.4	na	1.3	29.6
Tertiary education: enrolment in millions	7.4	0.9	5.6	3.2	na	4.5	7.0	na	18.0	4.3
Postal services										
Domestic services: dispatched letter items/capita, 1995	69	6	5	na	na	17	16	31	380	na
International services: dispatched letter items/capita, 1995	1.6	1.1	2.6	na	na	0.5	1.1	1.6	6	na
Press										
No. of dailies, 1994	8,896	157	136	2,790	404	3,650	1,199	na	4,088	4,808
Est. circulation/1,000 inh., 1994	96	10	44	27	na	56	44	na	44	286
Newsprint consumption, kg/inhab., 1996	20.9	1.6	2.9	1.9	7.5	6.8	10.7	6.7	78.2	5.2
Libraries										
Est. registered users/1,000 inh., 1995	na	1.7 <sup>1</sup>	na	na	41.0 <sup>2</sup>	na	na	330.0	na	na
Telecom										
Est. main lines/1,000 inh., 1996	131	14	51	18	61	35	108	169	424	45
Est. subscribers to cellular telephones/1,000 inh., 1996	25.7	2.1	3.7	0.4	8.7	9.0	15.3	3.8	91.7	5.8
Estimated no. fax machines/1,000 inh., 1995	na	0.2	1.5	na	0.5	0.3	4.2	1.2	23.2	na
Est. no. of ISDN subscribers/1,000 inh., 1996	0.7	na	na	na	na	na	na	na	3.7	0.0
Est. average residential connection charge, in \$, 1996	148	96	127	59 <sup>3</sup>	na	94	213	187	185	130
Est. average telecom revenues/capita, in \$, 1996	12	15	35	5	8	26	85	40	381	25

Table A.1 (continued)

	World	Sub-Saharan Africa	Arab States	Southern Asia	Eastern Asia	South-Eastern Asia and Pacific	Latin America and Caribbean	Eastern Europe and CIS	Industrial countries	Developing countries
<b>Media</b>										
No of radio receivers/1,000 inh., 1996	364	166	264	88	215	156	384	412	1005	185
No. of television receivers/1,000 inh., 1996	228	35	138	55	248	150	223	317	524	145
<b>Computers</b>										
No of PCs/1,000 inh., 1996	43.6	na	5.7	1.2	6.5	8.3	17.5	18.2	156.3	6.5
<b>Internet</b>										
No. of hosts, in thousands, 1996	16,253	104	9	4	135	77	164	246	15,818	435
Estimated no. of users/1,000 inh., 1996	4.8	na	0.2	na	0.5	0.6	1.3	2.6	17.9	0.5
Est. no. of people on-line, in millions, 1999	158	1.1 <sup>4</sup>	0.8 <sup>5</sup>	na	na	26.6	4.6	na	125.1	na

1. Estimate based on 7 countries only.

2. Estimate based on 3 countries only.

3. Figure based on 4 countries only.

4. Includes African Arab States.

5. Refers to the Middle East.

## SECTION TWO

### TRADE DATA

### FOR COMMUNICATION

### AND INFORMATION EQUIPMENT

Table A.2 → Major exporters, radio receivers, 1996

Country	Thousands of \$
Malaysia	3,066,783
China	2,396,693
Singapore	1,912,670
Japan	1,518,824
Mexico <sup>1</sup>	1,048,888
USA	648,935
Netherlands	592,666
Portugal	565,220
Germany	562,772
Belgium-Luxembourg	558,476
% of world exports	na

1. 1995 figure.

Table A.3 → Major exporters,  
television receivers, 1996

Country	Thousands of \$
Mexico <sup>1</sup>	2,977,544
Korea, Rep. of	2,206,483
Malaysia	2,084,264
Japan	2,031,575
UK	1,864,290
Singapore	1,797,088
Thailand <sup>1</sup>	954,137
France	899,549
Germany	865,764
Spain	830,139
% of world exports	na

1. 1995 figure.

Table A.4 → Major exporters,  
printed matter, 1996

Country	Thousands of \$
USA	4,345,792
Germany	3,781,272
UK	3,439,176
France	1,904,873
Italy	1,591,815
Belgium-Luxembourg	1,028,209
Canada	895,138
Spain	891,119
Netherlands	884,483
Hong Kong	618,662
% of world exports	64

Table A.5 → Major exporters,  
computer equipment, 1996

Country	Thousands of \$
Singapore	23,104,560
USA	21,384,912
Japan	15,848,706
UK	11,931,943
Netherlands	9,764,368
Germany	6,901,486
France	6,496,893
Ireland	6,177,021
Korea, Rep. of	4,706,853
Malaysia	4,112,737
% of world exports	87.2

Table A.6 → Major exporters,  
telecommunication equipment, 1996

Country	Thousands of \$
USA	17,693,776
Japan	14,940,588
Germany	9,062,230
UK	8,552,028
Sweden	8,356,232
Singapore	6,166,107
France	5,081,477
China	4,687,631
Korea, Rep. of	4,403,608
Canada	3,980,770
% of world exports	76.9

## SECTION THREE INTERNET

### Some definitions

**Host:** An Internet host is a computer connected to the Internet that can both access and be accessed, i.e. deliver information.

**Internet:** The Internet is a global network of networks enabling computers of all kinds to directly and transparently communicate and share services throughout much of the world (see Chapter 11). Because the Internet is an enormously valuable enabling device for so many people and organizations, it also constitutes a shared global resource of information, knowledge, and means of collaboration, and co-operation among countless diverse communities (Internet Society [www.isoc.org]).

**Subscriber:** Someone who is paying for dial-up or leased line access to the Internet.

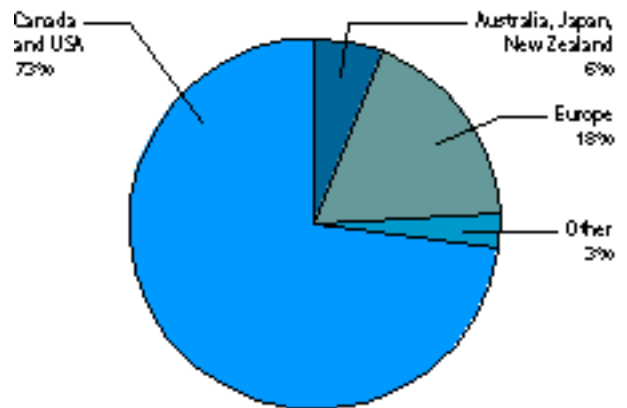
**User:** This is an indicator in which the lack of definition limits usefulness. A user could be someone who has used Internet once, someone who has used the Internet at least once during a certain period, or someone who uses it every day.

### Who is connected to Internet?

#### Geographically

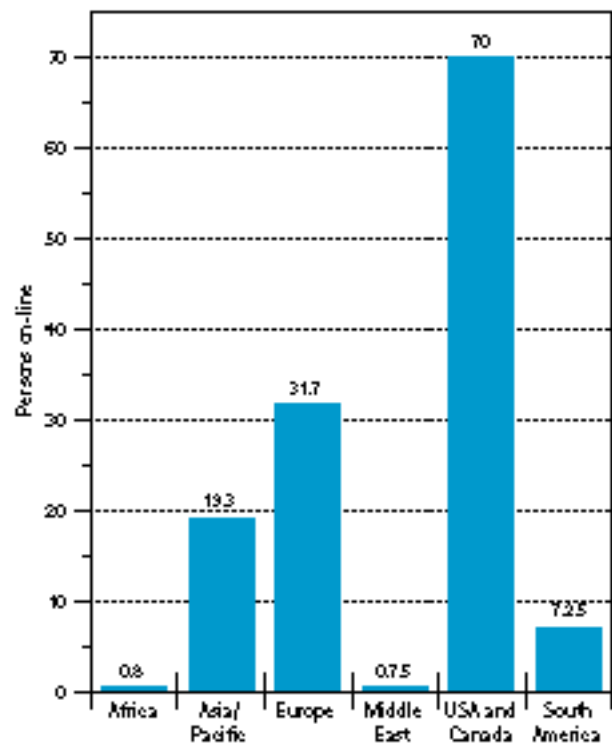
In global terms, which means asking which countries are connected, the answer is simple: almost all countries. According to the ITU (Dec. 1998) only three countries did not have any access, locally or otherwise, to the Internet: Democratic People's Republic of Korea, Iraq and Tokelau, the two former by choice and the latter due to its size. This does not mean, however, that access possibilities are equal. There are great disparities between high- and low-income regions.

Figure A.1 → Distribution of Internet hosts, July 1998



Source: Adapted from RIPE (www.ripe.net).

Figure A.2 → Estimated number of persons on-line, in millions, August 1998



Source: Various; compiled by Nua Internet Surveys, 1998.

Figure A.3 → Estimated number of hosts, in millions, 1995–1998

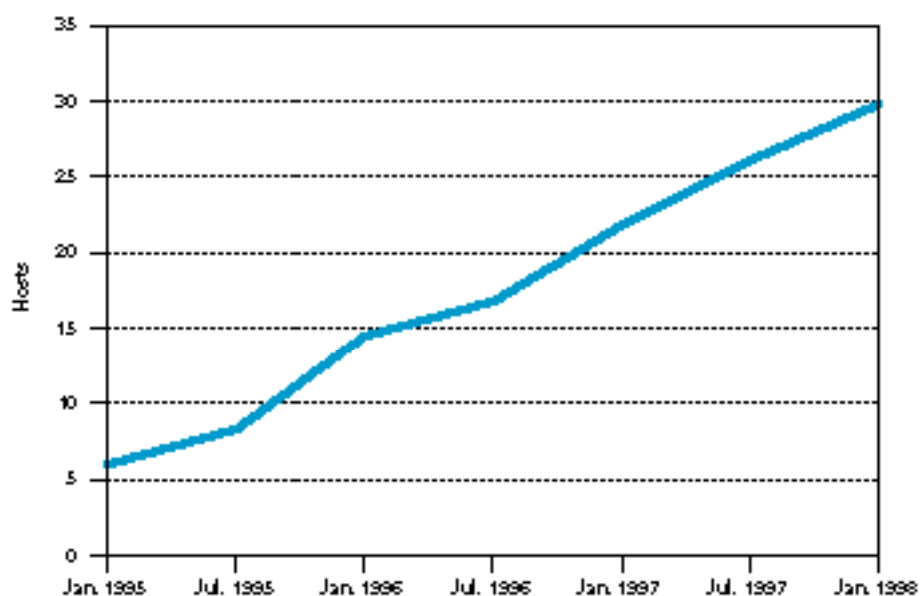
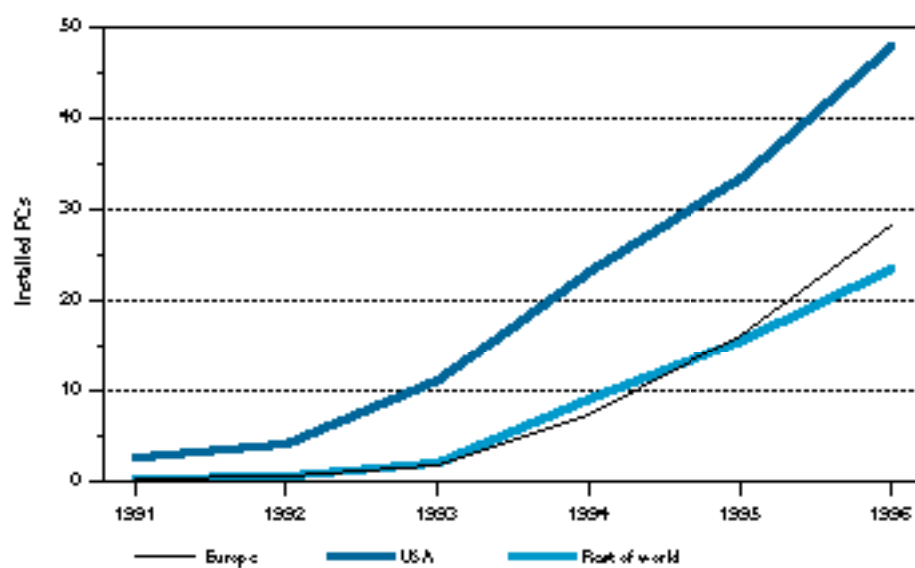
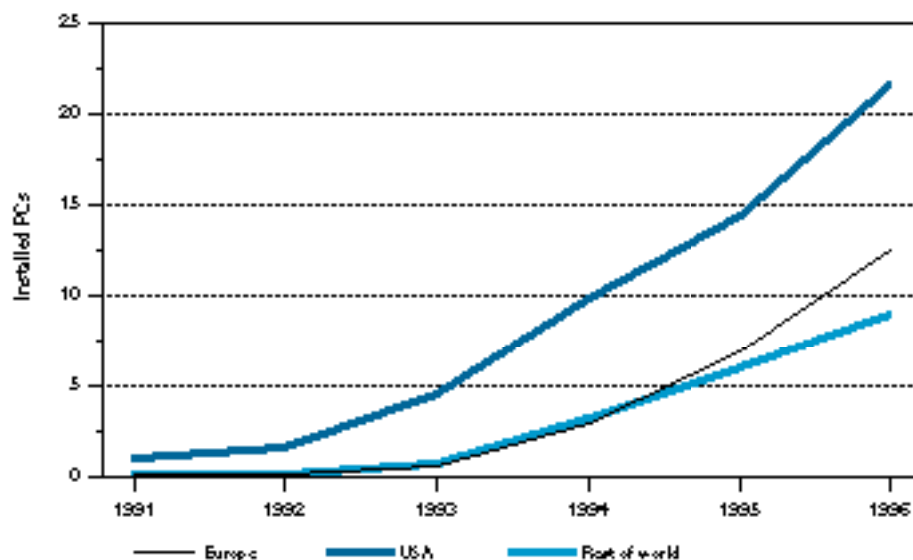
Source: Network Wizards ([www.nw.com](http://www.nw.com)).

Figure A.4 → Total number of installed PCs, home and professional, in millions, 1991–1996



Source: GkF, Inteco/BIPE Conseil.

Figure A.5 → Total number of installed home PCs, in millions, 1991–1996



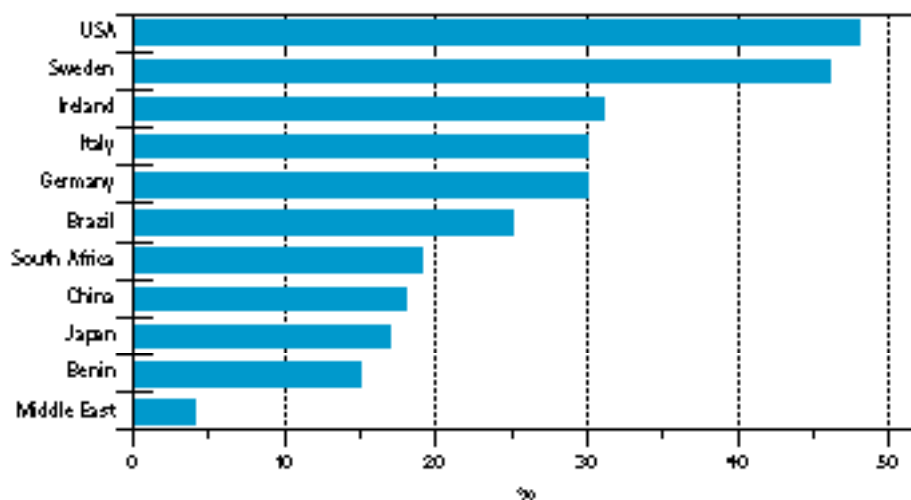
Source: GkF, Inteco/BIPE Conseil.

### Gender differences in Internet use

Internet use is largely male dominated, but to a varying degree from country to country. According to the ITU, 'Women have a number of disadvantages compared to men that inhibit their accessibility of the Internet. Multiple demands as both homemakers and workers gives women less time to both access and acquire the experience and knowledge for successfully using Internet.' Furthermore, girls make up only a

small percentage of students in computer science classes. Girls are significantly more likely than boys to enroll in clerical and data-entry classes, while boys are more likely to enroll in advanced computer science and graphics courses. Girls use computers less often outside of school, with the result that boys enter the classroom with more prior experience of computers than girls (American Association of University Women (AAUW), 1998).

Figure A.6 → Estimated percentage of female Internet users for selected countries, 1998

Source: Compiled from various sources (available at [www.nua.ie/surveys/index.cgi](http://www.nua.ie/surveys/index.cgi)).



## Internet access tariffs

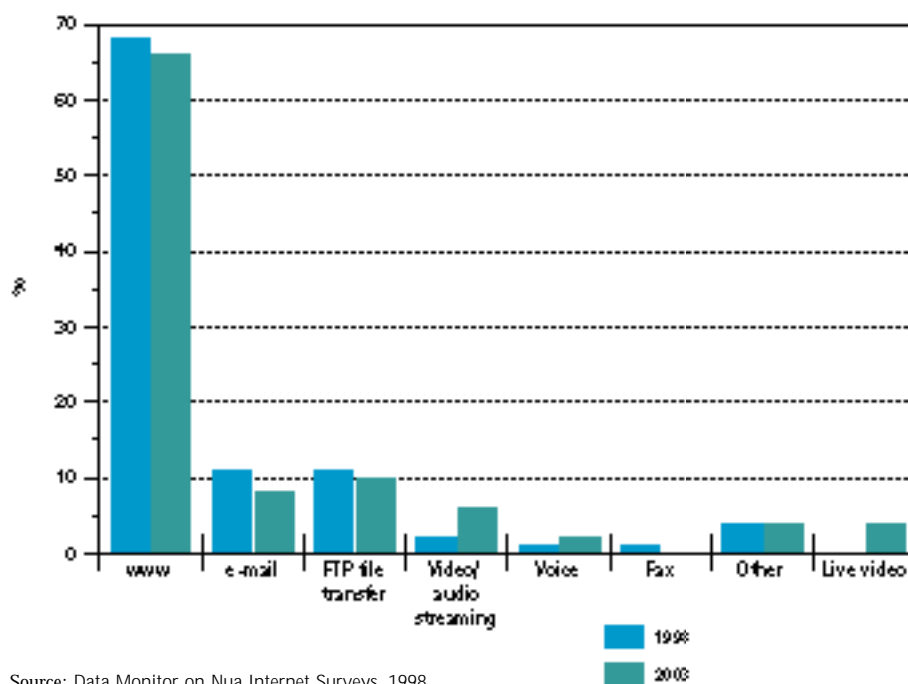
Nationally and internationally the pricing of Internet access differs a great deal. There are options of full Internet access at variable prices and fixed prices, prices for only local Internet access and for only e-mail, etc. Table A.7 presents some examples of prices in selected countries including a monthly dial-up charge of 20 hours of Internet use, local telephone charge and Internet Service Provider (ISP) charge (including VAT).

**Table A.7 → Internet access tariffs**

Country	Total cost in \$
Argentina	41.30
Australia	28.90
Belgium	42.70
Canada	12.30
France	42.40
Germany	51.20
Greece	28.70
Hong Kong	22.90
Hungary	44.20
India	12.80
Indonesia	14.40
Ireland	35.30
Israel	49.80
Italy	36.90
Japan	55.60
Korea	26.40
Luxembourg	78.30
Malaysia	8.40
Mexico	27.20
Netherlands	42.10
New Zealand	18.70
Norway	43.80
Philippines	30.50
Poland	40.00
Portugal	28.90
Russia	20.00
Singapore	20.50
South Africa	25.60
Spain	38.40
Sweden	38.60
Switzerland	32.10
Taiwan-China	28.30
Thailand	58.20
Turkey	33.90
UK	48.60
USA	20.00
Venezuela	66.90

Source: ITU, Internet Diffusion Trends, 1998.

Figure A.7 → Estimated percentage distribution of traffic on the Internet, 1998, and forecast for 2003



### Internet traffic

Of the traffic over the Internet, the traffic on the World Wide Web (WWW) is by far the largest. The diagram below shows the estimated traffic in 1998 by type of service and a forecast for the year 2003.

### Purchasing on the Internet

Use of the Internet, and primarily the WWW, as a market place, is steadily evolving. According to Nielsen Media Research, around 26% of the Net users in Canada and USA have purchased something via Internet. During 1998 the products most sold were the following:

Product	Estimated % of Net users who purchased
Books	7.1
Hardware	5.6
Software	5.1
Travel	3.6
Clothing	3.5

According to this survey the gender distribution of purchasers were 71% male and 29% female.

### Purchasing for the Internet: Worldwide Market Forecast

Table A.8 shows estimates for products and services that are purchased primarily to enable access to information and applications through the Internet or a corporate intranet, not for general use. (CAGR stands for Compound Annual Growth Rate.)

**Table A.8 → Worldwide Internet and intranet products and services, 1996 and 2000, in millions of \$**

Product/Service	1996	2000	1996/2000 CAGR (%)
Internet access	3,149	11,300	37.6
Personal computers	5,511	16,200	30.9
Network computers	706	15,440	116.3
Servers	2,247	13,150	55.5
Network equipment	3,500	10,300	31.0
Software	916	12,221	91.1
Services	2,477	13,770	53.6
Total	18,506	92,381	49.5

Source: International Data Corporation, 1997  
([www.idcresearch.com/f/idcf.htm](http://www.idcresearch.com/f/idcf.htm)).

## Selected variables by country

Table A.9 → African Internet density, 1998:  
African countries ranked by number of people per Internet user

Country	Full ISPs	E-mail	Total ISPs	Users	International bandwidth (Kb/s)	International IP provider	ISP monopoly	Population (millions)	Population/ISP user	Users/Int. Bandwidth (#/Kb/s)
South Africa	70	5	75	600,000	30,000	ISP+PTO	No	39	65	20
Namibia	5	1	6	2,000	256	ISP	No	1.7	850	8
Djibouti	1	0	1	400	128	PTO	Yes	0.43	1,075	3
Swaziland	2	1	3	900	128	ISP	No	0.97	1,078	7
Mauritius	1	5	6	1,000	256	PTO	Yes	1.1	1,100	4
Zimbabwe	7	57	12	10,000	2,000	PTO	No	11.1	1,110	5
Eq. Guinea	1	0	1	200	64	PTO	Yes	0.42	2,100	3
Tunisia	2	2	4	3,500	512	ATC	No	8.9	2,543	7
Boswana	3	3	6	500	512	PTO	na	1.4	2,800	1
Gabon	2	0	2	400	128	PTO	No	1.2	3,000	3
Egypt	25	3	28	20,000	2,000	RITSEC	No	60.7	3,035	10
Benin	5	1	6	1,750	64	PTO	Yes	5.5	3,143	27
Senegal	6	3	9	2,500	1,000	PTO	No	9	3,600	3
Ghana	3	6	9	4,500	512	ISP	No	17.8	3,956	9
Zambia	2	1	3	2,000	128	ISP+PTO	No	9.5	4,750	16
Morocco	15	2	17	6,000	2,000	PTO	No	29.2	4,867	3
Mozambique	5	1	6	3,500	256	ISP+PTO	No	18.4	5,257	14
Guinea Bissau	1	0	1	200	64	PTO	na	1.1	5,500	3
Kenya	8	8	16	5,000	2,000	ISP	No	29.1	5,820	3
Gambia	1	3	4	150	64	PTO	No	0.99	6,600	2
Angola	2	3	5	1,500	128	PTO	No	10.1	6,733	12
Cameroon	1	3	4	2,000	128	PTO	Yes	13.5	6,750	16
Uganda	2	2	4	2,000	256	ISP	No	20.4	10,200	8
Tanzania	10	4	14	2,500	2,000	Datel, SITA, Wilken	No	28.7	11,480	1
Eritrea	0	4	4	300	28.8	ISP	na	3.7	12,333	10
Togo	1	1	2	300	128	ISP	No	4.4	14,667	2
Ivory Coast	1	2	3	1,000	128	ISP	No	14.8	14,800	8
Burkina Faso	1	2	3	700	64	PTO	Yes	10.4	14,857	11
Central African Republic	1	0	1	200	64	PTO	Yes	3.2	16,000	3
Madagascar	3	2	5	700	128	PTO	No	13.9	19,857	5
Lesotho	0	1	1	100	9.6	ISP	No	2	20,000	10
Ethiopia	1	3	4	3,000	256	PTO	Yes	60.8	20,267	12

Table A.9 (continued)

Country	Full ISPs	E-mail	Total ISPs	Users	International bandwidth (Kb/s)	International IP provider	ISP monopoly	Population (millions)	Population/ISP user	Users/Int. Bandwidth (#/Kb/s)
Guinea	4	1	5	300	128	PTO	No	6.6	22,000	2
Mauritania	1	1	2	100	128	PTO	No	2.3	23,000	1
Mali	2	3	5	400	128	PTO	No	9.4	23,500	3
Malawi	1	2	3	400	128	ISP	No	9.7	24,250	3
Niger	1	1	2	200	64	PTO	Yes	8.9	44,500	3
Algeria	1	2	3	500	64	CERIST	Yes	28.5	57,000	8
Burundi	1	0	1	75	19.2	ISP	na	6.3	84,000	4
Rwanda	1	0	1	100	128	PTO	Yes	8.6	86,000	1
Sierra Leone	0	1	1	50	9.6	PTO soon	na	4.8	96,000	5
Sudan	1	0	1	300	64	ISP	na	30	100,000	5
Nigeria	2	4	6	1,000	128	ISP, PTO soon	No	101.2	101,200	8
Tchad	1	2	3	50	64	PTO	Yes	5.6	112,000	1
Congo-Kinshasa	1	0	1	100	9.6	ISP	No	44	440,000	10
Comoros	0	0	0	0	0	–	–	0.5	0	0
Liberia	0	0	0	0	0	–	–	3	0	0
Libya	0	0	0	0	0	–	–	5.2	0	0
Somalia	0	0	0	0	0	–	–	6.8	0	0

Source: Sangonet (wn.apc.org), 1998.

Table A.10 → Estimated number of hosts by top-level domain name

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
	TOTAL	43,229,694		49,426,417		6,196,723	1,305,147	14,898,729
com	Commercial	12,140,747		15,479,017		3,338,270	868,016	5,993,551
net	Networks	8,856,687		9,383,201		526,514	64,423	2,926,036
edu	Educational	5,022,815		5,228,251		205,436	3,600	1,678,553
jp	Japan	1,687,534		1,718,935		31,401	97	38,979
us	United States	1,562,391		1,642,418		80,027	75	3,118
mil	US Military	1,510,440		1,653,661		143,221	71	125,582
uk	United Kingdom	1,423,804		1,692,305		268,501	42	38,340
de	Germany	1,316,893		1,375,114		58,221	77,016	398,631
ca	Canada	1,119,172		1,584,273		465,101	5,048	259,457
au	Australia	792,351		858,380		66,029	39	25,678
org	Organizations	744,285		844,410		100,125	78,094	621,029
gov	Government	651,200		749,278		98,078	433	248,230
nl	Netherlands	564,129		576,161		12,032	19,964	293,278
fi	Finland	546,244		558,913		12,669	7,477	352,875
fr	France	488,043		571,220		83,177	8,834	252,090
se	Sweden	431,809		444,751		12,942	7,981	176,907
it	Italy	338,822		370,629		31,807	14,899	185,599
no	Norway	318,631		326,305		7,674	6,232	188,934
tw	Taiwan, China	308,676		320,327		11,651	23	4,306
dk	Denmark	279,790		293,778		13,988	9,386	119,290
es	Spain	264,245		270,352		6,107	3,843	139,691
ch	Switzerland	224,350		232,139		7,789	14,108	200,483
br	Brazil	215,086		224,916		9,830	378	25,908
kr	Korea, Republic	186,414		195,782		9,368	31	4,034
be	Belgium	165,873		255,739		89,866	3,659	40,081
ru	Russian Federation	147,352		155,246		7,894	4,465	80,108
za	South Africa	144,445		219,420		74,975	30	11,676
at	Austria	143,153		212,049		68,896	4,285	38,075
nz	New Zealand	137,247		142,952		5,705	17	4,507
mx	Mexico	112,620		120,967		8,347	122	8,999
pl	Poland	108,588		116,946		8,358	1,158	15,635
il	Israel	97,765		103,068		5,303	12	2,818
unknown	Unknown	96,914		238,862		141,948	71,308	67,341
hu	Hungary	83,530		87,263		3,733	1555	35,356
hk	Hong Kong	82,773		84,008		1,235	12	10,958
cz	Czech Republic	73,770		79,597		5,827	5,735	41,994
sg	Singapore	67,060		112,570		45,510	12	2,044
ar	Argentina	66,454		68,978		2,524	24	3,545
ie	Ireland	54,872		55,867		995	1,712	32,931
gr	Greece	51,541		54,026		2,485	2,399	20,524
pt	Portugal	49,731		51,210		1,479	2,225	27,650

Table A.10 (continued)

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
arpa	Mistakes	47,974		52,839		4,865	2	96
my	Malaysia	47,852		48,290		438	21	3,009
tr	Turkey	32,496		33,303		807	13	1,840
cl	Chile	30,103		31,083		980	1,053	9,429
ee	Estonia	21,969		23,068		1,099	1,172	14,898
is	Iceland	21,894		22,417		523	1,369	18,569
th	Thailand	20,527		20,951		424	9	1,083
su	Soviet Union	19,475		20,280		805	64	2,174
sk	Slovakia	17,953		18,638		685	1,082	12,858
ae	United Arab Emirates	17,904		18,292		388	7	211
si	Slovenia	17,836		18,309		473	864	9,097
cn	China	17,255		17,628		373	39	567
ro	Romania	16,659		24,266		7,607	843	12,216
co	Colombia	16,200		16,322		122	32	606
ua	Ukraine	15,652		19,149		3,497	48	1,539
id	Indonesia	15,448		16,223		775	11	680
uy	Uruguay	15,394		16,823		1,429	6	267
in	India	13,253		14,027		774	10	208
lv	Latvia	10,345		10,777		432	658	6,970
lt	Lithuania	10,147		10,338		191	440	8,141
ph	Philippines	9,204		9,677		473	7	283
ve	Venezuela	7,912		8,189		277	26	1,309
bg	Bulgaria	7,425		8,375		950	257	3,297
hr	Croatia (local name: Hrvatska)	6,884		6,973		89	549	5,795
yu	Yugoslavia	6,753		7,026		273	21	2,314
lu	Luxembourg	6,502		16,821		10,319	345	5,921
kw	Kuwait	6,231		6,546		315	7	5,061
do	Dominican Republic	4,825		4,851		26	19	239
pe	Peru	4,794		5,118		324	9	776
cy	Cyprus	3,902		3,937		35	6	280
nu	Niue	3,461		3,600		139	2,234	2,262
cr	Costa Rica	3,261		3,357		96	12	273
pk	Pakistan	3,096		3,524		428	8	407
na	Namibia	2,654		2,768		114	8	59
lb	Lebanon	2,358		2,604		246	6	57
tt	Trinidad and Tobago	1,944		1,994		50	9	116
eg	Egypt	1,908		18,538		16,630	7	191
kg	Kyrgyzstan	1,907		1,915		8	16	1,785
to	Tonga	1,871		1,928		57	1,113	1,339
gl	Greenland	1,741		1,750		9	50	826
pr	Puerto Rico	1,571		1,576		5	5	118
ec	Ecuador	1,548		1,566		18	14	478

Table A.10 (continued)

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
kz	Kazakhstan	1,480		1,495		15	111	1,302
bm	Bermuda	1,449		1,468		19	87	1,387
bn	Brunei Darussalam	1,195		1,200		5	5	1,174
py	Paraguay	1,147		1,157		10	6	134
zw	Zimbabwe	1,031		1,056		25	5	190
mt	Malta	966		976		10	11	54
gt	Guatemala	913		926		13	6	151
int	International Organizations	898		64,027		63,129	30	110
sv	El Salvador	815		820		5	5	64
cc	Cocos (Keeling) Islands	789		820		31	669	432
cx	Christmas Island	763		787		24	598	454
pa	Panama	742		760		18	12	43
by	Belarus	718		738		20	18	343
ni	Nicaragua	715		723		8	8	82
ge	Georgia	692		718		26	13	464
ke	Kenya	686		694		8	5	95
om	Oman	664		667		3	16	21
bw	Botswana	658		675		17	39	559
bo	Bolivia	626		632		6	8	99
fo	Faroe Islands	621		630		9	112	586
bh	Bahrain	577		579		2	3	5
mu	Mauritius	575		577		2	2	575
ma	Morocco	548		583		35	7	427
lk	Sri Lanka	539		547		8	30	211
ad	Andorra	517		520		3	34	512
mk	Macedonia, The FYR	515		518		3	5	85
md	Moldova, Republic of	501		836		335	46	461
bs	Bahamas	481		485		4	2	481
vi	Virgin Islands (US)	414		450		36	64	356
ng	Nigeria	410		412		2	4	15
am	Armenia	385		408		23	71	342
ba	Bosnia and Herzegovina	378		379		1	4	4
jo	Jordan	370		374		4	6	32
ky	Cayman Islands	348		363		15	12	49
li	Liechtenstein	331		339		8	111	113
jm	Jamaica	322		327		5	6	38
sa	Saudi Arabia	319		321		2	7	28
gi	Gibraltar	316		318		2	33	315
zm	Zambia	303		308		5	14	281
pf	French Polynesia	281		282		1	27	270
sz	Swaziland	278		304		26	9	56
tm	Turkmenistan	263		270		7	160	188

Table A.10 (continued)

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
bz	Belize	252		254		2	6	12
mc	Monaco	246		251		5	51	246
ir	Iran (Islamic Republic of)	244		247		3	5	25
ci	Côte d'Ivoire	237		239		2	17	71
uz	Uzbekistan	236		243		7	54	118
sm	San Marino	236		240		4	40	236
ai	Anguilla	233		264		31	111	63
fj	Fiji	214		217		3	5	56
sn	Senegal	194		194		0	16	193
gh	Ghana	192		194		2	1	7
bf	Burkina Faso	176		178		2	3	176
ag	Antigua and Barbuda	175		179		4	60	139
fm	Micronesia, Federated States of	170		171		1	165	15
az	Azerbaijan	163		164		1	6	14
gp	Guadeloupe	159		160		1	88	158
np	Nepal	153		156		3	3	6
dm	Dominica	148		148		0	8	146
mo	Macau	142		143		1	4	31
mz	Mozambique	141		141		0	13	111
tz	Tanzania, United Republic of	129		131		2	5	25
pg	Papua New Guinea	118		120		2	4	9
st	Sao Tome and Principe	115		124		9	85	85
ug	Uganda	113		114		1	7	30
nc	New Caledonia	113		113		0	58	93
gf	French Guiana	113		114		1	1	113
tg	Togo	110		112		2	3	68
mv	Maldives	109		109		0	3	6
gu	Guam	108		111		3	6	60
al	Albania	102		107		5	5	76
hn	Honduras	99		102		3	20	86
im	Isle of Man	98		99		1	6	23
aw	Aruba	88		88		0	4	88
cu	Cuba	80		100		20	16	70
vu	Vanuatu	78		78		0	8	25
tc	Turks and Caicos Islands	78		78		0	53	77
et	Ethiopia	78		78		0	3	3
tj	Tajikistan	74		83		9	43	43
hm	Heard and McDonald Islands	72		73		1	34	47
gy	Guyana	69		70		1	3	4
tn	Tunisia	67		69		2	11	67
mg	Madagascar	61		62		1	12	61
kh	Cambodia	60		61		1	3	13



Table A.10 (continued)

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
ac	Ascension Island	60		61		1	43	44
as	American Samoa	57		59		2	43	33
nf	Norfolk Island	55		56		1	11	25
aq	Antarctica	53		54		1	1	53
io	British Indian Ocean Territory	46		47		1	2	46
ck	Cook Islands	46		46		0	3	7
bb	Barbados	44		72		28	9	31
gb	Kingdom United	40		40		0	1	1
je	Jersey	39		44		5	5	14
mq	Martinique	38		40		2	21	37
sh	St. Helena	36		36		0	31	26
bt	Bhutan	36		37		1	6	35
vn	Viet Nam	34		34		0	8	27
ms	Montserrat	25		25		0	15	17
lc	Saint Lucia	23		23		0	5	23
dz	Algeria	23		25		2	2	22
vg	Virgin Islands (British)	22		22		0	9	18
ye	Yemen	20		20		0	9	16
sb	Solomon Islands	20		20		0	1	6
mn	Mongolia	20		20		0	18	6
ls	Lesotho	19		19		0	3	18
gg	Guernsey	19		19		0	10	18
ne	Niger	18		19		1	14	16
mr	Mauritania	15		16		1	7	15
mp	Northern Mariana Islands	15		15		0	10	9
gw	Guinea-Bissau	15		15		0	5	12
sl	Sierra Leone	13		13		0	1	13
qa	Qatar	13		13		0	5	8
tf	French Southern Territories	12		12		0	6	7
bj	Benin	12		12		0	2	12
va	Vatican City State (Holy See)	11		12		1	5	9
cd	Congo (Democratic Republic)	11		12		1	7	9
an	Netherlands Antilles	10		10		0	7	7
km	Comoros	9		9		0	3	8
sc	Seychelles	7		8		1	3	4
gs	South Georgia and the South Sandwich Islands	7		7		0	4	5
kn	Saint Kitts and Nevis	5		5		0	4	3
ly	Libyan Arab Jamahiriya	4		5		1	4	4
pn	Pitcairn	3		3		0	1	3
gd	Grenada	3		3		0	3	3
cm	Cameroon	3		3		0	3	2
tp	East Timor	2		2		0	2	1

Table A.10 (continued)

Domain code	Full name	Hosts	=	All hosts	—	Duplicate names	Level 2 domains	Level 3 domains
mh	Marshall Islands	2		2		0	1	2
ws	Samoa	1		1		0	1	0
um	United States Minor Outlying Islands	1		1		0	1	0
tv	Tuvalu	1		1		0	1	1
sy	Syrian Arab Republic	1		1		0	1	0
re	Reunion	1		1		0	1	1
pw	Palau	1		2		1	1	1
mw	Malawi	1		1		0	1	1
mm	Myanmar	1		1		0	1	0
ml	Mali	1		1		0	1	1
lr	Liberia	1		1		0	1	0
cv	Cape Verde	1		1		0	1	0
cg	Congo (Republic)	1		1		0	1	0
af	Afghanistan	1		1		0	1	1
zr	Zaire	0		0		0	0	0
yt	Mayotte	0		0		0	0	0
wf	Wallis and Futuna Islands	0		0		0	0	0
vc	Saint Vincent and the Grenadines	0		0		0	0	0
tk	Tokelau	0		0		0	0	0
td	Chad	0		0		0	0	0
sr	Suriname	0		0		0	0	0
so	Somalia	0		0		0	0	0
sj	Svalbard and Jan Mayen Islands	0		0		0	0	0
sd	Sudan	0		0		0	0	0
rw	Rwanda	0		0		0	0	0
pm	St. Pierre and Miquelon	0		0		0	0	0
nr	Nauru	0		0		0	0	0
la	Lao People's Democratic Republic	0		0		0	0	0
ki	Kiribati	0		0		0	0	0
iq	Iraq	0		0		0	0	0
ht	Haiti	0		0		0	0	0
gq	Equatorial Guinea	0		0		0	0	0
gn	Guinea	0		0		0	0	0
gm	Gambia	0		0		0	0	0
ga	Gabon	0		0		0	0	0
fk	Falkland Islands (Malvinas)	0		0		0	0	0
er	Eritrea	0		0		0	0	0
dj	Djibouti	0		0		0	0	0
cf	Central African Republic	0		0		0	0	0
bv	Bouvet Island	0		0		0	0	0
bi	Burundi	0		0		0	0	0
ao	Angola	0		0		0	0	0

Source: Network Wizards (www.nw.com).

## SECTION 4

### UNESCO'S OPERATIONAL PROJECTS IN THE FIELDS OF COMMUNICATION, INFORMATION AND INFORMATICS, 1998

In November 1989, as the Berlin Wall began to fall, UNESCO's General Conference adopted a New Communication Strategy aimed at responding to the needs of emerging democracies and those of developing countries. This strategy has three objectives:

- to encourage the free flow of information, at international as well as national levels;
- to promote its wider and better balanced dissemination, without any obstacle to the freedom of expression, and
- to strengthen communication capacities in the developing countries in order to increase their participation in the communication process.

At a time when the media and specialized information are tending to move closer together because the technologies through which they are conveyed are now often much the same, the principle of 'free flow' of information should be widened to cover all forms of information that contribute to the progress of societies and their democratic functioning.

The United Nations General Assembly's adoption in November 1996 of a resolution underscoring the key role of communication for development – as an instrument of dialogue between citizens and the authorities – and encouraging planners and decision-makers at all levels to include a 'communication' element in development programmes and projects, should give new impetus to the Organization's work in this field, since UNESCO is the only organization in the United Nations system with specific responsibility for the free flow of information and the development of the means of communication. The resolution reaffirmed the importance, to that end, of resource mobilization – including financial co-

operation – and called upon the international community and the organizations of the United Nations system to assist developing countries in capacity-building in this field.

Through its intergovernmental programmes (IPDC, PGI and IIP), international and regional networks and professional organizations, UNESCO rallies international technical co-operation to support the development of communication, information and informatics at the national, subregional and regional levels.

Through its 254 extrabudgetary projects, implemented by the Communication, Information and Informatics sector and its Regional Advisers, UNESCO is developing partnerships with public and private multilateral and bilateral funding agencies to implement projects and programmes in priority fields such as governance and the media; support for independent and pluralistic media; improving infrastructures (media, libraries, archives, information services and computer networks); strategies and policies to develop the new technologies; training specialists in communication, information and informatics. These activities will concern the developing countries as a priority, in particular the least developed countries and the Africa region, and also countries in transition.

As lead agency for two components of the United Nations System-Wide Special Initiative on Africa – Informatics in the service of development and Communication for peace-building – UNESCO will contribute in close co-ordination with the United Nations Economic Commission for Africa (ECA), UNDP, the International Telecommunication Union (ITU) and others in mobilizing the resources needed to implement them.

In 1998, a total of 254 projects were being implemented in the Communication, Information and Informatics Sector at Headquarters and Fields offices. The overall budget, which includes projects recently completed, those close to completion as well as those

that are on-going, amounts to \$40.8 million. Almost 50% of the funding concerns activities in Africa, and the remainder is shared among other developing regions. In the field of Communication, which takes an overall share of 82%, the larger providers are the Intergovernmental Programme for the Development of Communication and the United Nations Development Programme. The share of the fields of Information and Informatics is much smaller, 17.8%, with funding coming mainly from the Intergovernmental Informatics Programme and the UNDP.

Source: UNESCO. Sector of Communication, Information and Informatics. *On-going Extrabudgetary Projects*. Paris, UNESCO, 1998 ([www.unesco.org/webworld/projects/statistics.html](http://www.unesco.org/webworld/projects/statistics.html)).

## SOURCES

- All the World's Newspapers. ([www.webwombat.com.au/intercom/newsprs/index.htm](http://www.webwombat.com.au/intercom/newsprs/index.htm))
- ARABSAT. 1997. ARABSAT report to Coordination Committee.
- AMIC. 1998. *Asian Communication Handbook*. Asian Media Information and Communication Center, Singapore.
- Business Central Europe. September 1998.
- Business Week. November 2, 1998.
- Commercenet ([www.commerce.net](http://www.commerce.net))
- Copyright 1+C. 1998. *Le marché multimédia en France: bilan économique 1997*.
- EAO. 1998. *1998 Statistical Yearbook*. European Audiovisual Observatory, Strasbourg.
- EITO. European Information Technology Observatory. ([www.fvit-eurobit.de/DEF-EITO.htm](http://www.fvit-eurobit.de/DEF-EITO.htm))
- eMarketer ([www.emarketer.com](http://www.emarketer.com))
- Fortune. August 3, 1998.
- Frost and Sullivan. 1994. *World Multimedia Application Markets, Market forecast, Education Market*.
- IMAT. 1995. *L'enquête sur le secteur du multimédia*. DJC Research and industrie Canada.
- Innovitech. 1995. *Le technologies de l'information au Québec*. International Data Corporation ([www.idc.com](http://www.idc.com))
- International Trade Centre ([www.intracen.org](http://www.intracen.org))
- Internet Society ([www.isoc.org](http://www.isoc.org))
- ITU. 1998a. *Telecommunication Development Bureau. Internet Diffusion Trends*. Geneva (Document 08-E).
- . 1998b. *World Telecommunication Indicators*. Geneva. Network Wizards. ([www.nw.com](http://www.nw.com))
- OECD. 1998. *Main Economic Indicators*. Paris.
- The Pan Asia Networking Yearbook. 1998. ([www.panasia.org.sg/ecomsec/bookshelf/user/webdriver](http://www.panasia.org.sg/ecomsec/bookshelf/user/webdriver))
- Phare Regulatory Observatory for Telecoms, Broadcasting and Posts. Central and Eastern European Country Reports, Jan. - June 1998.
- Prothero. 1998. *Latin America Corporate Internet Strategy and Adoption 1998*.
- SIMBA Information Inc. 1994. *Economics of Multimedia Title Publishing*.
- UN. Statistics Division of the United Nations Secretariat. ([www.un.org](http://www.un.org))
- UN. Statistics Division of the United Nations Secretariat and International Labour Office. ([www.un.org](http://www.un.org))
- UNDP. 1997. *Human Development Report*. Oxford University Press.
- . 1998. *Human Development Report*. Oxford University Press.
- UNESCO. 1995. *Compendium of Statistics on Illiteracy*. 1995 edition, Paris.
- . 1996. *UNESCO Statistical Yearbook 1996*. Paris.
- . 1997. *UNESCO Statistical Yearbook 1997*. Paris.
- . 1998a. *UNESCO Statistical Yearbook 1998*. Paris.
- . 1998b. *World Education Report 1998*. UNESCO publishing, Oxford.
- UPU Statistics ([www.upu.org](http://www.upu.org))
- Von Euler, M.; BERG, D. 1998. *The Use of Electronic Media in Open and Distance Education*. UNESCO, Paris.
- World Bank. 1998. *World Development Report 1997*. Oxford University Press.