

# WORLD TELECOMMUNICATION DEVELOPMENT REPORT 2003



## Access indicators for the Information Society

Specially prepared for the World Summit on the Information Society the ITU has published the 2003 World Telecommunication Development Report: *Access Indicators for the Information Society*.

### The World's First Global ICT Ranking – the Digital Access Index (DAI)

#### DAI ranking

##### HIGH ACCESS

Sweden	0.85
Denmark	0.83
Iceland	0.82
Korea (Rep.)	0.82
Norway	0.79
Netherlands	0.79
Hong Kong, China	0.79
Finland	0.79
Taiwan, China	0.79
Canada	0.78
United States	0.78
United Kingdom	0.77
Switzerland	0.76
Singapore	0.75
Japan	0.75
Luxembourg	0.75
Austria	0.75
Germany	0.74
Australia	0.74
Belgium	0.74
New Zealand	0.72
Italy	0.72
France	0.72
Slovenia	0.72
Israel	0.70

The ITU's Digital Access Index (DAI) measures the overall ability of citizens to access and use information and communication technologies (ICTs). It is based on eight variables, covering five areas, to provide an overall country score. The areas are availability of infrastructure, affordability of access, educational level, quality of ICT services, and Internet usage. The results of the Index point to potential stumbling blocks in ICT adoption and can help countries identify their relative strengths and weaknesses. It covers a total of 178 economies, which makes it the first truly global ICT ranking.

Apart from Canada, ranked 10th, the top ten economies in the DAI are exclusively Asian and European. The greatest progress since 1998 has been made by the four Asian Tigers

and suggests that English is no longer a decisive factor in quick technology adoption, especially as more content is made available in other languages.

The index classifies countries into one of four digital access categories: high, upper, medium and low. The DAI is a vital reference for governments, international development agencies, non-governmental organizations and the private sector to assess national conditions in information and communications technology.

### Overcoming the digital and the statistical divide

While some developed nations are racing ahead in information society measurement and tracking a multitude of factors such as infrastructure, access, and usage, most developing nations are struggling to produce even the basic indicators. The number of Internet users in developing countries is often based on government 'guesstimates' — vague estimates. Sixty per cent of all Internet user surveys are carried out in the world's wealthiest economies, while in the 59 poorest economies, not a single official Internet user survey has been conducted. Countries that have managed to understand their ICT situation have been able to identify their strengths and weaknesses and adopt appropriate policies. In the Republic of Korea, which ranks 4th in the DAI, for example, detailed analysis of computer and Internet use match the country's rapid transformation into an information society.

**The report includes a 100-page statistical annex covering a range of data for 182 economies in 20 statistical tables. These "World Telecommunication Indicators" include data such as the number of telephone subscribers, television households and Internet users. The report is also a practical toolkit with dozens of definitions and examples of indicators used to measure access to ICTs, plus examples of model surveys that governments can use to improve their statistical practices.**



#### DAI ranking (cont'd)

##### UPPER ACCESS

Ireland	0.69
Cyprus	0.68
Estonia	0.67
Spain	0.67
Malta	0.67
Czech Republic	0.66
Greece	0.66
Portugal	0.65
United Arab Emirates	0.64
Macao, China	0.64
Hungary	0.63
Bahamas	0.62
St. Kitts and Nevis	0.60
Poland	0.59
Slovak Republic	0.59
Croatia	0.59
Bahrain	0.58
Chile	0.58
Antigua & Barbuda	0.57
Barbados	0.57
Malaysia	0.57
Lithuania	0.56
Qatar	0.55
Brunei Darussalam	0.55
Latvia	0.54
Uruguay	0.54
Seychelles	0.54
Dominica	0.54
Argentina	0.53
Trinidad & Tobago	0.53
Bulgaria	0.53
Jamaica	0.53
Costa Rica	0.52
St. Lucia	0.52
Kuwait	0.51
Grenada	0.51
Mauritius	0.50
Russia	0.50
Mexico	0.50
Brazil	0.50

## DAI ranking (cont'd)

### MEDIUM ACCESS

Belarus	0.49
Lebanon	0.48
Thailand	0.48
Romania	0.48
Turkey	0.48
TFYR Macedonia	0.48
Panama	0.47
Venezuela	0.47
Belize	0.47
St. Vincent	0.46
Bosnia	0.46
Suriname	0.46
South Africa	0.45
Colombia	0.45
Jordan	0.45
Serbia & Montenegro	0.45
Saudi Arabia	0.44
Peru	0.44
China	0.43
Fiji	0.43
Botswana	0.43
Iran (I.R.)	0.43
Ukraine	0.43
Guyana	0.43
Philippines	0.43
Oman	0.43
Maldives	0.43
Libya	0.42
Dominican Rep.	0.42
Tunisia	0.41
Ecuador	0.41
Kazakhstan	0.41
Egypt	0.40
Cape Verde	0.39
Albania	0.39
Paraguay	0.39
Namibia	0.39
Guatemala	0.38
El Salvador	0.38
Palestine	0.38
Sri Lanka	0.38
Bolivia	0.38
Cuba	0.38
Samoa	0.37
Algeria	0.37
Turkmenistan	0.37
Georgia	0.37
Swaziland	0.37
Moldova	0.37
Mongolia	0.35
Indonesia	0.34
Gabon	0.34
Morocco	0.33
India	0.32
Kyrgyzstan	0.32
Uzbekistan	0.31
Viet Nam	0.31
Armenia	0.30

A lack of timely and comparable data on access to information and communication technologies is therefore a major barrier to understanding the extent and the causes of the digital divide and in participating in the information society. This is especially relevant today, at a time when global leaders are convening for the first World Summit on the Information Society. To assist countries overcome the statistical divide, the report offers a toolkit on how to measure access to ICTs. Based on an in-depth analysis of the factors impacting ICT access and an inventory of existing ICT data and surveys, the report proposes 23 e-ITU indicators. The list goes beyond pure infrastructure and ranges from indicators such as *the percentage of households with a television*, and *the percentage of schools with Internet access*, to *the Internet access tariff as a percentage of per capita income*. If collected by every country in the world, these indicators would provide measurement and comparability in tracking the emergence of the global information society.

The report also highlights national digital divides that exist within businesses, schools and governments around the world. In Chile, 93 per cent of large businesses have Internet access, higher than the European Union average. But the corresponding figure in small Chilean firms is only 37 per cent. While Mexico's top secondary schools provide one computer for every 12 students—better than Germany, where the figure is one to 14—the corresponding ratio for Mexico's bottom quartile of schools is 59 students for every computer. Government access to ICTs—the sector where indicators are least standardized and available—shows similar disparities. In Peru, 81 per cent of central government agencies have access to the Internet while only 21 per cent of local government offices have such access.

### Monitoring the impact of ICTs on the Millennium Development Goals

In 2000 the United Nations adopted a set of development targets, the Millennium Development Goals (MDGs), to track progress towards the reduction of poverty, hunger and other pressing areas. Numerous success stories circulate about ICTs dramatically improving and even saving lives. Such accounts raise awareness but also need to be translated into indicators to measure the impact of ICTs within and across countries. Although frameworks to determine the socio-economic benefits of ICTs are in their infancy, the report proposes specific indicators that could help gauge the impact of ICTs on specific MDGs. Take Goal 2 of the MDGs, which is to 'Achieve universal primary education'. Based on an experience from Nepal, the report suggests to track the *number of primary school teachers trained by ICT-based education*. In 2001, 4'430 primary school teachers were trained in Nepal using radio-based distance education. Given the current student-to-teacher ratio of 40, an additional 176'616 primary school students could be enrolled through this initiative. This would raise the net primary school enrolment rate by 5.7 per cent.

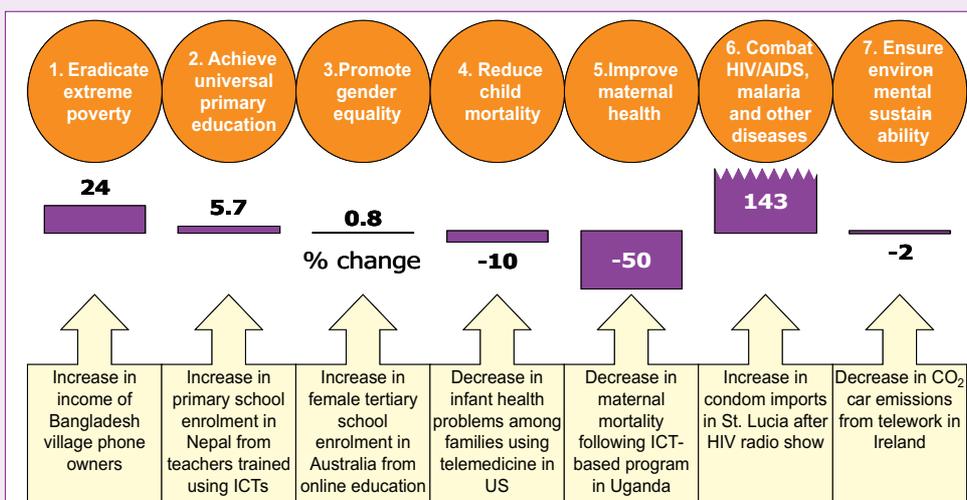
### DAI ranking (cont'd)

#### LOW ACCESS

Zimbabwe	0.29
Honduras	0.29
Syria	0.28
Papua New Guinea	0.26
Vanuatu	0.24
Pakistan	0.24
Azerbaijan	0.24
S. Tomé & Príncipe	0.23
Tajikistan	0.21
Equatorial Guinea	0.20
Kenya	0.19
Nicaragua	0.19
Lesotho	0.19
Nepal	0.19
Bangladesh	0.18
Yemen	0.18
Togo	0.18
Solomon Islands	0.17
Uganda	0.17
Zambia	0.17
Myanmar	0.17
Congo	0.17
Cameroon	0.16
Cambodia	0.16
Lao P.D.R.	0.15
Ghana	0.15
Malawi	0.15
Tanzania	0.15
Haiti	0.15
Nigeria	0.15
Djibouti	0.15
Rwanda	0.15
Madagascar	0.15
Mauritania	0.14
Senegal	0.14
Gambia	0.13
Bhutan	0.13
Sudan	0.13
Comoros	0.13
Côte d'Ivoire	0.13
Eritrea	0.13
D.R. Congo	0.12
Benin	0.12
Mozambique	0.12
Angola	0.11
Burundi	0.10
Guinea	0.10
Sierra Leone	0.10
Central African Rep.	0.10
Ethiopia	0.10
Guinea-Bissau	0.10
Chad	0.10
Mali	0.09
Burkina Faso	0.08
Niger	0.04

Note: On a scale of 0 to 1 where 1 = highest access. DAI values are shown to hundredths of a decimal point. Economies with the same DAI value are ranked by thousands of a decimal point.

### How ICTs impact the Millennium Development Goals



For further information and to purchase the report, please contact:

ITU - Sales and Marketing Division  
Place des Nations  
CH-1211 Geneva 20  
Switzerland



Telefax: +41 22 730 51 94

E-mail: sales@itu.int