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**TELECOMMUNICATION
DEVELOPMENT BUREAU**

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TITLE: WSIS Target a: ICTs in Villages

WSIS Target a: ICTs in Villages

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Contents

- WSIS target
- Measurement issues
- Global locality demography
- Locality ICT access data
- Mobile coverage
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- Regulatory strategies
- Conclusions & recommendations

WSIS Plan of Action

B. Objectives, goals and targets

6. Based on internationally agreed development goals, including those in the **Millennium Declaration**, which are premised on international cooperation, **indicative targets** may serve as global references for improving connectivity and access in the use of ICTs in promoting the **objectives of the Plan of Action**, to be achieved by **2015**. These targets may be taken into account in the establishment of the **national targets**, considering the different national circumstances:

a. to connect villages with ICTs and establish community access points;

Comments - WSIS Target a

a. to connect villages with ICTs and establish community access points;

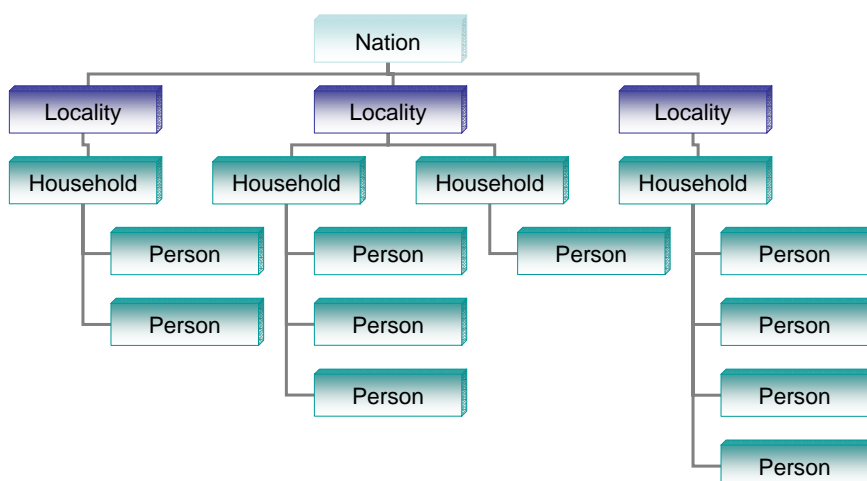
- Village as unit of measurement
 - Practically all national statistical systems do not disseminate data in this way
- Village implies rural
 - “a group of houses and other buildings, such as a church, a school and some shops, which is smaller than a town, usually in the countryside” [Cambridge Advanced Learner's Dictionary]
- “Connect villages with ICTs”
 - ICT is undefined
 - How many villages to connect is unspecified...
- “Community access points”
 - Undefined in the Plan of Action

Hardly any countries are directly tracking this...

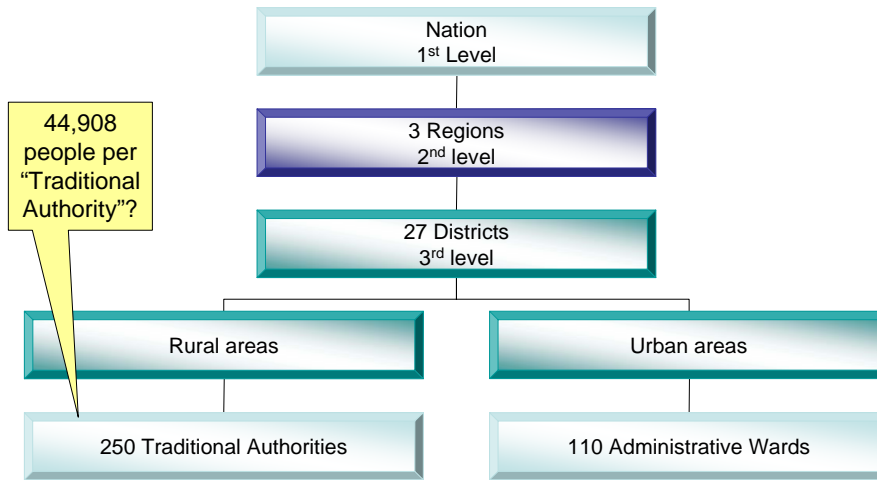
Villages

- Few countries readily publish data on number of localities let alone “villages”
- Information on administrative divisions usually stops at “region/state”
- No precise definition of village. Implies rural but definition of rural varies within & between countries

Levels of measurement



Spatial hierarchies in Malawi

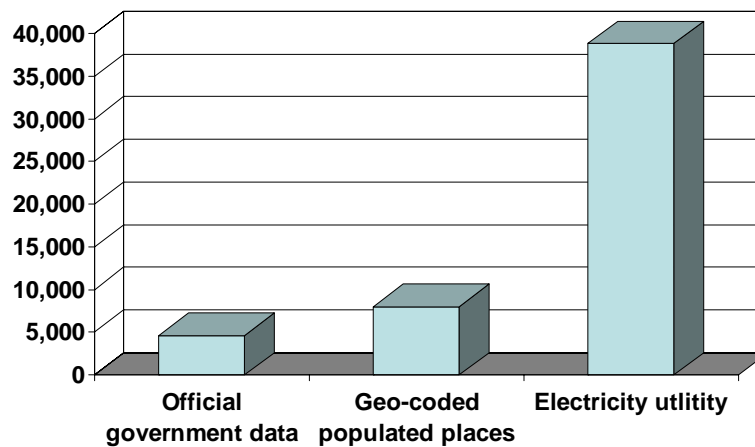


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Differing national counts of localities



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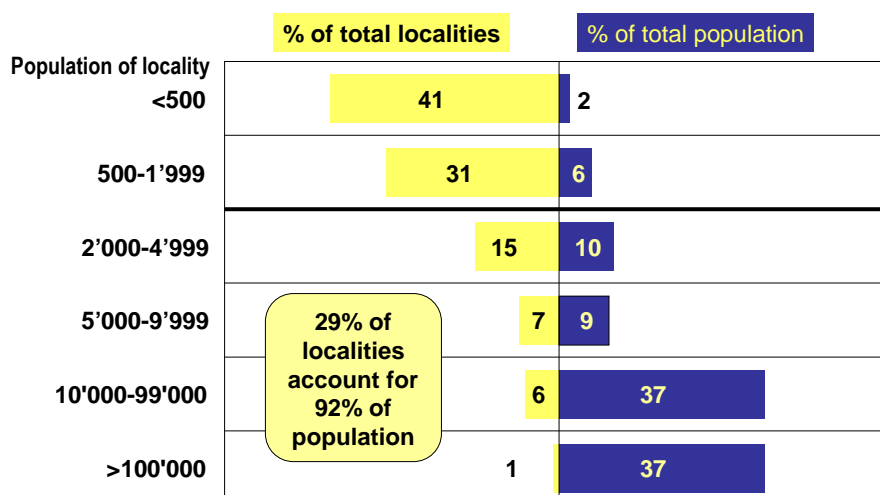
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Urban definition comparison

- 105 countries based their urban data on **administrative** criteria, limiting it to the boundaries of state or provincial capitals, municipalities or other local jurisdictions; 83 use this as their sole method of distinguishing urban from rural.
- 100 countries define cities by **population size or population density**, with minimum concentrations ranging broadly, from 200 to 50000 inhabitants; 57 use this as their sole urban criterion.
- 25 countries specify **economic** characteristics as significant, though not exclusive, in defining cities-typically, the proportion of the labour force employed in non-agricultural activities
- 18 countries count the availability of **urban infrastructure** in their definitions, including the presence of paved streets, water supply systems, sewerage systems, or electric lighting.
- 25 countries provide **no definition** of "urban" at all
- 6 countries regard their **entire population** as urban

http://www.scorus2006.ae.wroc.pl/modules/Downloads/presentations/Markandey_Rai.pdf

Population distribution of localities



Source: Adapted from Jordan Population & Housing Census 2004

Number of localities methodology

- Some countries have official administrative data on number of localities
- Secondary sources on number of localities (e.g., electricity utility, health surveys, election / local government data, etc.)
- Census enumeration areas
- Online gazette of geo-coded populated localities
- Estimate based on regional average locality size

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Overall global demographics

	Population (millions)	Rural population (%)	Rural population (millions)	Number of localities (000s)	Size
Developing	5,108	56%	2,850	2,961	1,826
East Asia & Pacific	1,717	58%	1,000	956	1,795
Europe & Central Asia	446	33%	148	285	2,841
Latin America & Caribbean	529	21%	113	349	1,645
Middle East & North Africa	308	42%	129	107	2,961
South Asia	1,354	72%	977	868	1,560
Sub-Saharan Africa	754	64%	484	396	1,904
Developed	1,013	22%	228	248	4,092
World	6,145	50%	3,102	3,059	2,009
Developing as % of world	84%		93%	92%	

Source: ITU from national data, UNDP and ITU estimates.

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ICTs in villages

- ICTs not defined in Plan of Action
- For this study, consider fixed telephony access for localities
- Also consider electricity
- “Establish community access points” not defined in Plan of Action. However ITU has done pioneering work in this area and Partnership has identified following indicator:
 - A10: Percentage of localities with public Internet access centres (PIACs) by number of inhabitants (rural/urban)

Same data problems as localities: Few countries collect this information or offer it in the format required

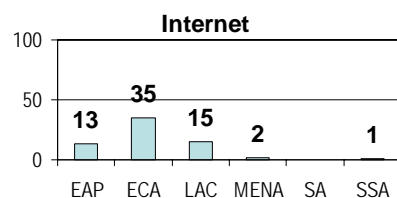
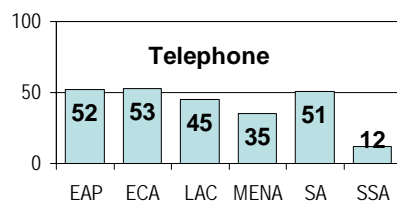
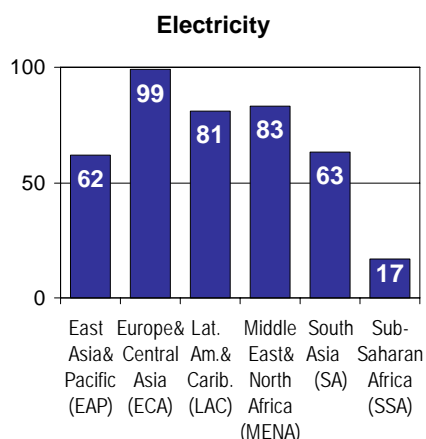
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ICTs in localities

Percentage of localities with (simple average, latest year)



Source: ITU from national administrative data.

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Peru



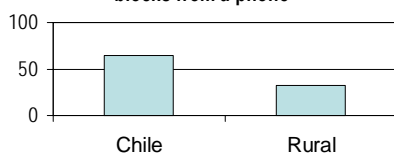
Number of Public Internet Access Points (PIAP)

	Locality by size	Number of localities	Population	Locality with PIAP	Population covered by PIAP	Percent with PIAP	
						Locality	Population
Urban	>500 000	1	582,975	1	582,975	100%	100%
	50 000-499 999	122	12,501,916	88	9,212,782	72%	74%
	10 000-49 999	228	3,891,678	153	3,100,222	67%	80%
	2 500-9 999	255	1,259,256	126	553,183	49%	44%
Rural	1 000-2 499	565	831,928	75	86,548	13%	10%
	500-999	1,933	1,273,209	67	40,002	3%	3%
	100-499	19,809	4,292,805	462	135,093	2%	3%
	<100	46,194	1,290,252	48	2,812	0.1%	0.2%
Total		69,107	25,924,019	1,020	13,713,617	1%	53%

Source: OSIPTEL, El Acceso Comunitario a las TICs (2004)

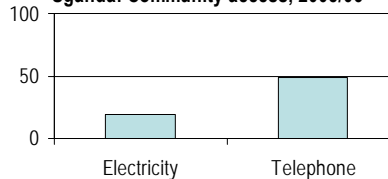
Other ways of measuring access

Chile, % of households less than 3 blocks from a phone



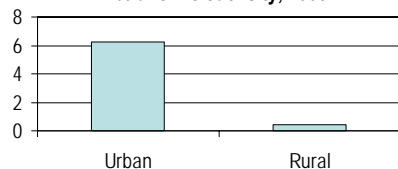
Source: SUBTEL.

Uganda: Community access, 2005/06



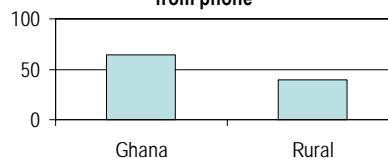
Source: UBOS National Household Survey.

Zimbabwe: Teledensity, 2003



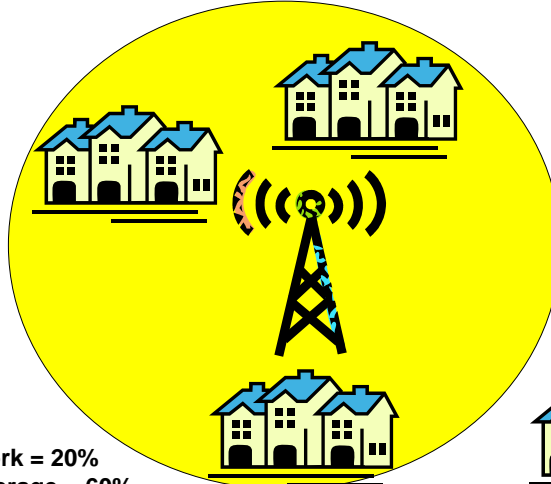
Source: POTRAZ.

Ghana: % of households < 1/2 hour from phone



Source: Ghana 2003 CWIQ Survey Report.

Spatial difference between fixed & mobile



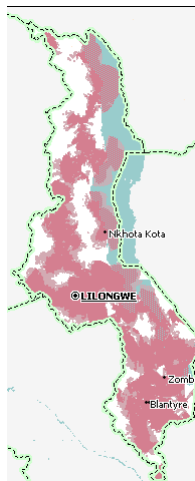
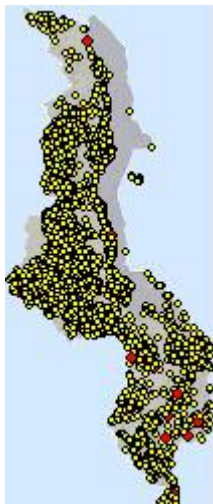
5 localities
 1 with fixed network = 20%
 3 with mobile coverage = 60%
 1 with none = 10%

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Mobile coverage & settlements



Malawi

Mobile population coverage:

Total (TC): 93%

Rural (RC): 92%

Population:

Total (TP): 12.7 million

Urban (UP): 1.5 million

Rural (RP): 11.2 million

Rural population coverage=

$(TC \times TP - UP) / RP =$

$93\% \times 12.7\text{m} - 1.5\text{m} = 10.3\text{m}$

$10.3 / 11.2 \sim 92\%$

Source: WinRock, National Statistical Office of Malawi, GSMA, maplibrary.

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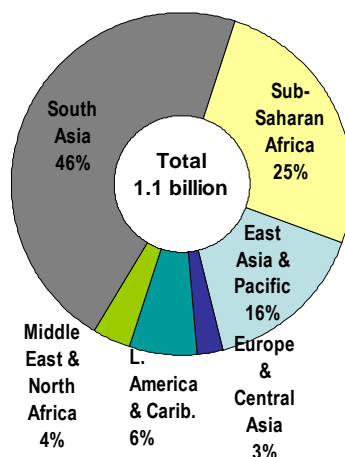
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Rural mobile population coverage

Mobile population coverage 2006, %

	Total	Rural
Developing	76	62
East Asia & Pacific	89	83
Europe & Central Asia	90	83
Latin America & Caribbean	87	41
Middle East & North Africa	79	69
South Asia	62	47
Sub-Saharan Africa	57	42

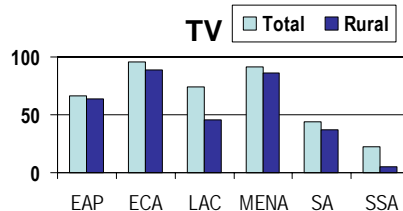
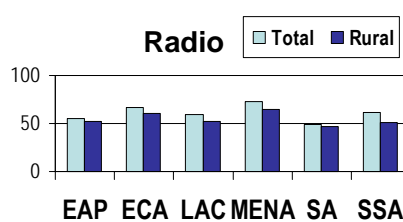
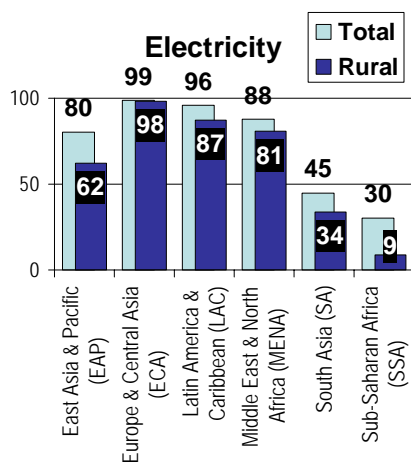
Rural population not covered by mobile signal



Source: ITU from regulators, operators, World Bank and ITU calculations.

ICTs in households

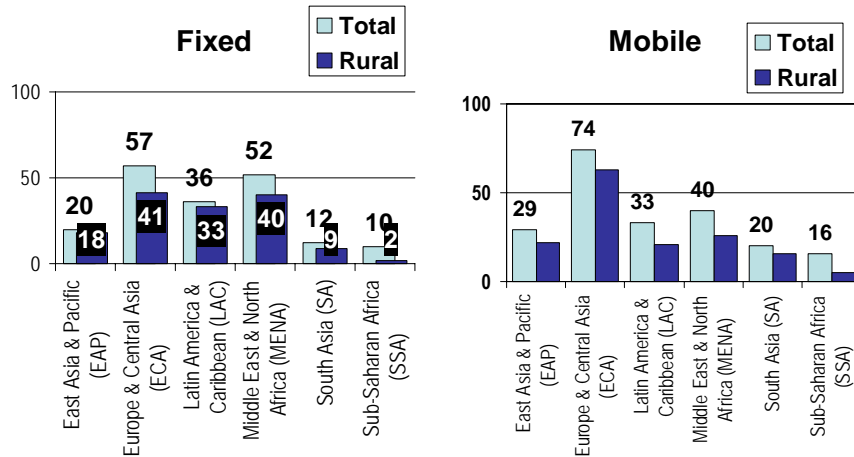
Percentage of households with (latest year, simple average):



Source: ITU from national household surveys.

ICTs in households

Percentage of households with (latest year, simple average):



Source: ITU from national household surveys.

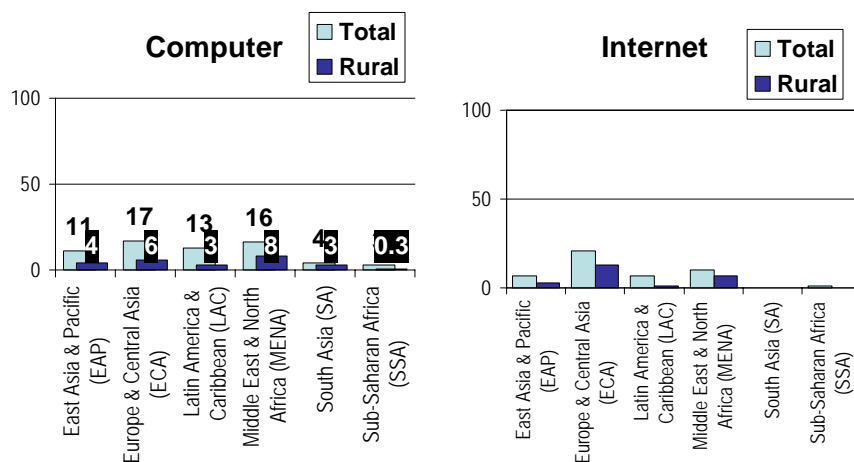
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ICTs in households

Percentage of households with (latest year, simple average):



Source: ITU from national household surveys.

ICTs in Villages

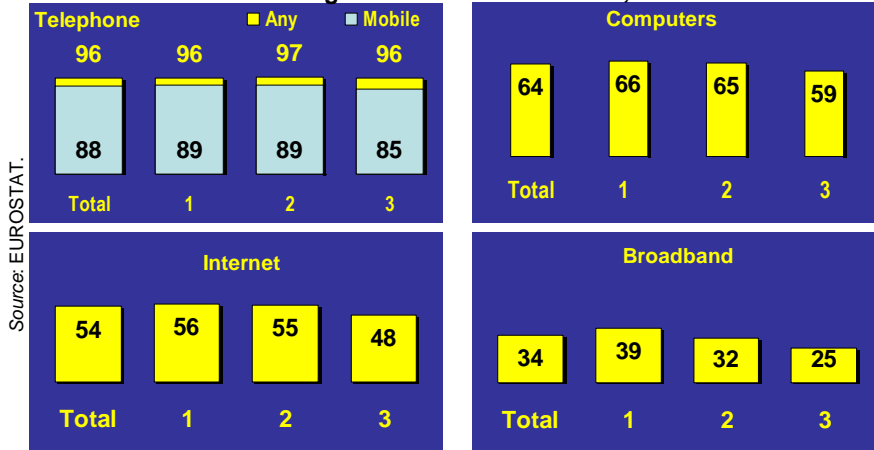
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Urban / Rural in the EU



Percentage of households with ICT, 2006

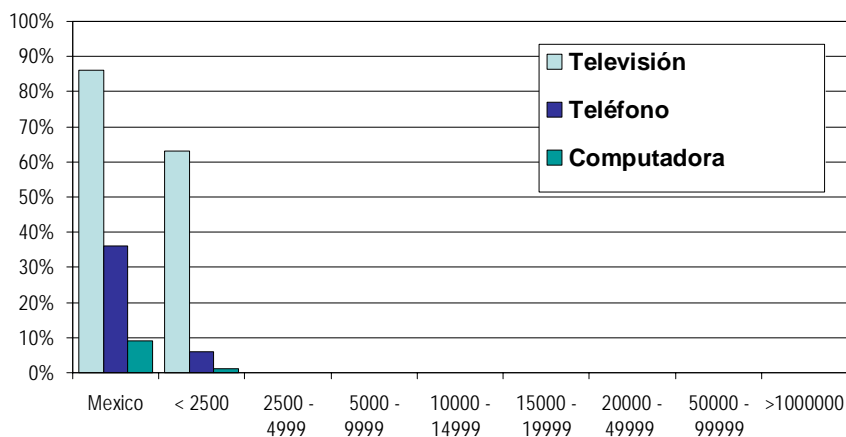


Source: EUROSTAT.

- 1 Households living in densely-populated area (at least 500 inhabitants/Km2)
- 2 Households living in intermediate urbanized area (between 100 and 499 inhabitants/Km2)
- 3 Households living in sparsely populated area (less than 100 inhabitants/Km2)

Localities & households

Mexico, % households with ICTs by locality size, 2000



Demand side

- Have looked at availability of infrastructure
- Also important to see how it is used, particularly in the context of rural
- Partnership has identified this indicator:
 - HH9 Location of individual use of the Internet in the last 12 months:
 - (a) at home;
 - (b) at work;
 - (c) place of education;
 - (d) at another person's home;
 - (e) community Internet access facility (specific denomination depends on national practices);
 - (f) commercial Internet access facility (specific denomination depends on national practices); and
 - (g) others

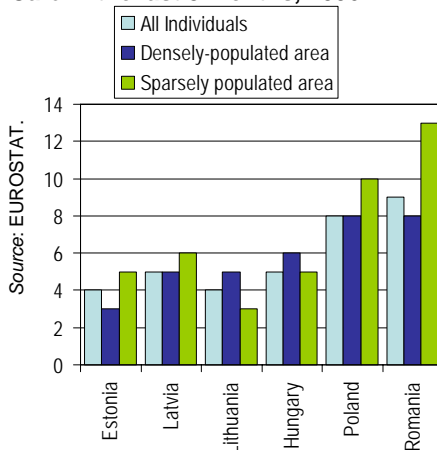
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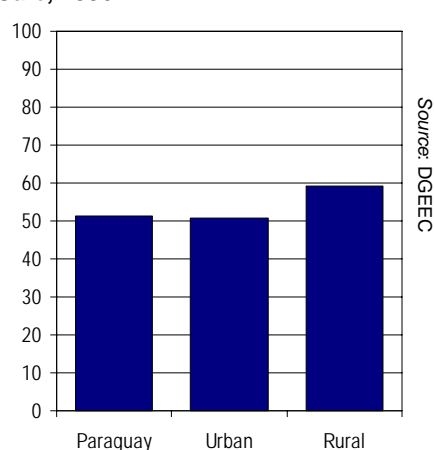
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Internet café usage

% of Internet users who used Internet Café in the last 3 months, 2006



% of Internet users who used Internet Café, 2006



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Regulatory strategies

- Mobile coverage targets in license
- Competition
- Village payphone programs
- Reverse subsidy auction
- E-government programs

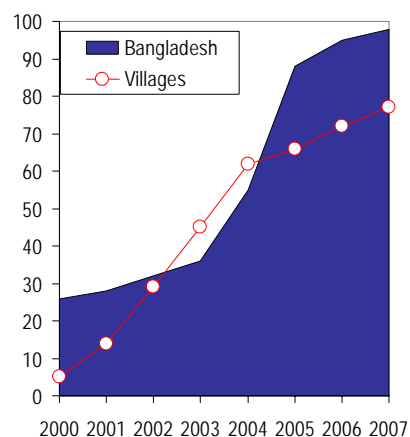
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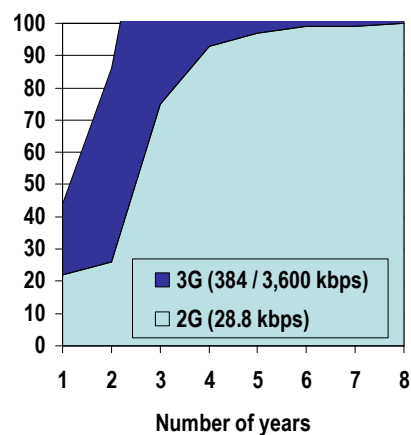
Mobile coverage trends

Bangladesh



Source: Grameen, own estimates.

Japan



Source: DoCoMo.

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Conclusions & recommendations

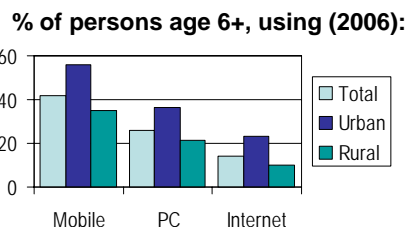
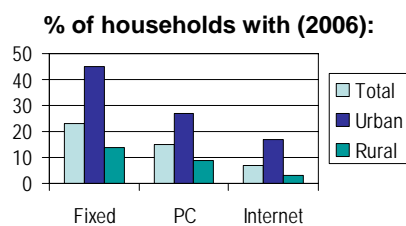
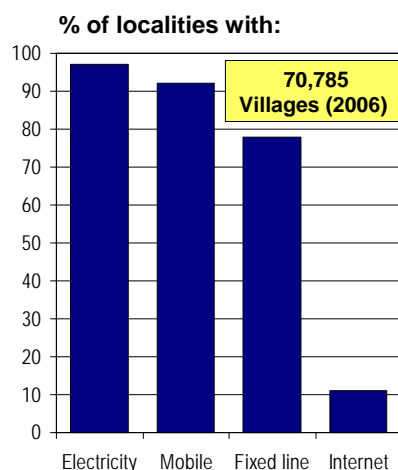
- Government agency responsible for ICT compile existing information
 - When available from NSO sometimes not “user-friendly” (e.g.):
 - Language
 - Disaggregated
 - Hard to locate
- Locality data be broken down by population
- Household data broken down by rural
- Mobile coverage broken down by technology
- Other WSIS targets

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Thailand



Source: National Statistics Office, AIS, SRRU.

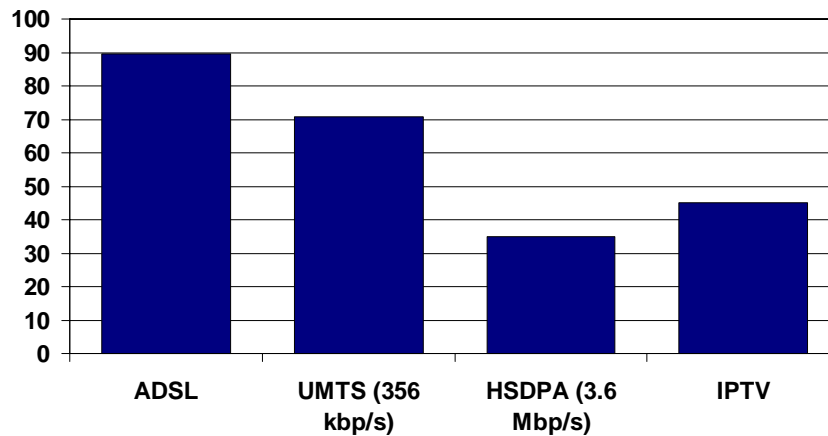
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Technology coverage

Italy, Coverage of population (%), 2006



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All WSIS Targets

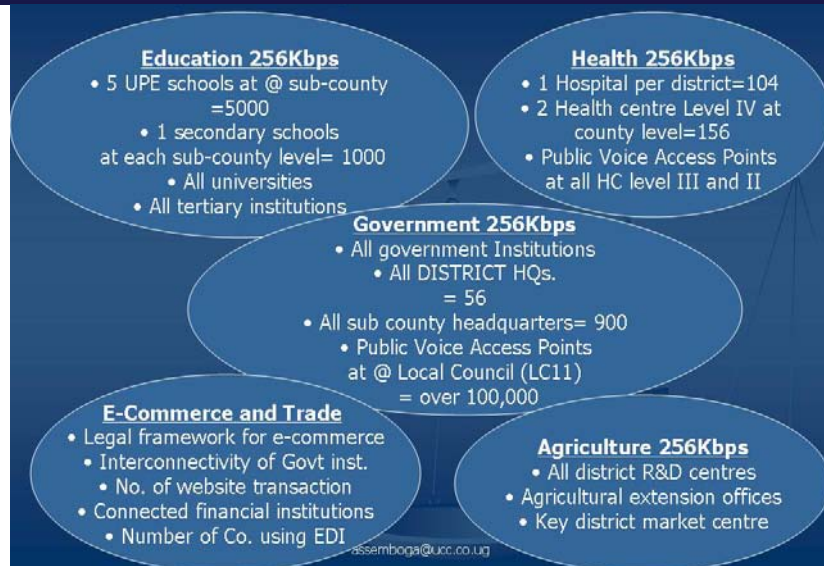
1. to connect villages with ICTs and establish community access points;
2. to connect universities, colleges, secondary schools and primary schools with ICTs;
3. to connect scientific and research centres with ICTs;
4. to connect public libraries, cultural centres, museums, post offices and archives with ICTs;
5. to connect health centres and hospitals with ICTs;
6. to connect all local and central government departments and establish Web sites and email addresses;
7. to adapt all primary and secondary school curricula to meet the challenges of the Information Society, taking into account national circumstances;
8. to ensure that all of the world's population have access to television and radio services;
9. to encourage the development of content and to put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet;
10. to ensure that more than half the world's inhabitants have access to ICTs within their reach.

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Uganda: Targets for short-term 2007



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Some of Lebanon's ICT Targets

- Villages are already connected, 30 community access points by 2004
- Connecting public institutions (government agencies, schools, universities, libraries, hospitals) by 2005
- Secondary school curriculum revised in 2002. All students to reach ICT competency level as part of the formal education by 2010
- All universities & research centers to be connected by 2005, all secondary schools by 2008 and all primary schools by 2010
- All public libraries and museums are to be connected by 2008
- All hospitals are to be connected by 2006 & health/social centers by 2010
- Internet penetration rate to reach 18% by 2006 and 25% by 2010
- Broadband connectivity services to be offered by 2005
- Building awareness of the use of ICTs to all segments of the society by 2010

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End

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