The Gender Digital Divide in Francophone Africa

a harsh reality

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The Gender Digital Divide
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Gender and ICT Network

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Acronyms and abbreviations

AFARD	Association of African Women for Research and Development (Association des Femmes Africaines pour la Recherche et le Développement), (Sénégal)
AGDI	African Gender and Development Index
APC/WNSP	Women's Networking Support Programme of the Association for Progressive Communication
ART	Senegalese Telecommunications Regulations Agency (Agence sénégalaise de Régulation des Télécommunications)
AWPS	African Women's Progress Scoreboard
BF	Burkina Faso
BJ	Benin
CEA	United Nations Economic Commission for Africa (Ethiopia)
CEFORP	Population Research and Training Centre (Centre de Formation et de Recherche en matière de Population), Abomey-Calavi University (Benin)
CEPROCIDE	Centre for the Promotion of Citizenship for Sustainable Grassroots Development (Centre de Promotion de la Citoyenneté pour le Développement Durable à la Base) (Mali)
CIGDD	Composite Indicator of the gender digital divide
CM	Cameroon
CM2	Last year of primary school (cours moyen deuxième année)
CSO	Civil society organisation
ENDA	Environmental Development Action in the Third World
GDD	Gender Digital Divide
GDI	Gender-Related Development Index
GEM	Gender Empowerment Measure
GSI	Gender Status Index
HDI	Human Development Index
ICT	Information and communications technologies
IDRC	International Development Research Centre
ISP	Internet Service Provider
ITU	International Telecommunication Union
ML	Mali
MR	Mauritania
NGO	Non-governmental organisation
op. cit.	in the work cited
OSIRIS	Monitoring Centre for Information Systems and the Internet in Senegal (Observatoire des Systèmes d'Information sur les Réseaux et Inforoutes du Sénégal)
PPP	Purchasing Power Parity
SN	Senegal
UNDP	United Nations Development Programme
UNIFEM	United Nations Development Fund for Women
WSIS	World Summit on the Information Society

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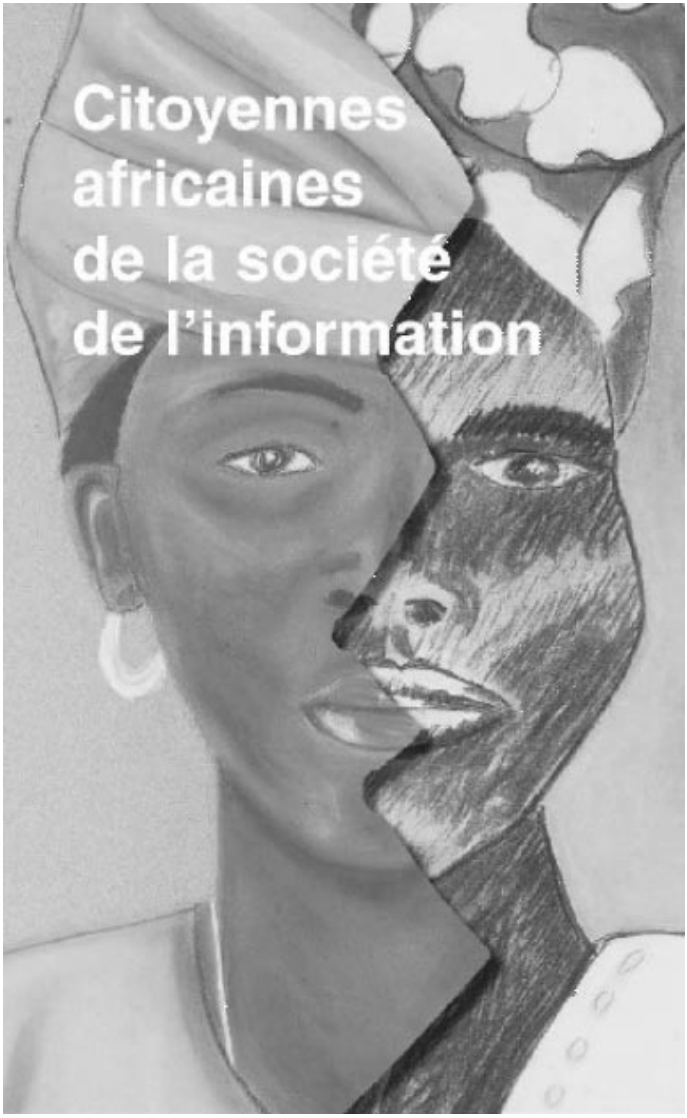

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Collective Research

This document presents the main results of the research on the "Gender digital divide in Francophone Africa: data and indicators", which was carried out in 2004–2005 by the Gender and ICT Network (Réseau genre et TIC), with the sponsorship of the International Development Research Centre (IDRC, Ottawa, Canada).

The Gender and ICT Network is a joint initiative of the international organisation Environmental Development Action in the Third World (ENDA), the Monitoring Centre for Information Systems and the Internet in Senegal (l'Observatoire des Systèmes d'Information sur les Réseaux et Inforoutes du Sénégal – OSIRIS) and the Senegalese Telecommunications Regulations Agency (l'Agence sénégalaise de Régulation des Télécommunications – ART). Comprising persons and organisations involved in promoting gender equality in the ICT sector, its mission, together with all its national stakeholders and international partners, is to promote gender equality in the information society.

The research, the results of which are presented here, is a collective work,[1] carried out under the coordination of Marie-Hélène Mottin-Sylla (Gender and ICT Network, ENDA, Dakar, Senegal). She has made use of the results of the survey and work undertaken by a research group comprising Moustapha Gibigaye (Benin), Sylvestre Ouedraogo (Burkina Faso), Robertine Tankeu (Cameroon), Sonya Noudehou (Mali), Fatma Mint Elkory (Mauritania) and Oumoul Khayri Niang Mbodj (Senegal). The regional team was supported in their work by statistician Al-Hassan Cisse, as well as an advisory team made up of Fatimata Seye Sylla (Gender and ICT Network, OSIRIS, Dakar), Ramata Molo Thioune (IDRC, Dakar), Nancy Hafkin (Knowledge Working, Boston) and Tacko Ndiaye (UNIFEM Dakar, then ECA Addis Ababa).

[1] See Appendix 3 for biographical notes on the members of the research team.

The research team would like to thank, first, all the members of the Gender and ICT Network, and particularly the representatives of the three institutions responsible for its establishment: ENDA Third World, OSIRIS and ART.

Its thanks also go to the International Development Research Centre (Ottawa and Dakar), which made a vital contribution towards the work. Special thanks go to Mr. Steve Song, Head of the Acacia Team and Director of Connectivity Africa, and Mr. Alioune Camara, Chief Programme Specialist, for their constant support, which enabled the transformation of the initial concept into a stimulating and user-friendly enterprise.

The regional research could not have been conducted so successfully without the support of the national data capture and processing teams in Benin, Burkina Faso, Cameroon, Mali, Mauritania and Senegal: we would like to extend our thanks to their members, whom we cannot mention individually, as well as to all the persons and representatives of institutions who agreed to participate in the study through responses to questionnaires and interviews. The local consultations could not have taken place without the institutions that hosted the research project in the different countries, and to them we offer our sincere appreciation: the Advisory Network for the African Information Society, Central Africa, Anais AC (Cameroon), the Population Research and Training Centre (Centre de Formation et de Recherche en matière de Population – CEFORP), the University of Abomey-Calavi (Benin), the Centre for the Promotion of Citizenship for Sustainable Grassroots Development (Centre de Promotion de la Citoyenneté pour le Développement Durable à la Base – CEPROCIDE) (Mali), Yam Pukri (Burkina Faso), the NGO NICT and Citizenship (NTIC & Citoyenneté) (Mauritania) and the Association of African Women for Research and Development (l'Association des Femmes Africaines pour la Recherche et le Développement – AFARD) (Senegal).

Finally, the team offers its kind thanks to Marie Odile Faye Ndong, project assistant, for her continual availability and follow-up of collaborative work during the project.

Summary

The “Gender Digital Divide in Francophone Africa” research project, undertaken by the Gender and ICT Network, found that women overall have one chance in three less than men of benefiting from the African Information Society in the six countries included in the study (Benin, Burkina FasoBurkina Faso, Cameroon, Mali, Mauritania and Senegal). Furthermore, any connection between gender and ICT issues is largely unrecognised. The quantitative and qualitative evidence presented by the research, which justifies the alarms raised by gender specialists within the information society, appeals to public and civil society policymakers to implement actions towards a fairer and more inclusive society in terms of gender.

At a time when information and communications technologies (ICTs) are regarded as essential tools for poverty reduction, courageous political actions must be taken if the ICT sector is to equally benefit women and men, which is a prerequisite for sustainable human development. Before relevant policies can be drawn up, monitoring and supervisory tools have to be developed. This research is a first step in this direction.

The composite indicator of the gender digital divide developed within the framework of this research is based on four components (control, content, capacities, and connectivity), and uses a total of 18 indices. Together, these enable gender disparities (the digital gender divide) to be measured with regard to access, use and mastery of the three information and communications technologies (computers, Internet and mobile telephones) that are strategically important for the promotion of gender equality.

The research results are hard-hitting in that they show the gender digital divide to be a harsh reality in each one of these areas, especially in terms of control, content and capacities. Only young girls with a secondary school education seem exempt from these gender disparities, but these women of tomorrow are still only being prepared for a secondary role as consumers and “helping hands” in the information society.

Key words: *Africa, Francophone, women, gender, ICT, information and communications technologies, policies, development, research, statistics, report, World Summit on the Information Society, digital divide, disparities, indicators.*

Foreword

Maureen O'Neil
President
International Development Research Centre
Ottawa, Canada

In 1997, when the Acacia programme was launched, IDRC's aim was to contribute through research towards finding relevant and appropriate solutions for Africa's effective integration into the Information Society, and significant participation and contributions by Africans to the same. Acacia was in fact envisaged as a response to African demand for a reduction in the digital divide, not only between Africa and other continents, but also between the countries themselves and within the African communities, with all their diversity.

It is a currently accepted fact that Africa's integration into the information society must be effected by Africans themselves, with equal participation and appropriation of the opportunities offered by these technologies. In their interactions, men and women must therefore be given the same opportunities to participate in the development of this African Information Society, and to benefit from the opportunities offered by information and communications technologies (ICTs) to speed up the continent's economic and social development process.

Studies and research undertaken both through projects subsidised by the Acacia programme[2] and through other mechanisms have shown that ICTs have an effective capacity for transformation, and to play a catalytic role in socio-economic growth and development.

[2] Information and communications technologies in Africa: Volumes 1, 2 and 3

However, this research has also shown that ICTs are not intrinsically neutral: without specific provisions and measures, there is a high risk of duplicating the gender inequalities (against women) observed in other areas and sectors during the process of ICT appropriation and the introduction of innovations.

Furthermore, an increasing number of voices are being raised against gender inequality in ICT access, use and control, as well as in benefits being derived from these ICTs. Moreover, the systematic way in which gender aspects are being overlooked during the process of drafting and implementing ICT policies is of concern to analysts of the information society's development.

However, it should be noted that these heavily criticised inequalities are not methodically substantiated by specific research and reliable and relevant measures.

In fact, there has been little research to date to methodically prepare researchers to conduct rigorous analyses to establish gender-specific discrepancies in ICT access, control and appropriation. Moreover, very few indicators and reliable measures, quantitative as well as qualitative, have been systematically established to date to enable the level of gender disparities to be ascertained.

This current piece of work, a collaborative effort, aims to contribute towards finding general solutions to correct this lack. It contains the summaries of the results of research undertaken over a period of nearly two years by a team of Francophone researchers from Benin, Burkina Faso, Cameroon, Mali and Senegal.

It aims to provide decision-makers, and those responsible for the development of ICT policy with the required tools for the development and implementation of inclusive policies that take these gender-specific factors into account. In addition, indicators and indices to measure the gender digital divide that were developed during the course of this pioneer work offer researchers and the information society's watchdog institutions the instruments, methodological supports and benchmarks for developing this information society in an equitable manner.

Using a framework of gender-specific analysis and quantitative and qualitative methods to capture and process data, and working with a participatory and multi-disciplinary approach, the researchers involved in this work not only developed indicators to measure the gender digital divide, but also confirmed the existence of such a divide, within individual countries as well as overall.

We hope that this research, which is ground-breaking and investigative in nature but nevertheless restricted in time and space, will be appropriated on a large scale by researchers, decision-makers and organisations responsible for the development and establishment of statistics, to name but a few, so that it can be continued, improved, extended and generalised in order for ICT policies to become more inclusive, and based on principles of gender-related equality and equity.

Preface

Josephine Ouedraogo
Deputy Executive Secretary
United Nations Economic Commission for Africa
Addis Ababa, Ethiopia

What is the gender digital divide? It refers to gender disparities in terms of access, control and content of information and communications technologies (ICTs), as well as the necessary capacities to use them.

ICTs are essential tools in all areas of social, cultural, economic and political interaction. Access to information on maternal and infant health, HIV/AIDS prevention, nutrition, human rights, environmental protection, production techniques, jobs and markets has a significant impact on demographic growth, economic production and sustainable development in Africa.

Information and communications technologies (ICTs) are therefore of cross-disciplinary importance for the achievement of the Millennium Development Goals and for poverty reduction. Guaranteeing appropriate consideration of the concerns of both men and women in the elaboration of ICT policies, equal access to content and control of content, as well as capacities and connectivity, will all lead to a gender disparity reduction in terms of education, economic opportunities and decision-making.

However, the lack of statistics relating to the gender digital divide has led to significant deficiencies in the knowledge system and the analytical approach to problems and solutions linked to the construction of a fair and inclusive African Information Society. The development of ICT policies that are relevant for Africa must be based on the production and use of disaggregated data on the digital divide.

This large-scale study on the "The Gender Digital Divide in Francophone Africa: a Harsh Reality", undertaken by the Gender and ICT Network, and covering the six African countries of Benin, Burkina Faso, Cameroon, Mali, Mauritania and Senegal, is a ground-breaking, innovative initiative that should be applauded by all partners in development. First, it has increased the knowledge base and statistical collection tools, enabling the gender digital divide to be measured. It also constitutes a decision-making tool for the development of equitable, relevant ICT policies in the context of the search for solutions for sustainable development in Africa. Finally, it encourages political dialogue on ICT integration in poverty-reduction strategies, and in policies to empower African women.

The indicators that were developed, and the results of this study, will be considered within the framework of the African Gender and Development Index (AGDI), developed by the Economic Commission for Africa (ECA). The AGDI presents a mechanism to evaluate the social, economic and political status of women in relation to that of men in Africa. Through the development of this index, the ECA aims to provide African decision-makers and their partners with an adequate tool to measure gender equality and the empowerment and promotion of women. The AGDI will also enable an evaluation of the efforts of the various governments with regard to the implementation of conventions ratified by African countries.

This study on "The Gender Digital Divide in Francophone Africa: a Harsh Reality" is an important contribution to the World Summit on the Information Society (WSIS) in that it draws attention to concerns about gender equality and equity with regard to ICT access and control. The ECA is actively committed to integrating the gender aspect into the WSIS process, and welcomes the availability of the disaggregated data on the digital divide that is being captured and analysed within the framework of this study.

"The information society is about people, and not infrastructure, software, equipment, figures or percentages. Policies, strategies and statistics are merely steps towards the real goal: people and their lives".

(Joint Statistical Workshop … 2003)

Decision-making tools

The signatory states of the "Millennium Declaration" (UN, 2002) recognise that the welfare of persons and societies can be guaranteed through poverty reduction and reinforcement of the status and capacities of women. In order to place the potential of information and communications technologies (ICTs) at the service of an inclusive society, the "Plan of Action" of the World Summit on the Information Society (2003), subscribed to by these same States, recommends the capture of gender-specific disaggregated data, and the development of statistics and indicators on the information society.

Availability of this type of data is particularly important for the countries of Francophone West Africa, which feature among the poorest countries on the planet (UNDP, 2004), and are among the countries that are most marginalised by the world digital divide. Poverty reduction through the promotion of women is a more urgent need there than anywhere else.

The current research evaluates the significance and features of the gender digital divide in Francophone Africa; that is, the extent and current characteristics of gender inequality with regard to the mastery of information and communications technologies (ICTs) as tools for sustainable development. The captured data enabled the calculation of a composite indicator of the gender digital divide, which represents a tool for information, action, monitoring and control, to be used by decision-makers in the public, civil and private sectors who are responsible for the formulation and implementation of gender-sensitive public development policies in all sectors, and particularly the ICT sector.

This research is not solely aimed at women, but rather at gender disparities, considered from the perspective of the promotion of gender equality. The gender digital divide can only be appreciated by assessing the situation of women in relation to that of men, as well as interest on gender issues in contexts where ICTs are available. It is important, therefore, to emphasise the fact that the results of this study cannot be used to judge ICT penetration in the countries concerned.

This work is innovative. With the exception of UNESCO statistics on literacy and school enrolment, it cannot use pre-existing data that would only require analysis, Moreover, the conceptual and methodological tools guiding the formulation and the data-capture process err through a quasi-general blindness (above and beyond the countries studied here) to the consideration of gender issues. The issues involved in the current research, as well as the construction of the resultant methodology, are therefore based on the theories proposed by gender equality activists in the information society, who have coordinated themselves since the beginning of the process of the WSIS.

This pioneer initiative has been undertaken within the framework of a civil-public partnership established by the Gender and ICT Network[3]. Its intention is not to replace the public and international institutions responsible for the production of the data and indicators required to guide international policies, but to open a permanent door to the integration of gender issues in ICT policies by producing decision-making tools. The current work, which is investigative, limited, and deliberately advocates the promotion of gender equality, was carried out in the spirit of the recommendations made by the international community in favour of partnership actions, including assessments, between all stakeholders in the information society. However, these results will certainly have to be revised, improved and duplicated, especially with a view to a chronological follow-up of the development of the proposed indicators.

[3] Information on the Gender and ICT Network is available at: http://www.famafrique.org/regentic/accueil.html

The data presented substantiates the reality of the gender digital divide in all six Francophone African countries included in the study. These six countries are amongst those that clearly deserve the most urgent attention in terms of all kinds of solidarity, especially digital solidarity: they have very little data available on gender/ICT policy convergence, and, until recently, were able to rally little interest from the world community, which showed more interest in analysing "top-ranking" or emerging countries. However, reference to the analysis of the Gender-related Development Index highlights the fact that gender inequality is more marked in countries ranked towards the bottom of the human development index, and these countries can therefore be expected to have the most marked gender digital divide.

Our results therefore risk being over-optimistic since, for practical reasons, our research covered six of the worst-off countries (in terms of ICTs) in the region: Benin, Burkina Faso, Cameroon[4], Mali, Mauritania and Senegal. Our ten years' experience on ICT and gender issues in Francophone Africa have taught us that the best opportunities were to be found there to ensure our project's success in terms of expertise, techniques, institutions, initiatives and research.

The intent of this research work is to respond to a simple question: do women and men have different relationships to ICTs? In the first instance, this requires relevant data to be identified for an evaluation to be made of the respective places of men and women in the national digital society. This methodological work on the components of the "gender digital divide" led to the creation of research tools that produced results whose analysis enabled the extent of the gender digital divide in the concerned countries to be measured and demonstrated, as well as emphasising the areas in which the results are more worrying. That led us to formulate recommendations intended for policymakers involved in the ICT/gender area.

[4] The plethora of women's ICT initiatives in Cameroon, a member of the Organisation of Francophone Countries ('Organisation de la Francophonie), led to this country's involvement in the research project.

The results of our work are not surprising: the gender digital divide is a reality in Francophone Africa, and its extent is considerable: its composite index has a value of 0,64, which means that men have "ten opportunities" to women's six in the vast and multi-faceted ICT sector.

In this knowledge era, the balance sheet is mixed for women as well as for all the countries where they represent half of the population. This composite index in fact masks important disparities. The gender digital divide, which is real in terms of accessibility, is even more worrying with regard to the ability to use ICTs and content, and is very serious in terms of participation in ICT decision-making

Our team, comprising a research network in the concerned countries, therefore went on to critically analyse the existing data, which is plentiful as a result of the WSIS process.

These results, which are hardly reassuring in the immediate term, and indeed worrying in the long-term should appeal to both public and civil society policymakers to strategically direct their activities towards the construction of an informed, responsible, inclusive and public-spirited African information society.

All the work is based on problems related to gender, ICTs and the use of indices as decision-making tools, with which public decision-makers as well as the public at large can become familiar. On the one hand, gender (social data) is currently confused with sex (biological data), or reduced to "women's issues." Gender equality is, however, an intrinsic component of sustainable and equitable development, and, for most people, this equality is simply desirable at best. It is also very often considered as an "accessory" of national development policies that can be subordinated to other so-called "superior" interests. On the other hand, the ICT sector is often perceived to limit itself to issues relating to equipment, access, infrastructure and connectivity. In order to correct these inaccurate perceptions, and to establish a general frame of reference for our work, an "emergency manual for decision-makers" was produced by the Gender and ICT Network ("Women African Citizens..." [Citoyennes africaines ..."] 2004) as a prelude to the current research.

Towards regional synergy

The results of this research are primarily intended to be useful to policymakers responsible for the formulation, application and implementation of ICT policies. The reasons for gender issues to assume a central position in ICT policies are detailed in ***"Citoyennes africaines"***, op. cit. The current research provides figures and data to support the theories presented in this advocacy manual.

In accordance with national contexts, the research is mainly directed at those in charge of ICT-related public services and their advisers, directors and implementation agents, as well as members of parliament who vote in laws relevant to this sector. The research results should be useful for those responsible for formulating, implementing and monitoring gender and/or ICT policies amongst the various stakeholders of the information society, such as directors and high-level decision-makers of parapublic or private sector organisations (telecommunications, post, radio, television and telephone agencies). It should attract the attention of media and audiovisual supervisory bodies, and private ICT entrepreneurs (telecommunications operators, service providers…), as well as representatives of international, multilateral or bilateral cooperation development organisations responsible for ICT and/or gender, and those in charge of civil society organisations, non-governmental organisations, grassroots community organisations and women's organisations.

This research also aims to be of use to media representatives, to those responsible for providing public information on development issues, and to the research communities in university, statistical and development areas who are involved in the production of statistics and indicators relevant to the information society. Finally, the research aims to raise the awareness of the public at large, and of citizens who, as a result of increased democratic participation in governance, have become the ultimate decision-makers in the global village.

The objective of producing this regional analysis of data captured in the six countries included in the study is not – despite the appeal launched by the stakeholders involved in the organisation of the information society (**"Joint Workshop", 2003, ITU, 2003**) – to classify or compare. It is to promote interest in gender and ICT issues in the Francophone African sub-region by developing procedures and tools to motivate concerted action toward gender equality in the African information society.

In the pages that follow, the section entitled **"Sustainable Development Policies"** is concerned with the necessity, at the dawn of the information society, for the inclusion of gender issues in ICT policies, if there is really to be a reduction in poverty, the primary development objective in the region that concerns us. The section on **"Development of Relevant Indicators"** relates the method used to determine how to evaluate and measure the gender situation in the ICT sector. **"A multitude of inequalities"** presents the results and data from on-site research, and the last section puts forward a composite analysis of this data, and suggests action plans for the promotion of "**gender equality in the African information society."**

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Sustainable development policies

At a time when the global community is concerned with organising the consequences of the digital revolution brought about the global penetration of information and communications technologies (ICTs) in all areas, stakeholders involved in formulating and organising the emerging global society should remember that "*people's welfare remains the ultimate development objective" **(WSIS Civil Society, 2003)***.

Gender equality and ICTs in poverty reduction

Interest in ICTs on the part of Francophone African countries, most of which are amongst the poorest countries in the world **(UNDP, 2004)** should be in line with the capacity of ICTs to promote the development objectives laid out in the Millennium Declaration, especially gender equality, empowerment of women and the eradication of extreme poverty **(World Summit on the Information Society, 2003).** ICTs, the driving force and symbol of globalisation, should contribute towards the promotion of harmonised, sustainable and democratic development, centred on communities **(Thioune, ed., 2003)** and regional cooperation **(ECA, 2003)**. It is absolutely certain that ICTs alone cannot create gender equality or end poverty **(APCWNSP "Policy Guide …")***: they* are merely tools and methods to use within the framework of human development policies.

The six countries covered by this research are part of the region that is "on the worst side" of the world digital divide, as evidenced by the ITU's "Digital Access Index" **(Simard, 2003).** They have placed their bets on ICTs as a development tool, and have established relevant national policies and strategies. Making up the majority of poor people in this poor region, the half of the human resources represented by the female population seems to be on the fringes of this development. Although women have a dominant daily social and economic role, they remain invisible

in public life, and gender equality is not taken into consideration in ICT policies: this invariably transcends the specific geographical and cultural contexts of the six countries. In the same way, strategies to empower women and reduce poverty established in each of these countries do not interconnect with ICT policies, and therein lies a major risk for women, as well as for the developing African information society.

Three decades have been enough to prove ***(Parpart and Connelly, 2000)*** that there are substantial differences in terms of opportunities and possibilities being offered to men and women in society **(Table 1)**. As mentioned by the **ECA (2004)**, "*gender equality in no way means similarities between men and women, but refers to equal rights, participation, opportunities, access to and control of resources*."

Box 1 – Gender and ICTs: the stereotypes remain

"The Posts and Telecommunications Office is a priority department, very technical. Women contribute what they can, but in general, it is the men who do the most work, because the women are not available. They have to go home to look after their households when the men are at work. There are other realities. This inevitably leads to a decrease in productivity. These are limitations. But generally, women have a lot more humanity in their work: amicability, good temperament and strictness, especially in financial management. It's important!..." *(Human Resources Officer, Posts and Telecommunications Office, Benin)*.

"Gender equality is a cornerstone for the development of a country. If woman are helped to give themselves direction, if doors are opened for them, they can do anything. Gender opens the minds of both sexes. But women lack courage, daring and will." *(Male, manager, Parakou District, Benin)*.

Gender inequality – unequal status and opportunities for men and women – does not spring from an assumed natural or biological order of things – but was created and preserved by a process of social construction that favours the male gender ***(APC/WNSP, "GEM Methodology"; Gender and ICT Network, 2004)***.

The effect of gender inequality on underdevelopment is so significant that the global community has agreed to make the reduction of this inequality one of the eight Millennium Development Goals ***(UN, 2002)*****.**

The reality of gender inequality in the demographic, educational, health, professional and political fields was brought to light thanks to the collection of disaggregated gender-specific data. A similar course of action should urgently be undertaken in the multi-faceted and strategic ICT sector, under pressure from women's organisations if necessary. These organisations are in fact well aware that: "*No data means no visibility; and no visibility means no priority" **(Huyer & Westholm, 2001)***, especially in terms of political strategy or budgetary allocations. The data currently in use for ICT planning (cf. **Table 1)** is exceedingly blind on gender issues, and, as a result, incapable of supporting remedial policies.

In everyday life, and for the few that can have been bothered to notice, gender inequality is easily discernable in the areas of **access to resources and to capacities** (economic, educational, financial, time-related). However, these inequalities are **consequences of inequalities in terms of control and decision-making in the public and private spheres**. A result of the limited participation of women in decision-making bodies is that their needs, concerns and values have become invisible in the big picture determined by the masculine model ***(Klasen, 2004)***.

Table 1: ICT Indicators in Africa: the invisibility of gender issues

	BJ	BF	CM	ML	MR	SN
Total number of telephone subscribers, per 100 people, 2003	4,31	5,13	2,39	1,03	10,4	7,77
Effective teledensity, 2003	3,36	1,85	4,43	0,53	9,22	5,56
Telephone mainlines, per 100 people, 2003	0,95	0,53	0,7	0,53	1,18	2,21
Percentage of households with a telephone, 2002	3,7	1,7	n.d.	2,4	2,9	17
Public phones, per 1000 people, 2002	0,08	0,42	0,45	0,23	1,37	1,6
Public phones, % of mainlines, 2002	0,98	8,15	6,93	6,03	11,6	6,63
Cellular subscribers, % growth, 1998–2003	107	142	193	124	n.d.	83,8
Cellular subscribers as % of telephone subscribers	78	77,6	86,4	48,2	88,7	71,6
Telecommunications personnel, % of women, 2002	12,8	13,3	n.d.	22,4	28,8	23,5
Internet users, per 100 people, 2003	1	0,39	0,38	0,24	0,37	2,17
Computers, per 100 people, 2003	0,37	0,21	0,57	0,14	1,08	2,12
Adult literacy rate	38,6	24,8	72,4	26,4	40,7	38,3
School enrolment rate	49	22	48	29	43	38
Digital access index	0,12	0,08	0,16	0,09	0,14	0,14
Population, total, 2003, millions	7,03	12,3	16,3	10,9	2,75	10,4
Population, density per km^2, 2003	62	45	34	9	3	53
GDP per capita. US $, 2002	413	220	670	318	365	506

Source: ITU, 2004

Measuring gender disparities

In order to substantiate the real differences in the status of men and women, UNDP has published the **Gender-Related Development Index (GDI)** since 1995, which covers all countries in the world. This index measures gender-specific variations in the **Human Development Index (HDI)** by combining indicators of life expectancy, education level and income. The **Gender Empowerment Measure (GEM)** complements this by disclosing the part played by women in economic and political life ***(UNDP, 2004)***.[5]

[5] The main indicators of gender inequality available for the six countries covered by the research can be found in the statistical appendix.

Social Watch's comment on the results of the GDI is that "in countries where gender inequality is the most pronounced, the gender disparity ratio in terms of literacy and primary school enrolment is around 0,7, and in terms of secondary and tertiary enrolment, around 0,3. In these same countries, the disparity rate in terms of income and economic activities shows that women receive an average of 60 per cent of the remuneration received by their male counterparts, although they represent approximately 50 per cent of the workforce. In the lower-ranking countries, women may only receive 30 per cent of the remuneration, and represent 6 per cent of the active population (…). It is in the area of political representation (especially with regard to women in parliament) that the largest variety of indicators within a country relating to the same group can be found*" (Social Watch, 2004).*

However, this organisation does note "slight to significant" progress in terms of gender equality in areas of literacy and primary enrolment, as well as participation of women in public decision-making posts. However, even in 2004, women made up less than ten to twenty per cent of parliamentarians in the six countries covered by this research ***(Interparliamentary Union, 2004).*** Moreover, a comparative study of the classification of countries according to the HDI and the GDI shows that the lowest-ranking countries in terms of human development are also the lowest-ranking in terms of gender equality.

Table 2: Human development and gender equality: back of the pack

HDI and GDI Ranking	BJ	BF	CM	ML	MR	SN
Human Development Index (out of 177 countries)	161	175	141	174	152	157
Gender-Related Development Index (out of 144 countries)	130	143	111	142	124	128

Source : UNDP, 2004

Social Watch noted: "*Although it is tempting, and certainly useful, to want to combine the different aspects of gender equality into a single figure, a real perspective on gender should in fact be done horizontally, taking into account all the aspects used to analyse social development, and it should thus serve to define the concept of social development:* ***that does not mean that a country is "developed" and has "achieved gender equality" when this is a prerequisite to development.***

The ***Economic Commission for Africa (2004)*** has just finalised the methodology for the calculation of an African Gender and Development Index (AGDI), for publication every three years, to assist decision-makers in evaluating the performance of their policies and programmes, improving their knowledge, and increasing the visibility of gender issues (**Box 2**). The AGDI enables a comparison to be made of gender disparities and policy performance amongst African countries, rather than among countries whose realities are very different in terms of development.

The AGDI measures gender inequality, but does not relate the results to absolute welfare levels, nor to the general socio-economic performance of a country. It should therefore be interpreted in relation to other indices that measure human development and poverty: those that depend on the national income of a country, such as the **Human Development Index** and the **Human Poverty Index**, annually produced by UNDP. Although the AGDI is still in its embryonic stages, and is limited to a single variable of gender as a factor of inequality, **it raises the visibility of the effects of African policies on gender equality,** and serves as a tool to energise an important and goal-oriented process of intervention in the promotion of gender equality for the sustainable development of all. However, the ICT access indicator, amongst others, was not retained in the calculation of the AGDI.

Box 2 - AGDI: methodological approach

The first component of the AGDI, **the Gender Status Index (GSI)**, measures gender-related inequalities with the help of quantitative indicators (education, health, income, use of time, employment, access to resources, formal and informal political representation). The second component, **the African Women's Progress Scoreboard (AWPS)** measures the progress made in terms of women's advancement and empowerment. The GSI and AWPS are based on three blocks made up of a total of 42 indicators: "**social power**" (capabilities), **"economic power**" (opportunities), "**political power**" (power to act or ability to influence and contribute to results); the AWPS includes a fourth block, namely **women's rights *(ECA, 2004).***

Although UNDP's progress inspired us to conceptualise a composite indicator of the gender digital divide, we, like the ECA, have proceeded according to analytical steps to identify the nature of its composition. We used proposals made by gender and ICT specialists, notably in the context of the WSIS process, which are detailed below.

Symptoms of the gender digital divide

The central position essentially held by gender in sustainable development, including the digital society, was raised in Bamako at the first conference organised within the framework of the WSIS process ***(WSIS Gender Caucus, 2002)***, which extended advocacy to the strategic importance of ICTs for African women ***(APC-African-Women and FEMNET, 2000; Rathgeber & Adera, 2002).***

The ***"Gender Evaluation Methodology for ICT Initiatives" (APC/WNSP)*** demonstrates that factors other than income and education influence the digital divide, such as gender, age, location and origins. Moreover, an analysis of the gender digital divide cannot be summed up by disparities in terms of access: for women, ICTs are not "just another tool". Their strategic importance is linked to that fact that they can be used to fight the issues at the root of women's marginalisation and isolation, because ICTs provide for expression and community action.

Many pieces of work undertaken – mainly in English – by women's organisations, civil society and the international community have conducted theoretical analyses of the links between gender, ICTs and development in terms of use, obstacles, education and training, work impact, globalisation, and women's political and economic promotion ***(Hafkin and Taggart, 2001)***. UNESCO published a noteworthy French language summary ***(Primo, 2003)*** of the relationship between gender inequality and the digital divide, and drew up a detailed inventory of the socio-cultural and institutional obstacles to ICTs created and upheld by gender inequality. The ***UNESCO (2003)*** study on the status of gender and ICT research in the information society substantiates the existence of the gender digital divide, and the fact that action priorities should focus on the equal use of ICTs by men and women, as well as on women's participation in policymaking and production, digital literacy, and the removal of time constraints linked to women's triple role.

From the start of the data-capture process on the information society, ***Hafkin (2003)*** has advocated the collection of gender-sensitive indicators to be used in the establishment of a universal and equitable information society. She takes stock of the main gender issues in the ICT sector, while emphasising that one single indicator would not suffice to cover issues of gender equality from the perspective of the information society.

APC/WNSP confirms that these indicators should reflect a political vision of the place and role of women and ICTs in the information society: protection of women's and human rights, refusal of discrimination, equal opportunities, cross-disciplinarity, and visibility of gender relations, rights to communication, security, access, education, knowledge and participation.

These different perspectives and proposals made up the platform on which we constructed the theoretical model of a composite indicator that would take into account the most important aspects of the gender digital divide.

Development of relevant indicators

An indicator should be relevant, clear, comprehensible and accurate. It should facilitate rationalisations of the highest possible number of phenomena for the widest possible user audience, with the help of a concise number of quantitative and qualitative measures.

A gender-sensitive indicator should enable "changes noted in gender relations over a certain period to be highlighted" ***(CIDA, 1997)*****.** Gender and ICT indicators should enable evaluation of the contribution made by ICTs towards the promotion or marginalisation of women, and towards the preservation or transformation of gender relations. ***APC/WNSP*** mentions that (quantitative) access indicators should be completed to enable (qualitative) responses to other questions: who makes decisions relative to technology access? Who creates useful content, and in what language? How do women use the information to which they have access? How do ICTs help women to promote community action and advocacy for change and communication for democracy?

A pioneering, activist enterprise

This initial quantitative and qualitative research is limited to the collection of a set of simple data; it should be revised, completed and applied to other contexts. Its only intention is to be of immediate use to the primary beneficiaries of the research, that is the various political stakeholders of the ICT sector. The research is deliberately activist in nature: while recognising that gender is only one of the many aspects of the social and digital divide, and striving, whenever possible and relevant, to make connections with other disparity-determining factors, its primary goal is to highlight the effect of gender on the digital divide.

This work does not intend to be exhaustive. Its goal is not to accumulate the maximum data on the vast ICT sector, but to present a global, holistic and harmonised vision of the significance of the digital revolution for the future of social gender-related relations.

Inspiration from lessons learnt

Huyer & Westholm, 2001 recommend that indicators be identified in a participatory manner. For us, that means indicators should be developed from theoretical proposals put forward by gender and ICT specialists, according to the principle that was ratified during the ***Joint statistical workshop on monitoring the information society (2003)***. This many-sided partnership "involving stakeholders in the information society, as well as the traditional statistical institutes, involves a critical revision of traditional indicators, which are often inappropriate for political analysis" ***(Minges 2003)*.**

The International Telecommunication Union (2003) proposes that evaluation of the analysis of infrastructure and equipment supplies, considered to be the main obstacle to date to improved ICT access, be complemented by an evaluation of indicators – broken down by socio-economic categories, including gender – to verify the consumption of ICT products and services. The report, which proposes the collection of a list of "e-ITU indicators" to enable the construction of a Gender-Related Digital Access Index, seeks to identify the female side of some pre-existing indicators rather than adopt a set of gender issues to identify which indicators to observe.

Women's organisations ***(APC-Women-Africa and FEMNET, APC/WNSP, Gender and ICT Network)*** suggest that it would be prejudicial to limit women to the role of consumers of ICT products and services, and to be content with measuring their part in infrastructure supply, and usage demand. The indicator for the gender digital divide must, in accordance with the ***WSIS Declaration of Principles***, consider women as "key players in the information society", and must therefore also support their public and political role.

Indicator components: the “4 Cs”

A composite indicator of the gender digital divide should be built on the following four components: control, content relevance, capacities, and connectivity. We have chosen to present them here in order of their strategic importance for the promotion of gender equality, rather than in the order usually used in international statistics.

The **control** component should demonstrate: gender inequality in terms of political, economic and public decision-making; the degree of preparedness for the consideration of gender in ICT policies; and the awareness of ICT policies in gender issues. This indicator should enable responses to the following questions:

- What is the **place** (quantitatively as well as qualitatively) of women in the organisational structures and higher echelons of public, private and civil decision-making bodies in the ICT sector, at management, technical, commercial and operational levels?
- What gender concerns are covered by ICT **policies**, legislation and regulations? What gender analysis could be done of the main cornerstones of ICT policies?
- Are women’s organisations **active** in the promotion of gender equality in the ICT sector?

The **content** component should demonstrate: gender aspects in the use made of ICT tools, products and services; gender sensitivity in ICT products; and content relevance in terms of gender. This component should enable the evaluation of:

- The types of content (leisure, social, domestic, training, economic, political and public) “consumed” by what categories of women?
- The type of content produced by and for what types of women? To respond to what types of needs?

The **capacities** component should be an indicator of the underlying structure of the gender digital divide, in terms of literacy and knowledge, as well as the likelihood of its preservation, in society in general and in the ICT sector in particular. The capacities component should study:

- Types and levels of ICT training
- Gender sensitivity in ICT training
- Consideration of political aspects in ICT training.

The last component, **connectivity**, should cover elements of the gender digital divide relating to usage in terms of access and accessibility. **Access** is understood to be the physical availability of network and telecommunications infrastructures and ICT equipment and services. **Accessibility** refers to the possibility of accessing these facilities, once their availability is assured. ICT accessibility is not a neutral issue where gender is concerned. In places where physical access is guaranteed, it can be noted that women do not use ICTs because of gender-specific constraints: they have more constraints than men in terms of financial availability, mobility and time. They are very aware, moreover, of aspects relating to security and violence. As a result, the gender-based standards and social roles of women mean that there is a correlation between factors such as physical location, schedules, formats and costs at which ICT tools, products and services are available, and the use made of them by women when they are available. The connectivity component should enable us to establish:

- **How many** women use ICTs in relation to the male population using the same ICTs?
- **Who and where** are the women who use ICTs in relation to the men that use, or do not use, these same ICTs?
- **Where and how** do women gain access (public, professional or private) to ICTs?
- **What use** (personal, productive, public) do women make of ICTs?

The composite indicator of the gender digital divide can then be constructed according to the components and definitions presented in **Table 3.**

Table 3 Components of the gender digital divide indicator

		Definition	Meaning
Composite Indicator of the Gender Digital Divide	1 — Control	11 – Gender disparities in the higher echelons of ICT policymaking bodies	Substantiated by the GDD in terms of political decisions
		12 – Gender disparities in the higher echelons of ICT economic bodies	Substantiated by the GDD in terms of economic decisions
		13 – Gender disparities in the higher echelons of civil society organisations	Substantiated by the GDD in terms of civic actions
		14 – Number of civil society organisations active on ICT and gender issues	Substantiated by the degree of preparedness to advocate gender consideration in ICT policies
		15 – Explicit reference to gender considerations in ICT legislation and regulation	Substantiated by the sensitivity of ICT policies to gender issues
		16 – Disparities in gender training in ICT institutions	Substantiated by the degree of preparedness to develop gender relations
	2 – Content	21 – Gender disparities in the consumption of virtual products	Substantiated by the type of use made of ICTs
		22 – Percentage of national electronic products (sites, lists, telephone services) dealing with gender in French or the national language	Substantiated by gender-sensitivity in ICT products
		23 – Adaptation of virtual content to the needs expressed by women and men	Substantiated by the GDD in terms of content relevance
	3 – Capacities	31 – Gender disparities in terms of literacy/school enrolment (3 levels of education: primary, secondary and tertiary) irrespective of language	Substantiated by the original reasons for the GDD
		32 – Gender disparities in ICT training	Substantiated by the GDD in terms of usage capacities
		33 – Explicit consideration of gender issues and ICT policies in ICT training (trainers, trainees, content, methods)	Substantiated by the GDD's tendency towards self-sustainment
		34 – Gender disparities amongst ICT professionals (computers and telecommunications) who are active or in training	Substantiated by the GDD in terms of training
	4 – Connectivity	41 – Gender disparities in the use of the 3 ICTs (computers, Internet, mobile telephones)	Substantiated by the GDD according to strategic ICTs
		42 – Gender disparities in access to computers and the Internet according to access locations (public, professional, private)	Substantiated by the GDD in terms of access
		43 – Gender disparities in mobile telephone or email subscriptions	Substantiated by the GDD in terms of accessibility
		44 – Gender disparities according to ICT use methods: personal, professional, public	Substantiated by the GDD in terms of usage
		45 – Gender disparities in Internet and mobile phone access and accessibility	Substantiated by the reasons for the GDD in terms of access

(The indicator calculation method can be found in Appendix 1)

Three strategic ICTs

As it is not possible to study all ICTs, that is all hardware, software, networks and media that enable the capture, storage, processing, transmission and presentation of information, this work is limited to the study of three of the ICTs that are considered to be strategic for the promotion of gender equality: computers, Internet, and mobile telephones.

- **The computer** is the basic tool for individual participation in the digital universe. It allows everyone to produce, store and exchange their own information, and to access the Internet.
- **The Internet** enables public access to global knowledge and individual and public expression through information, expression, communication, advocacy and action.
- **The mobile phone** is a particularly important piece of technology in the African context ***(ITU, 2004)***, especially for barely literate or educated African women ***(UNFPA, 2004)***.

These ICTs can evidently only be studied in areas that already have access infrastructures; that is, mainly electricity (for computers), landlines (for the Internet) and mobile telephone relay stations (for mobile telephones).

Field survey

After developing the theoretical grid for the construction of the gender digital divide indicator from existing documentary information, through the use of 18 indices comprising four components, we captured field data to enable the values to be calculated. To this end, the team members first carried out a background study in the six countries, specifying the socio-demographic and socio-economic characteristics of their populations, as well as the gender and ICT policies and institutional frameworks, and describing the main stakeholders in the ICT sector.

- **Research tools**

Three **research tools** were designed to capture data, through which the different indices are calculated according to the methodology presented in **Appendix 1.**

i. A **questionnaire addressed to individuals** making up the sample,[6] **comprising** 61 questions in total, 20 of which deal with identification of the survey, 3 on knowledge about the gender issue, 9 on computers, 14 on the Internet, 5 on mobile telephony, and 10 on the evaluation of gender and ICT issues by the interviewee. This questionnaire was applied to a random sample[7] (itinerary method) of 6,743 persons above 15 years of age,[8] according to characteristics of national populations in terms of gender, age and residential area.

ii. A **questionnaire addressed to institutions**, comprising 32 questions: 17 questions enabling identification of the respondent and the institution, including its composition in terms of gender, 5 dealing with gender and gender/ICT training policies, 4 intended only for training centres and dealing with gender consideration in training actions, and 7 questions leading to conclusion and collection of the interviewee's evaluation. This questionnaire was applied to 380 institutions selected by stratification, and included at least 1/10th of the most important institutions and training centres. The others were chosen by random selection in the second stratum. The "institutional" category includes public organisations (ministries, agencies, parliament, councils), private organisations (from the formal sector: operators, ISPs, professional associations,

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[6] The working documents on which the current abstract is based are available on Indifract's website: http://www.famafrique.org/regentic/indifract/accueil.html (See Bibliography).

[7] Questionnaire sample (individuals and institutions mixed): minimum of 1,000 people per country, that is: Benin: 1,006; Burkina Faso: 1,150; Cameroon: 1,547; Mali: 1,000; Mauritania: 1,000; Senegal: 1,040.

[8] Except in Mali and Mauritania, where only persons above 18 years of age were questioned.

telecentres; and from the informal sector: member and community access centres, small ICT-related businesses) and civil society organisations (NGOs, women's associations and civil society associations), as well as private, university and scholastic professional and academic training centres. Regional organisations and international cooperation initiatives active in the ICT and gender sector were only considered if they are involved in the development of relevant initiatives in the concerned country.

The data resulting from the two questionnaires was processed in each country, and synthesised in accordance with the indicator calculation table presented in the Appendices. It was then analysed and presented in national reports. A compilation of all the databases enabled the presentation of the current regional summary.

iii. A **semi-directive interview guide** was developed to serve as a basis for the capture of qualitative indicators, especially testimonies. A **content analysis** of the texts of gender and ICT policies, as well as websites hosted in the countries, was undertaken to provide data for the establishment of indicators 15 to 22. Indicator 31 was calculated from data provided by ***UNESCO (2003)*****.**

- **The gross sample**

In all six countries, the sample comprised people and institutions from rural, urban and semi-urban areas with ICT services. There would have been no sense in wanting to examine a gender digital divide in areas without ICT services.

The overall sample, composed of 6,743 persons, of which 49,9 per cent were men, and 50.1 per cent women is representative of the population distribution according to gender, age and residential area. It comprises 62,4 per cent of people living in the urban area, 18,6 per cent in the peri-urban areas, and 19 per cent in the rural areas. The over-representation of the population with a more advanced level of education (namely secondary school) is justified by the subject of the research: only 10,1 per cent of

people in the sample have no schooling, 15 per cent received primary education, 52,1 per cent secondary education, and 29,2 per cent tertiary education. Distribution by age is relatively representative of the age pyramid: 49,1 per cent of interviewees are under 25 years of age, 45,1 per cent are between 26 and 50, and 5,8 per cent are over 50 years of age.

The results were preliminarily processed on a national level, and presented in national research reports (see **note 6, page 27**). The databases were then harmonised for all the countries, which led to the presentation of the results that follow.

A multitude of inequalities

Meaning of the index values

The results presented below should be read in the following manner: an indicator with the value of 1 translates to perfect gender equality; if the value is above 1, there is inequality in favour of women; if it is below 1, the indicator shows inequality in favour of men.

If the variation in relation to 1 is minor, for example above 0,95 per cent, the inequality is not significant and a simple fissure or crack can be referred to. An inclusive index of between 0,85 and 0,80 per cent translates to obvious inequality that ought to be corrected by appropriate policies.

However, an inclusive index of between 0,80 and 0,60 translates to serious inequalities against women, and calls attention to the urgent need for voluntarist policies to remedy the situation.

Below 0,60 per cent, the index calls for urgent actions to remedy an alarming situation of exclusion of women and gender issues in the information society.

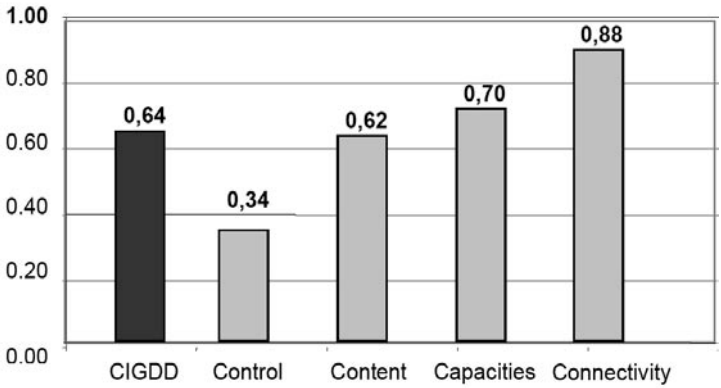
Overall composite indicator: evidence of the divide

The composite indicator of the gender digital divide is calculated as an average of its four components: control, content, capacities, and connectivity. Each one of these is also the average of its component indices.[9] Its overall value is proof that **the gender digital divide, to the detriment of women, is absolutely real: currently, women have 35 per cent less opportunities than men to benefit from the African information society**. This justifies the concerns raised by gender and ICT specialists, and their activities in favour of affirmative remedial policies for reduction of this divide.

[9] Details of the data collected in the countries is presented in Appendix 2.

This composite index covers the variable disparity levels in the four domains that have been determined as significant. **The situation is seriously worrying with regard to control**: women have **only a third** of the opportunities available to men. The gender disparity indices of content and capacities also reveal inequality in the order of one-third. In terms of **connectivity, that is, access (physical) and accessibility (social)**, the disparities are real, but less significant: **women are "only" marginalised by a tenth** in relation to men (see **figure 1**).

Figure 1 – The four components of the compocite indicator of the gender digital divide



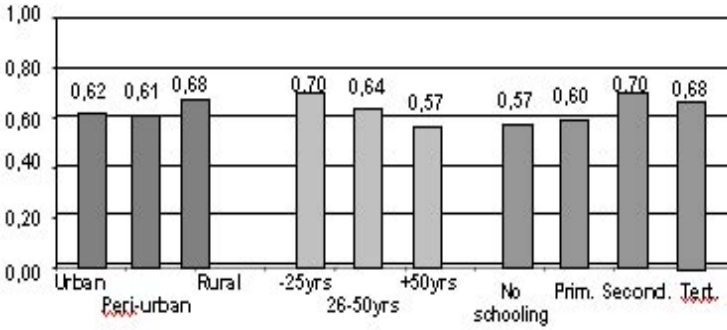
The domains of **control, content and capacities** therefore reveal the most serious gender disparities, and these domains should be **prioritised for development by policies for an inclusive information society**. The net disparities recorded in the area of connectivity, although fewer, should be **corrected** by vigilant actions.

The regional indicator of the gender digital divide varies according to residential area, age and education level. Gender inequalities seem **less significant in the rural areas** than in the urban and peri-urban areas. The disparities are **lower among the youth** than amongst adults and the elderly, **and are lower amongst those who have received schooling (secondary and higher)**, than among those who received little or no schooling.

The higher gender sensitivity amongst the youth and those who received secondary education can be explained by the impact of **public digital literacy policies together with recent policies for the education of girls**, such as those in Cameroon or Burkina Faso. It could also explain why those who began their professional lives before the real popularisation of ICTs (adults, especially the elderly, and those who received tertiary education) are more affected by the gender digital divide.

Contrary to popular belief, our sample did not show evidence of differences in gender disparities between urban and peri-urban areas, which are even higher than those noted in rural areas, even though these are disadvantaged in terms of ICT services (**figure 2**).

Figure 2 – Variations of the gender digital divide: residence, age and education level



The control indicator: an alarming abyss

The control indicator considers the participation of women in decision-making, and in the exercise of authority in the ICT sector. Gender and ICT specialists deem this to be an area of strategic importance, in which it is important to measure the space occupied by women, because it is at the level of political decision-making and action that changes can be made that will lead to increased gender equality: these will not be effective unless a "critical mass" of women are represented in these areas.

The control indicator has been measured through six indices:

- The level of gender disparities in the higher echelons of **policymaking** bodies;
- The level of gender disparities in the higher echelons of ICT **economic** bodies;
- The level of gender disparities in the higher echelons of **civil society** organisations;
- The proportion of civil society organisations active on **ICT and gender** issues;
- Explicit reference to gender considerations in **ICT legislation** and regulations;
- Gender disparities in **gender training** in ICT institutions.

The most worrying facet of the gender digital divide revolves around the participation of women in decision-making and gender considerations in policies: **in terms of control, women have a "weight" of only one-third.** Their marginalisation is particularly noticeable in the areas of **political and economic decision-making**, but much less in that of **public decision-making exercised by civil society organisations (Box 3).**

Box 3 – Minorities in decision-making forums

Apart from certain professional organisations, the civil society organisations included in the study in Mali are, in the majority and even totally, made up of women. But 36 per cent of the institutions interviewed do not have a single woman at the higher decision-making level, and 60 per cent have no gender policy ***(Noudehou, 2005)***.

The first Mauritanian women Doctor of Mathematics launched the Internet Fair (Fête de l'Internet) before heading the State Secretariat for New Technologies (Secrétariat d'Etat aux Technologies Nouvelles), changing the image of women in veils: her youth and femininity are reflected in the department's policies and decisions ***(Elkory, 2005)***.

In Benin, 69,4 per cent of interviewed men, as opposed to 30,6 per cent of women, control ICT policymaking bodies; although they are represented 2,3 times more than women, a minority amongst these men claim to know about the concept of gender (24 per cent of men as opposed to 100 per cent of women) ***(Gibigaye, 2005)***.

It is anticipated that **this situation will be difficult to improve** for three reasons:

- First, only a **very small proportion of civil society organisations (CSOs)** have effective gender and ICT programmes.
- Second, only half (see **Box 4**) of the countries included in the study have legislation and regulations that contain **explicit references to the need for gender equality in telecommunications policies.**[10]
- Third, less than one-half (0,48) of the personnel in ICT institutions have received gender training[11] (see **figure 3**).

[10] Only three countries (Burkina Faso, Cameroon and Mali), make specific reference to gender equality issues as matters of principle in their basic ICT legislation and regulations. The overall value of this index (0) is not therefore representative of the average situation, but translates – to respect the consistency of the method used to calculate the index – the fact that the situation is, overall, imperfect in all the countries studied, and requires action (See *Appendix: Index Calculation Method).*

[11] Moreover, it is primarily women who have benefited, although they are a minority at the decision-making level of these institutions.

The disparities are more marked in the areas of political and economic decision-making that in that of public decision-making. It is true that most civil society organisations today have programmes for women, even if these are not specifically on gender (see **Box 5**). This is a result of the conditions of international development aid: international advocacy for much-needed gender equality has eventually borne fruit.

Box 4 –Policies that are blind to gender

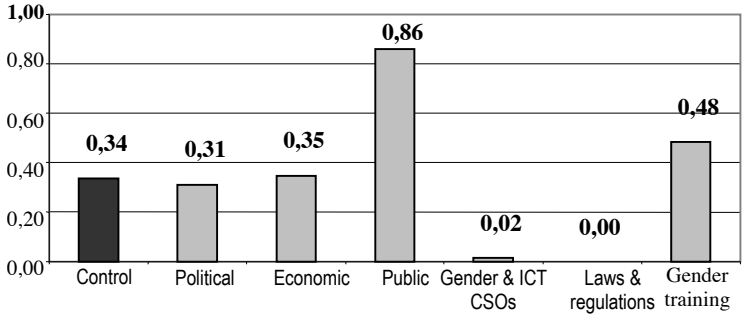
In Benin, the ICT/gender problem is almost disregarded in political reference documents: the Action Plan of the National Policy for the Promotion of Women (Le Plan d'Action de la Politique de Nationale de Promotion de la Femme) places no emphasis on ICT issues, and ICT Policies and Strategies in Benin (la Politique et Stratégies des TIC au Bénin) only touches lightly on gender issues, by mentioning "the promotion of the youth and of gender". There is therefore an enormous lack of databases that are disaggregated by gender, and thus enable an evaluation of the extent of the disparities in this sector ***(Gibigaye, 2005).***

Although Mauritania is very active in promoting women and gender equality, it seems to place no emphasis on the integration of women and girls into the ICT sector. And its ICT policy is no more explicit with regard to the role that women should play in this area ***(Elkory, 2005)***.

The principles of the 2004 Operationalisation Strategy of the Development Plan of the National Information and Communication Infrastructure (Stratégie d'opérationnalisation 2004 du Plan de développement de l'infrastructure nationale d'information et de communication) in Burkina Faso clearly recognises the place of women in the information society, but the gender aspect is weak in most of the intervention focal areas. Reference has to be made to the sectoral programmes to find these issues "that are considered to be too specific" ***(Ouedraogo, 2005)***.

The Senegalese Telecommunications Code (le Code sénégalais des Télécommunications) recognises equal treatment of users as a basic principle, but does not analyse this principle from the gender perspective. No correlation is established between the two related problems of gender and ICTs ***(Niang, 2005)***.

Figure 3 – The six indices of the control indicator



Box 5 – Gender issues now recognised as relevant to citizenship

21 of the 371 NGOs in Burkina Faso explicitly deal with gender issues, and three of these work on the issue of gender and ICTs. However, the vast majority of NGOs and CSOs claim to be developing gender programmes, irrespective of their primary mission ***(Ouedraogo, 2005).***

The content relevance indicator: the fascination of tools

This indicator enables a measurement to be made of the extent to which content disseminated by the ICT tools and applications included in the research contribute towards the promotion of gender equality. Three indices are involved in this measurement:

- The **level of gender disparity** in the consumption of virtual products;
- The **percentage of national electronic products** that deal with gender;
- The **level** of appropriateness of **virtual content** for the needs expressed **by women and men**.

In terms of content, the gender digital divide is more than a third. However, this average value masks very different realities according to the various indices. Gender disparities are relatively **low in terms of virtual product consumption**, and **there is quasi-equality with regard to meeting the needs** expressed by the interviewees.

However, only **0,04 per cent of virtual products produced and hosted in the country deal with gender issues** (**figure 5**). As illustrated in **Box 6**, content produced by women and aimed at gender equality is minimal, or very marked by extroversion.

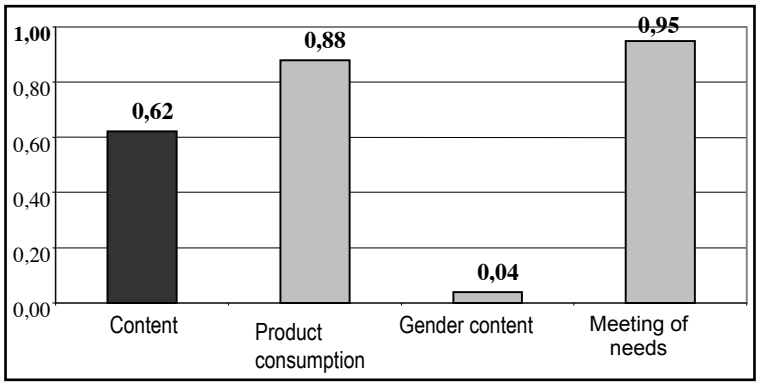
Box 6 – Little endogenous content

"I often use the Internet to communicate and chat, but I am not satisfied with the results because I still haven't found the white husband that I am looking for" *(Young woman, Bandjaun (rural area), West Cameroon)*.

Out of the 60 national websites hosted in Mauritania, only the Maurifemme site really deals with gender and ICT issues: most references to this issue are found in websites of institutions supporting the government and civil society *(Elkory, 2005)*.

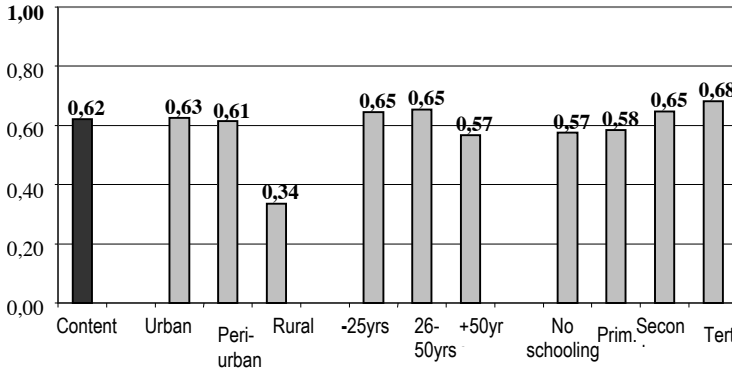
"A study of the Burkinabe canvas reveals the near-absence of women and gender issues. The websites of some women's associations covering these issues are not interactive. The seven women amongst the 80 members of the Burkina-nitc.org list participate very rarely" *(Ouedraogo, 2005)*.

Figure 4 – The three indices of the composite indicator of content relevance



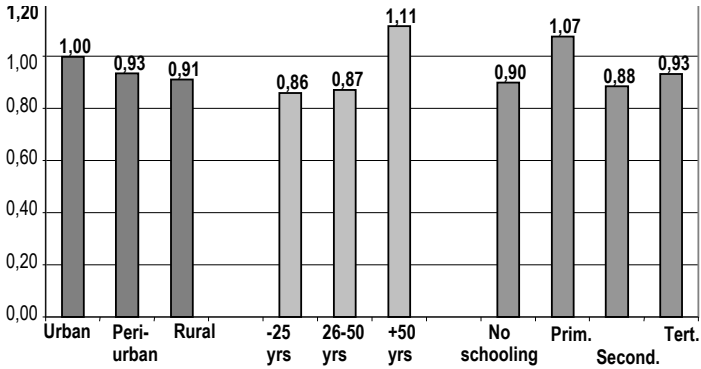
In terms of content, the gender digital divide is **twice the size in rural populations** than in urban populations. It affects the **elderly** slightly more than the youth and adults, and it tends to **decrease with education level** (**figure 6**).

Figure 5 – Indicator of content relevance according to residential area, age and education level



However, **an equal number of women and men consider that their needs are being satisfied by the content to which they have access through ICT applications.** This is particularly the case of women amongst the elderly, and those with primary education (**figure 6**).

Figure 6 – Meeting expressed needs: gender disparities



The obvious contrast between the satisfaction of needs and the near non-existence of products dealing with gender issues can be explained. As qualitative interviews emerge, interviewees of both sexes **confirm their satisfaction with the technical reliability of ICT applications** (immediate need) **rather than their critical awareness of the content of information disseminated by these applications** (strategic need)[12], which is seriously worrying in a society that, owing to technology, is built on knowledge.

The capacities indicator: a clean break that spares the educated youth

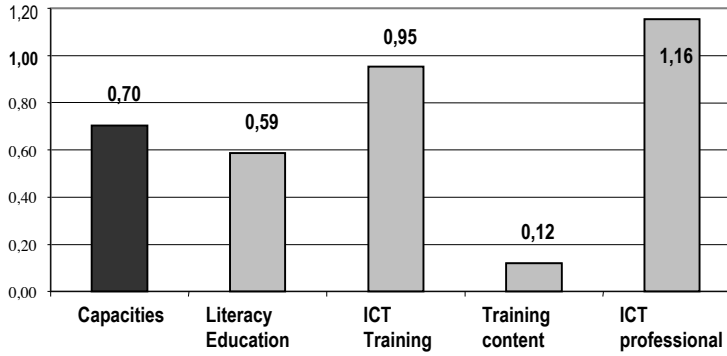
The capacities indicator enables a measurement to be taken of the extent to which men and women have equal opportunities to benefit from the information society. It is based on four indices:

- The gender disparity ratio in terms of **literacy and education levels**, irrespective of language;
- The gender disparity ratio in terms of **computer and Internet training** (formal and informal). These disparities were studied on three levels: basic and advanced digital literacy; computer and Internet training; and training on content production;
- The level of ICT training, with special consideration of **gender issues and/or ICT policies** in the selection of trainers and trainees, and in training content and teaching methods;
- The **gender disparity ratio in ICT professional human resources** (active, or in training) according to levels.

As capacity-building is the key to integration into the information society, women are overall clearly penalised, particularly as a result of their reduced access to schools, and the lack of consideration of gender specifics in training content (**figure 7**).

[12] Analysis in terms of immediate and strategic needs is detailed in ***APCWNSP "Gender Evaluation Methodology …"***

Figure 7 – The four indices of the capacities indicator



In terms of capacities in ICT use, there are obvious gender disparities that are **mainly related to low literacy and education levels among women.** And although **men and women benefit almost equally from ICT training**, very few training programmes present **specific gender content in ICT policies.**

On the contrary, **although women overall receive as much ICT training as men, they remain at a more elementary level. Young women with secondary school education are less affected** by the gender digital divide, which explains the **high proportion of professional women in the ICT field.** In fact, although literacy levels **amongst women are nearly 50 per cent of that among men,** there are **vastly more women, numerically speaking, amongst ICT professionals.**

Women and men certainly benefit almost equally from ICT training. However, **disparities become apparent if training levels are taken into account:** the disparities are **noticeable at intermediate levels, and significant at advanced levels**. Moreover, although women receive **computer** training to the same level as men in formal training institutions, they are **marginalised in informal training systems**. In terms of **Internet training, they are marginalised in the formal** as well as the informal systems (**figure 8**). The marginalised status of women has repercussions on their place in the ICT sector, in spite of some progress made in terms of female education (**Boxes 7 and 8**).

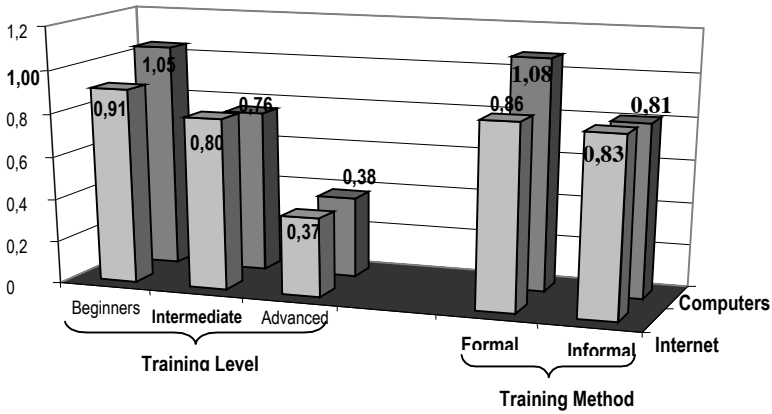
Box 7 – Affirmative policies to remove gender obstacles

Cameroon has abolished school fees and established computer education courses and programmes mainly for women. However, women are very often relegated to second place, which hinders their access to and control of resources, their mobility and their decision-making capacity. Close to half of the population – 70 per cent of which are women – live on less than US$1 per day, and women receive much less remuneration than men. Public policy recommends that each ministry be made up of least 30 per cent women, a goal that is far from being achieved. ***(Tankeu, 2005)***.

"If women are competent, there is no reason to favour them. But implementing a system that makes ICTs more accessible to women is no problem. However, they should fight to make an impression" *(Human resources and information technology officer, National Assembly, Burkina Faso)*.

"We automatically reserve places for women wanting to enrol in our courses, and they receive preferential tariffs" *(Manager of the Multimedia Centres of Ouagadougou Municipality)*.
The Yam Pukri Association, seeking to be effective, implicitly takes gender into account (flexitime, preference for women trainers): 60 per cent of trainees are women *(Director, Yam Pukri, Burkina Faso)*.

Figure 8 – Levels and Methods of computer and Internet training:gender disparities



Box 8 – Women in the ICT sector: the bottom rungs of the ladder

In the numerous cyber cafés and private ICT training centres surveyed in Cameroon and Benin, women are strongly represented, but they generally play the role of cashiers, receptionists, secretaries and data entry clerks, although they are recognised as part of the information technology sector. This is particularly the case in rural areas, where there are high levels of school dropouts among women who descend upon computer introduction centres in great numbers. However, men are generally in the majority, and occupy strategic posts.

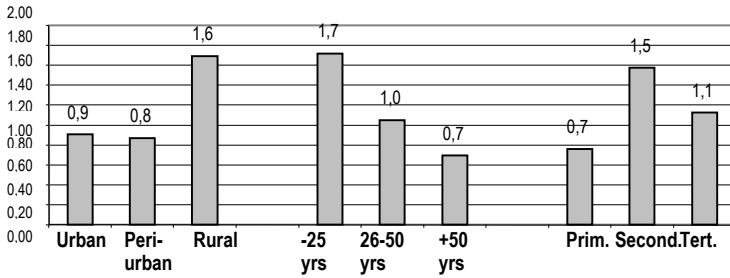
"I am not educated, and I don't have the means or the time to devote to that." *(Housewife, Benin)*.

"Many women do not use computers, apart from secretaries because of their work. Often women or girls undertake training, the "uneducated" in search of a diploma in order to find a job…" *(Head of a computer training centre, Benin)*.

"Today, I regret all the sacrifices I made to get there because, as a married women, I can no longer work in this field. The schedules and requirements for availability don't suit the life of a married woman" *(Woman, Mali)*.

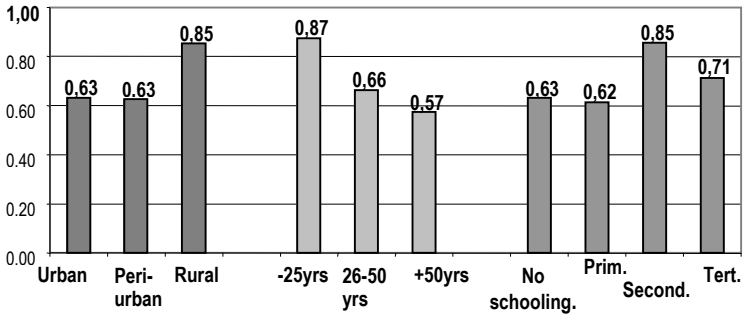
The survey clearly revealed **gender disparities in women's favour among ICT professionals in the information technology and telecommunications sectors**. Women even represent the clear majority of young ICT professionals, with an intermediate level of training as well as, to a lesser extent, an advanced level of training. In rural areas, gender disparities are clearly in women's favour. On the contrary, disparities are against them in urban areas, and more particularly in peri-urban areas (**figure 9**).

Figure 9 – Gender disparities amongst ICT professionals: residential area, age and education level



In terms of capacities, **gender disparities increase with age.** There are **fewer disparities among the youth who have been educated to primary and secondary levels**. Adult women, and even more elderly women, are victim to even more disparities. It is interesting to note that there seems to be more gender equality in rural areas than in urban and peri-urban areas **(figure 10).**

Figure 10 –Capacities indicator, according to residential area, age and education level



Connectivity indicator: limited disparities

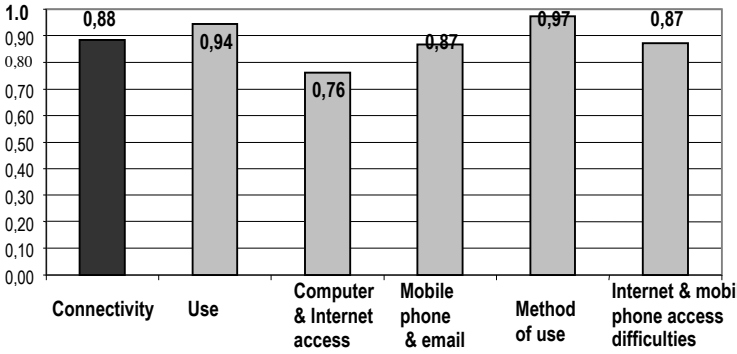
The connectivity indicator covers gender disparities in terms of access (physical) and accessibility (social) to the three studied ICTs. It is based on five indices:

- **Usage disparities** between women and men for **each of the three ICTs studied** (computers, Internet and mobile phones) in the framework of their professional or personal activities;
- The ratio of male/female **disparities in access to the three ICTs, according to access location** (public, professional, private);
- The gender inequality ratio in terms of **mobile phone and email subscriptions**;
- The composite ratio of ICT **usage disparities** between men and women. Use is classified into three categories: personal use (leisure, social and personal development); professional (economic) and public (policy, information, strategic);
- The gender disparity ratio in terms of **difficulties in ICT access and accessibility.**

Overall, gender disparities are **relatively low** in terms of connectivity; that is, physical access and social accessibility to ICTs.

Gender disparities are overall **minimal** (although against women) in terms of connectivity, that is, (physical) access and (social) accessibility, but they are **higher in terms of access to tools (except with regard to mobile phones)**. However, **once access is assured, there is less gender disparity in the use made of the three ICTs**.
Women make more **personal and social use of ICTs**. Internet and mobile phones are perceived as **threats to the gender role balance**. For women more than for men, obstacles to connectivity are more closely related to **access locations, time constraints and "technophobia" (figure 11**).

Figure 11 – The five indices of the connectivity indicator



Although gender equality in terms of connectivity seems relatively easy to achieve from the quantitative point of view, qualitative interviews reveal that there are still obstacles to equality, which can only be explained through analysis of social gender relations. **ICT tools are clearly perceived as potential threats to the balance of gender relations** (**Box 9**).

Box 9 – The information revolution is a threat to domestic equilibrium …

I have a mobile phone, but my husband always listens to my conversations when I receive a call. When I come home from work, he always invents a reason to check on my phone, which means that I use it reluctantly, although I am convinced of its usefulness and importance. I don't even let myself go to a cybercafé when he is there." *(Cameroon, woman, middle-manager)*.

"The mobile phone has brought out immorality in households, it is a tool that, though useful, can lead to dishonesty of partners." (Cameroon, peri-urban artisan).
"My husband does not accept my need for a mobile phone. I have asked him many times to get me one, but he replies that if I want a divorce, I only have to ask." *(Cameroon, housewife, Edea)*.

"My wife has a technical diploma but I don't want her to work. She doesn't go to the cyber café anymore either because it is a place where women get picked up and also, when she goes there, she risks being late for her duties. She will use the Internet when I can afford a home computer, and an Internet subscription." *(Man, Mali).*

"What husband will let his wife surf the net, to do what? Unless the connection is at home!!" *(Shopkeeper, Benin)*.

"The belief in rumours that the Internet leads to moral depravity must be changed." *(Young man in a cyber café, Benin)*.

"Mobile phones cause household conflict. A man doesn't like to see his wife using a mobile because of customs. It often leads to suspicion, which disrupts household harmony." *(Young female student, Benin)*.

"Every time I receive a call, he asks me: "Who called you? What does he want?", a whole lot of questions, so much so that I sometimes get sick of the phone. If my husband must always control my mobile, it's pointless having it, if you want to keep peace in the home." *(Woman, middle manager, Benin)*.

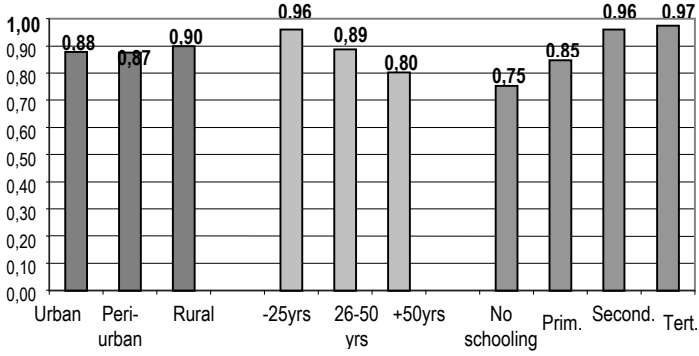
"You often hear men say 'I will never buy her a mobile phone or a computer for her to surf on' for fear that their wives will be chatted up on the telephone or the Internet". *(Economic operator, Parakou, North Benin)*.

… but encourages personal development
"Since I have been on the Internet, my activities and perspectives have changed. I more often consult with my colleagues before making a decision, without having to move about. I understand that we African women, more than others, must really appropriate ICTs, as they can save us a lot of effort, means and time." *(Network President, Mauritania)*.

"ICTs opened several doors for me, and gave me a much-needed way to express my dreams, visions and personality … without moving about. I was able to become informed about public culture as well as techniques, all that without defaulting on my duties as a mother, wife and employee." *(Woman, web developer, Mauritania).*

The gender disparity index in terms of connectivity does not appear to vary according to residential area. However, there is a closer correlation with age and a reverse correlation with education level (figure 12).

Figure 12 – Connectivity index: residence, age and education level



Although gender disparities are slightly noticeable in terms of computer access, they are **more obvious with regard to Internet access**. However, there seems to be **perfect gender equality with regard to mobile phone access (figure 13).** Gender disparities in computer and Internet access exist in each of the access locations, but **are slightly more evident with regard to private home access (figure 14)** and are less pronounced with regard to **mobile phone subscriptions than to email subscriptions** (**figure 15**).

Figure 13 – Disparities in access to the three ICTs

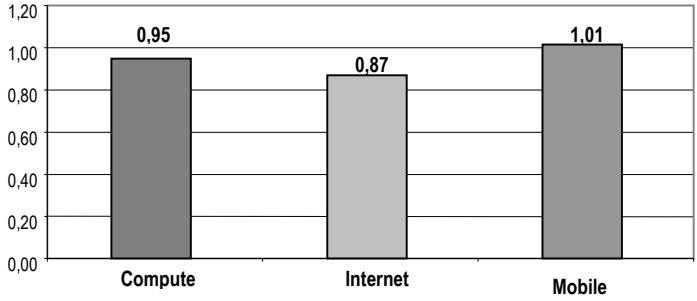


Figure 14 – Gender disparities by computer and Internet access locations

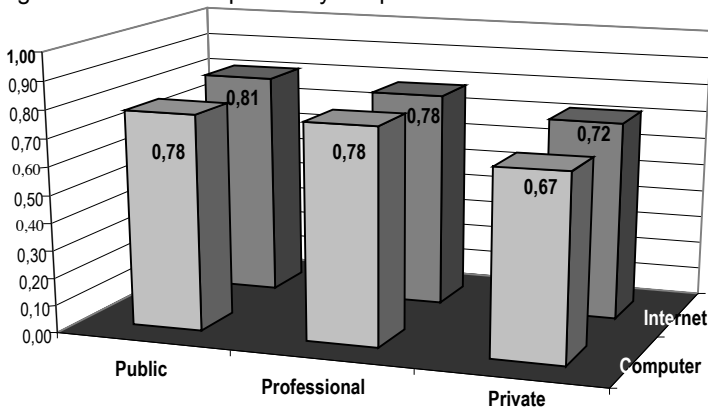
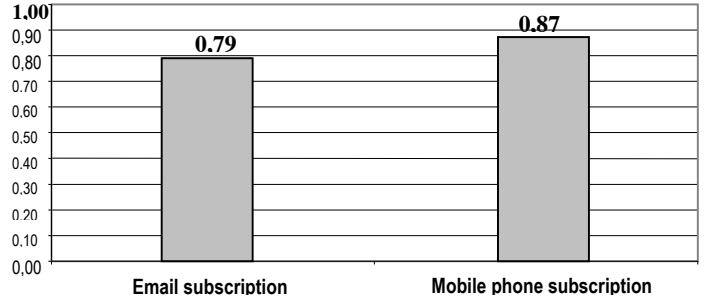
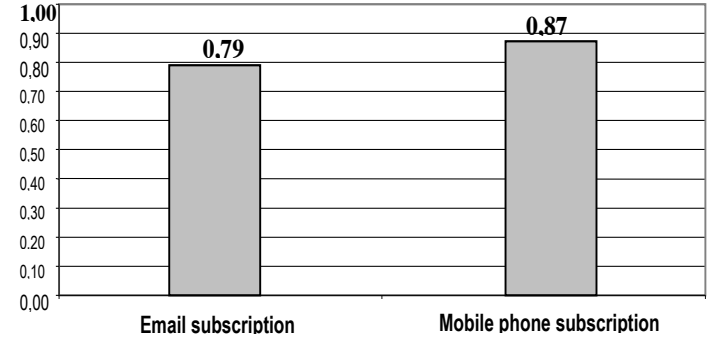


Figure 15 – Email and mobile phone subscriptions:gender disparities



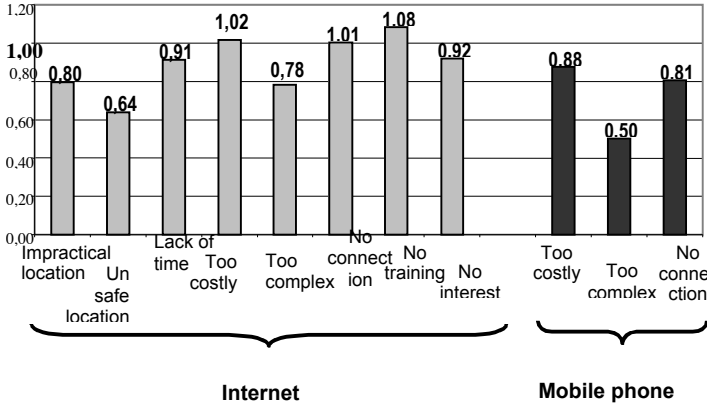
Although **no gender disparities in terms of ICT usage** are noted overall, **women seem to make more use of ICTs in a personal and social context**, whereas men tend to use them for professional and public reasons. (**figure 19**).

Figure 16 – Gender disparities in ICT use



Women report no more Internet access difficulties than men in terms of cost and connection availability. They even claim to **have more advantages in terms of training.** However, there are slight gender disparities against women with regard to **the availability of time (Box 10)** and **interest in the Internet**, as well as **the cost of mobile telephone access.** However, if the gender digital divide is to be reduced, gender-related emphasis should be placed on **location accessibility and security,** and the use of the Internet and mobile phones, which are perceived to be too complicated, should be **demystified** through popularisation activities targeting women. (**figure 17**).

Figure 17 – Access difficulties: gender disparities



Box 10 – Gender constraints

One of the main constraints that emerged from the survey and that explains the lack of computer use by women is their lack of time: they must divide their time between their reproductive role (mother), their productive role and their social life, which leaves very little time for other activities *(Tankeu, 2005)*.

"It's embarrassing to ask for help from cyber café employees, that is why I only go to send or read messages." *(Young girl in a cyber café, Benin)*.

An equitable digital society?

The aim of our research **was not** to measure the digital divide that penalises the people in the six countries included in the survey, nor to measure the ICT penetration rate. However, contrary to popular belief, it does suggest that ICTs have largely penetrated all aspects of the daily life of the majority of Francophone populations of West and Central Africa, and not only the capitals' elites.

We wanted to measure the **domestic gender digital divide** in these countries, that is, establish to what extent the women of these countries are subject to additional marginalisation, and to what extent there is consideration of gender issues in the ICT sector. The resultant information should be used to give a better orientation to the political actions of public, private and civil decision-makers in the ICT sector, to ensure that they achieve their goal of sustainable human development.

The results of our work confirm the existence of **the gender digital divide** in the six Francophone West and Central African countries included in the study, and the development concerns raised by gender and ICT specialists are therefore justified. Our survey showed that the **actual concept of gender has not been well popularised (Box 11), nor have the political connections between ICTs, gender equality and sustainable development.** The low level of gender knowledge, among men as well as women, contributes to further marginalisation of women, and exacerbates the digital divide: consideration of gender requires groundwork amongst the male population,[13] since **sustainable human development** cannot take place without **gender equality.**

[13] On this subject, see ***«Africans citizens of the information society» (2005)***

Box 11 – Without validating the concept of gender, how can we hope for an inclusive digital society?

"We must face facts: nature has defined each person's role in the development process; it is not normal for women to think they have the same role as men in the city. There is a morphological difference between men and women." (Man, in a public institution, Benin).

"Yes, I know what it is. Women want to be equal to men, but it's not possible." (Shopkeeper in Bafoussam, Cameroon).

"It would be worth increasing men's awareness so that they allow their partners to cultivate their minds, and develop an interest in new information and communications technologies." (Student, Cotonou, Benin).

Justified concerns

At the dawn of the knowledge era, the balance sheet is deplorable, for women as well as for all countries for whom they represent half of the population. **A multitude of serious inequalities reveals the obvious marginalisation of women.**

These inequalities are **disturbing**. Schematically, **women are penalised by two-thirds in terms of decision-making, by one-third in the areas of content and capacities, and by one-tenth** in terms of access and accessibility. **In total, women have one-third less chance than men to benefit from the expected advantages of the African information society.**

It is to be expected that the situation will **be difficult to change** because half of the countries have no legal or advocacy tools; almost no civil society organisations take responsibility for these matters; and because training on gender issues is hardly widespread, and mainly involves women who are too marginalised to form a critical mass at the decision-making level.

All women, however, are not equal: **the youth, and particularly those with secondary education**, suffer the least from the gender digital divide. It is disturbing that they are only a minority amongst the youth cohort, and that there are significant **gender disparities in literacy and education** (although less so in the case of Cameroon). In addition, there are **many young women in ICT-related professions**, but more at the **operational** than decision-making level. However, although they are **as well placed as men in terms of ICT product consumption**, they have no **critical input on the content** disseminated by these products.

Real gender-linked social dimensions were revealed in the access domain: ICTs – especially the Internet and mobile phones – are perceived as a **destabilising factor in gender relations within the domestic framework**, and incompatible with the status of married woman. That is primarily translated by gender-related access difficulties in terms of **access locations, security, and gender roles.**

Although it is impossible to compare the results of this work with other work undertaken according to a similar methodology, our conclusions substantiate the selective results produced in other similar socio-geographic contexts, and conform with currently available general indicators that demonstrate the very low visibility of women in terms of participation in public decision-making; the progress achieved in educating girls to primary and secondary level; and the expansion of ICT coverage. This pioneer research work certainly needs validation by civil society women's organisations, as well as by national and international statistics institutions, to verify that the general extracted profile is realistic, at least for the six countries included in the survey, and perhaps also for the other countries in the sub-region, and even, subject to context-related variations, to other regions in the world, at least in developing areas.

"Helping hands" and passive consumers?

The composite index of the gender digital divide confirms the 40 per cent handicap with which Francophone African women enter the information society in comparison to their male counterparts. This overall result will not surprise gender specialists, because it is simply an addition to the long list of indicators of the marginalisation of women in terms of access to resources and the benefits of development. The gender digital divide is, globally, the reflection of real and general gender disparities.

We have shown that, in order to guarantee an inclusive society, there should be participation in the areas of **content, control and training.** Without content, it will be impossible to convince decision-makers, amongst whom there is not a critical mass of women, who are often more informed on gender issues.

Moreover, gender disparities are less significant in terms of content **consumption** than in terms of content itself. This shows the trend towards the **establishment of a society in which good female consumers are equal in number to good male consumers** rather than a **citizen society, even in terms of gender.** Our research therefore suggests that the essential importance of **knowledge disseminated by content** is very far from being appropriated in a **critical and strategic** manner, from the perspective of the fascination exercised by **ICT tools and applications**, which is particularly serious in terms of gender. **Content production** on gender is primarily a matter for gender specialists, who are mainly active within civil society, and, of course, women's organisations. It is through the production of relevant content that they will succeed in increasing the awareness of other stakeholders, particularly those of the public and private sectors. It is therefore worrying to note **the overwhelming absence** of women's organisations and civil society organisations specifically working on gender and ICT issues, and producing content.

Furthermore, the **low level of participation of women in the higher decision-making levels in ICT organisations** is deeply felt in the public and private sectors, but above all, in civil society, with almost no exceptions. By contrast, there is a **strong women's presence in the higher levels of production and means within public and private ICT organisations**. Also noteworthy is the fact that gender disparities are the most serious amongst those with **no education, or primary schooling only,** which means that there **are more gender disparities amongst poor and illiterate women.**

All of these factors endorse the compilation of this distressing and compromising report for African society: Francophone African women continue to risk being relegated to **second-class citizens,** that is **"helping hands"** in the African information society.

Further gender equality is possible

In contrast to these sombre conclusions, various points should be emphasised which endorse the notion that the marginalisation of women is not inevitably engraved on future history.

First, the effective gender disparities noted in the domains of **connectivity and – to a certain extent – capacities** are relatively unalarming. In these domains, one can see the results of the progress achieved by **harmonised public policies aimed at infrastructural development, as well as training for women.** These encouraging results defend the **strengthening of interconnections between ICT and gender policies.**

Also, the results obtained in terms of capacities show that **women are largely aware of, and even initiated into, ICTs**, and that they are **digitally numerous** in this economic and professional sector. Their rapid rise in the ranks from production posts to decision-making posts, and **the building of the "critical mass"** of women that is currently so weak can be envisaged.

With regard to **connectivity**, efforts should be concentrated within the **disadvantaged areas (urban and rural areas)** for the benefit of **adult women** in charge of families. **Obviously, universal service strategies will have to take gender analysis in account: connectivity must be developed amongst adult women in poor areas**, including health centres, education centres, women's groups, credit services, security, socials, and markets.

These results, which are **hardly reassuring in the short-term, and very worrying in the long-term,** certainly from the perspective of **sustainable human development**, should be of particular concern to public, private and civil society policymakers, who should strategically direct their activities towards the construction of an informed, responsible and inclusive African information society.

To date, regional and national ICT policies have concentrated on access,[14] and – to a lesser extent – on training, and have certainly produced significant results. However, apart from the crucial areas of control, content and capacities, there is little chance for these policies to contribute towards a significant decrease in the gender digital divide, poverty reduction (**Box 12**) or ensuring sustainable human development.

Box 12 – ICTs as a survival strategy

"Women, and particularly girls, have access to computers through their training as secretaries or data entry clerks. One would imagine that women have more access to computers because there are more women secretaries than men. In reality, women use computers because they have to, and not out of concern to get training, and keep up-to-date. They get training simply to find a job to survive." *(Trainer in a private computer training centre, Benin)*.

[14] It was, for example, the theme of the second African Regional Preparatory Conference for the World Summit of the Information Society, held in Accra in February 2005.

Civil society stakeholders, especially those from women's organisations, risk going off track in the same way, by neglecting this strategically important subject of "gender and ICT". It should be hoped that **the international development cooperation community will understand the importance of these issues for sustainable human development,**[15] and will know how to open the relevant doors.

Beyond these mixed reflections, the primary and relatively positive result of our work is that we were able to clearly highlight the fact that the youth are less negatively affected by the gender digital divide: from the gender perspective, **the main (female) winners in the information society are the (female) urban educated youth**, who have perhaps made an irreversible leap from the point of view of gender relations.[16] It is certainly this category of persons who should benefit from our efforts in the immediate term, especially in terms of gender training, by the production of gender content. However, in order for our efforts not to be abandoned on the far side of the information highway, monitoring activities should also be undertaken, for the benefit of the vast majority of rural, poor, uneducated adult and elderly women.

15 We assume from the perspective of our results that their success would mean significant consideration of gender issues in ICT initiatives in the rural environment.

16 However, they only represent 13 per cent of the population at best in this category! (UNDP, 2004)

Follow-up activities?

International organisations responsible for measuring the information society have started to show interest in consideration of gender issues. We recognise that it may be difficult for them to undertake studies that advocate gender equality to the same extent that ours does. However, we hope to have contributed towards the development of a **truly relevant methodology for the study of gender issues in the information society**, although this methodology, because of its innovative nature, still needs refinement: **limiting oneself to access and usage issues, as most organisations currently do, makes no sense in terms of sustainable human development.**

Although international organisations that measure the information society – and their national offices – may be unable to apply even an improved version of the whole methodology in their data-capture programmes, they should at least design **specific programmes** taking these issues into account, in order to fulfil their mission (**Box 13**).

Box 13 – ICTs and development: still insufficient knowledge

"Following the example of other African countries like Nigeria and South Africa, the industrial sector should be developed by providing women with opportunities: their numbers in this sector are hardly believable. Thus, following the example of gender and ICTs, surveys should be organised on gender and the industrial sector." *(Programme Analyst in Cotonou, Benin)*.

"Uneducated women must be trained, because this is a major handicap to ICT use. I would like to do a course in computers and Internet also, but it seems that this is for intellectuals. And, as I didn't even get to CM2…" *(Young dressmaker, Benin)*.

The real operational urgency, however, is to **design alternative frameworks for dialogue to genuinely establish essential strategies and programmes for regional development, combining the two transverse approaches of ICT and gender.** It is undeniably **by allowing women to participate in ICT policy-making** as well as by **demystifying the technical side of ICTs with respect to the real development challenges that they harbour** that we will be able to achieve that goal.

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Appendices

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- *Individual questionnaire (doc, 157 Kb).*
- *Report of the workshop on "Protocols for Data Capture" ("Protocoles de collecte de l'information"), Dakar (Senegal), 9-14 August 2004 (doc, 214 Kb).*
- *Table of indicators (xls, 64 Kb).*
- *Table of indicator calculations (doc, 154 Kb).*

Online Bibliography

Appendices

Appendix 1 - Indicator calculation method

1 – Control

11 – Gender inequalities in the higher echelons of ICT policymaking bodies: The percentage of women in high-level posts in ICT policymaking bodies in relation to the percentage of men in high-level posts in ICT policymaking bodies.

12 – Gender inequalities in the higher echelons of ICT enterprises: The percentage of women in high-level posts in ICT enterprises in relation to the percentage of men in high-level posts in ICT enterprises.

13 – Gender inequalities in the higher echelons of civil society organisations: The percentage of women in high-level posts in civil society organisations in relation to the percentage of men in high-level posts in civil society organisations.

14 – Number of civil society organisations active on ICT and gender issues: The percentage of civil society organisations active on ICT and gender issues in relation to the total number of civil society organisations active in the country.

15 – Explicit reference to gender considerations in ICT legislation and regulation: Variable dichotomy with the value of 1 if explicit reference is made to gender in ICT legislation and regulations, and 0 if no reference is made.

16 – Disparities in gender training in ICT institutions: Percentage of women who have received gender training in relation to the percentage of men having received gender training in ICT institutions.

2 – Content

21 – Gender disparities in the consumption of virtual products (leisure, domestic, training, economic, political): Percentage of women using virtual products (according to set categories) in relation to the percentage of men using the same virtual products.

22 – Percentage of national electronic products dealing with gender in French or the national language: Percentage of electronic products (websites, electronic lists, voice services) registered under the national domain, and whose main objective is gender, in relation to the total number of the same virtual products.

23 – Adaptation of virtual content to the needs expressed by women and men: Percentage of women who claim to be satisfied with virtual content in relation to the percentage of men who claim to be satisfied.

3 – Capacities

31 – Gender disparities in literacy/school enrolment (3 levels of education: primary, secondary and tertiary) irrespective of language: Enrolment level of literate women/women enrolled in the three levels of education in relation to the level of enrolment of men at the same level.

32 – Gender disparities in ICT training: Number of women who have received formal or informal computer and Internet training in (basic and advanced digital literacy: Internet use; content production) in relation to the number of men who have received the same training.

33 – Explicit consideration of gender issues and ICT policies in ICT training in terms of selection of trainers and trainees, content and teaching methods: the number of ICT training programmes that specifically consider gender issues (in terms of trainers, trainees, content and teaching methods), in relation to total number of training programmes, according to the same categories.

34 – Gender disparities amongst ICT professionals (information technology and telecommunications), who are active or in training: Number of ICT professional women in the areas of information technology and telecommunications in relation to the number of ICT professional men.

4 – Connectivity

41 – Gender disparities in the use of the 3 ICTs (computers, Internet, mobile telephones): The number of women using the three ICTs in relation to the number of men using the same ICTs.

42 – Gender disparities in access to computers and the Internet according to access locations (public, professional, private): Number of women using computers and the Internet in the three categories of access locations in relation to the number of men using computers and the Internet in the same categories.

43 – Gender disparities in mobile telephone or email subscriptions: Number of women with a mobile telephone or email address subscription in relation to the number of men with a mobile telephone or email address subscription.

44 – Gender disparities according to ICT use methods (personal, professional, public): Number of women using computers, the Internet or mobile telephones for personal, professional or public use in relation to the number of men using computers, the Internet or mobile telephones for the same usage categories.

45 – Gender disparities in Internet and mobile phone access and accessibility: Percentage of men claiming difficulties in Internet and mobile telephone access and accessibility in relation to the percentage of women claiming difficulties in Internet and mobile telephone access and accessibility.

Appendix 2 - Statistical Results by Country

Table 4 – Statistical Results by Country

	6 countries	BJ	BF	CM	ML	MR	SN
Digital Divide Indicator	**0,64**	**0,58**	**0,70**	**0,71**	**0,69**	**0,59**	**0,67**
Control indicator	0,34	0,22	0,54	0,33	0,48	0,22	0,52
11 – Gender disparities in the higher echelons of ICT policymaking bodies	0,31	0,31	0,18	0,29	0,35	0,31	0,59
12 – Gender disparities in the higher echelons of ICT economic enterprises:	0,35	0,46	0,34	0,14	0,13	0,46	0,82
13 – Gender inequalities in the higher echelons of civil society organisations	0,86	0,00	0,80	0,00	0,40	0,00	1,30
14 – Number of civil society organisations active on ICT and gender issues	0,02	0,03	0,01	0,00	0,03	0,03	0,01
15 – Explicit reference to gender considerations in ICT legislation and regulations	0,00	0,00	1,00	1,00	1,00	0,00	0,00
16 – Disparities in gender training in ICT institutions	0,48	0,55	0,88	0,53	0,97	0,53	0,40
Content relevance Indicator	**0,62**	**0,62**	**0,61**	**0,62**	**0,69**	**0,61**	**0,64**
21 – Gender disparities in the consumption of virtual products	0,88	0,84	0,83	0,96	1,05	0,77	0,90
22 – Percentage of national electronic products dealing with gender in French or the national language	0,04	0,05	0,03	0,11	0,05	0,03	0,01
23 – Adaptation of virtual content to the needs expressed by women and men	0,95	0,96	0,98	0,78	0,98	1,03	1,01
Capacities Indicator	**0,70**	**0,65**	**0,77**	**0,97**	**0,64**	**0,63**	**0,73**
31 – Gender disparities in literacy/school enrolment	0,59	0,45	0,42	0,81	0,45	0,59	0,59
32 – Gender disparities in ICT training	0,95	0,93	1,00	1,02	1,03	0,94	0,86

	6 countries	BJ	BF	CM	ML	MR	SN
33 – Explicit consideration of gender issues and ICT policies in ICT training	0,12	0,09	0,05	0,08	0,28	0,33	0,10
34 – Gender disparities amongst ICT professionals who are active/ in training	1,16	1,13	1,63	1,97	0,80	0,67	1,38
Connectivity Indicator	**0,88**	**0,84**	**0,89**	**0,94**	**0,94**	**0,88**	**0,81**
41 – Gender disparities in the use of the 3 ICTs	0,94	0,95	0,95	0,96	0,98	1,01	0,82
42 – Gender disparities in computer and Internet access	0,76	0,82	0,87	0,86	0,87	0,54	0,69
43 – Gender disparities in mobile telephone or email subscriptions	0,87	0,81	0,86	0,95	0,97	0,95	0,63
44 – Gender disparities according to ICT use methods	0,97	0,92	0,94	0,94	0,95	1,01	1,02
45 – Gender disparities in Internet and mobile phone access and accessibility	0,87	0,72	0,82	0,98	0,92	0,91	0,86

Appendix 3 - Research Team: Biographical Notes

Regional Research Coordination

Marie-Hélène Mottin-Sylla, ***Gender and ICT Network, ENDA, SYNFEV***
Marie-Helene Mottin Sylla heads the Synergy, Gender and Development Team (Equipe Synergie Genre et Développement – SYNFEV) of ENDA (Environmental Development Action in the Third World), an international non-governmental organisation based in Dakar (Senegal) (http://www.enda.sn). She has been passionate about the opportunities available to women through information and communications technologies since the United Nations Fourth World Conference on Women (Beijing, 1995), and has developed activities and actions to benefit the women of Francophone Africa, in partnership with the Women's Networking Support Programme of the Association for Progressive Communication. Since 1999, she has coordinated Famafrique, the first website on sustainable development for women of Francophone Africa (http://www.famafrique.org). In 2003, she organised the Gender and ICT Network (Réseau Genre et TIC) (http://www.famafrique.org/regentic), a multi-sectoral initiative whose aim is to promote gender equality in the information society, within the process of the World Summit of the Information Society, and to undertake research, advocacy, awareness and public information activities.

National Researchers

Moustapha Gibigaye, (Benin) CEFORP
A researcher at the Centre for Training and Research in Population (Centre de Formation et de Recherche en matière de Population – CEFORP) of the Abomey-Calavi University (UAC, Benin), Sall Moustapha Gibigaye holds a Masters in Social Science (Sociology-Anthropology), and a Diploma of Specialist Higher Studies (DESS) in Urban Populations and Dynamics. He has participated in several studies on population issues (health, education of girls in Benin, child traffic, etc.) and in programme evaluations; studies sponsored by various international and national agencies. With regard to NICTs, Mr. Gibigaye had an active role in 2003 in the first study on NICT statistics in Benin. Since October 2003, he has taught a course on "NICTs and Education" in the Department of Psychology and Educational Sciences of the Abomey-Calavi University.

Sylvestre Ouedraogo (Burkina Faso), Yam Pukri
Sylvestre Ouedraogo is an economics lecturer at the University of Ouagadougou, and teaches courses in economics, food and nutrition policies, and evaluation of development and information technology projects. After receiving his doctorate in 1996, he founded the Yam Pukri Association (http://www.yam-pukri.org) ("open your mind" in the local Moore language), whose objective is training, popularising and advising on new technologies (computers and Internet). He has taken part in many ICT studies in Burkina Faso (see http://www.burkina-ntic.org). He coordinates the Burkina-NICT Network (Réseau Burkina-ntic) that aims to facilitate ICT information sharing and knowledge exchange for development in Burkina Faso. He published the book *The computer and the djembé* ("L'ordinateur et le djembé") (Harmattan Publications, Paris) and has carried out many consultancies in the area of new technologies in Burkina. He has also participated in many collective works on ICT, including *Coping with Poverty*, in Panos report N° 48, *Completing the revolution, the challenge in rural Telephony in Africa*, Panos Institute, London (www.panos.org.uk) (2004) and the *Swiss Yearbook of Development Policy*, IUED, Geneva in 2003.

Robertine Tankeu (Cameroon), Anais AC
Holding an international MBA from the University of Ottawa and a Masters Degree in Economic Sciences from the University of Montreal, Robertine Tankeu has worked in international development for more than 10 years as a consultant in planning, monitoring and evaluating development projects. Robertine Tankeu is the National Director of Anais.ac (Advisory Network for the African Information Society, Central Africa), an NGO whose main mission is ICT social appropriation. She was a gender and development consultant with Canadian Cooperation in Yaounde in Cameroon, and an analyst of public aid policies for development with the Canadian International Development Agency (CIDA) in Canada.

Sonya Noudehou (Mali), CEPROCIDE
Sonya Noudehou is a specialist in New Information Technologies (website creation, management of information systems and databases) and in Human Resources Management and Marketing. She holds a Higher Technical Diploma (Brevet de Technicien Supérieur) in Business Management Accounting (Gasa Training – Benin) and a Bachelor of Science degree from Rhodes University in South Africa. The gender gap in the world of technology is the inspiration for her professional activities. She is involved in ICT promotion and adaptation for women and in other activities related to the emancipation of and grassroots development for African women.

Fatma Mint Elkory (Mauritania), NGO NICTs and Citizenship (Ntic & Citoyenneté)
Fatma Mint Elkory, a researcher, is head of the computerised management and NICT department at the Central Library of Nouakchott University, and is in charge of training on computerised documentation systems for representatives of various national information organisations in Mauritania. One of the first women to go into website development, she developed the websites for various scientific and cultural fairs organised by the Nouakchott University. Fatma also heads the NGO "NICTs and Citizenship", whose goal is ICT appropriation by the most vulnerable populations in Mauritania. She founded the "Maurifemme" website, about and for Mauritanian women, which is a tool for information and reference on Mauritanian culture and, very recently, in partnership with a rural NGO, she founded the "Minterrif" website on rural women in Mauritania. Fatma is a member and founding member of various Mauritanian civil society organisations, including: the Nouakchott Civil Society Cyberforum (cyberforum de la société civile de Nouakchott); the Mauritanian NGO Sustainable Development Platform (la plateforme des ong mauritaniennes pour le développement durable); and the "Mohamed Mahmoud Ould Bourdid Foundation for Diabetes and other Chronic Illnesses" ("Fondation Mohamed Mahmoud Ould Bourdid, pour le diabète et autres maladies chroniques"). She is involved in various regional and international networks such as "Regentic" (Gender and ICT Network), "Rinoceros" (International information exchange network); and the "Network of Co-Development Operators in Southern Countries" ("Réseau d'opérateurs de co-développement dans les pays du Sud"). She has undertaken many consultancies, and participated in several national, regional and international meetings on ICTs, sustainable development and gender, as well as several advocacy and lobby campaigns.

Oumoul Khayri Niang M'Bodj (Senegal), Association of African Women for Research and Development (Association des Femmes Africaines pour la Recherche et le Développement – AFARD)
Oumoul Khayri Niang M'Bodj is an anthropologist specialising in gender. She holds a Masters Degree in Philosophy and Sociology, a Diploma of Advanced Studies (DEA) in Anthropology and a Diploma of Specialised Higher Studies (DESS) in Diplomacy and International Relations. A researcher and trainer, her research and training and advocacy activities are related to equity and equality in development strategies and the promotion of female leadership in decision-making bodies.

Advisory Committee

Fatimata Seye Sylla, Gender and ICT Network, OSIRIS (Senegal)
After her Baccalauréat in mathematics, Fatimata Seye Sylla obtained a Higher Diploma in Information Technology at Havre University (France) and a Master of Science Degree from the Massachusetts Institute of Technology (M.I.T./ Media Lab.), Boston, USA, as well as a postgraduate diploma from the Centre for Higher African Management Studies (Centre d'Etudes Supérieures Africaines de Gestion – CESAG) (Dakar, Senegal). She also undertook several training courses in information science, database management, computers in education, web design, Internet, multimedia and networking. For ten years, she was a project director within the Senegalese Government, and then Director General of Solutions 3+, an IT services enterprise in Senegal, and founding President of the Bokk Jang Association. She is the co-founder of ISOC Senegal and OSIRIS, which she represents within the Gender and ICT Network. An international consultant for many international organisations, she has set up several computer systems and organised many training programmes. She has produced several research reports on the use of information and communications technologies for education, gender and development. She is a member of the Computer Research and Education Group of the Educational Research Network for West And Central Africa (ROCARE), and she is currently Executive Director of the Digital Freedom Initiative Programme in Senegal.

Ramata Molo Thioune, IDRC (Senegal)
Ramata Molo Thioune is a knowledge analyst for IDRC's Acacia Programme in Dakar, Senegal. She holds a Masters Degree in Macroeconomics, a Diploma of Advanced Studies in environmental science (Cheikh Anta Diop University, Senegal), and a Masters Degree in Rural Economics (Laval University, Canada). Mrs. Thioune has worked with various national and international agencies in the areas of project planning, monitoring and evaluation. She is a member of the Canadian Bureau of the International Association of Agricultural Economists, and of the Senegalese Bureau of the International Association of Francophone Women (l'Association Internationale des Femmes de la Francophonie).

Nancy Hafkin, Knowledge Working (U.S.A.)
Nancy J.Hafkin has worked for many years on issues of gender and information technology for development. In 1976, together with Edna G. Bay, she edited “Women in Africa: Studies in Social and Economic Change” (Stanford University Press). She lived in Ethiopia from1975 to 2000 where, from 1975 to 1987, she headed the Research and Publications department of the African Training and Research Centre for Women of the United Nations Economic Commission for Africa (Addis Ababa, Ethiopia). In 1987, she headed the ECA’s Pan African Development Information System (PADIS). She was Coordinator of the African Information Society Initiative until 2000, and then ECA Team Leader for Promoting Information Technology in Africa. In 2000, the Association for Progressive Communications instituted the annual Nancy J. Hafkin Prize for the Information Society, which encourages and increases the visibility of African information and communications technologies initiatives. Now retired from the United Nations System, Nancy lives in Boston, and works as a gender and IT consultant in developing countries, and has produced many publications. She holds a B.A., M.A. and Ph.D. in history and African studies from Brandeis and Boston Universities. Of her two Ethiopian-American children, one is studying medicine in Texas, and the other culinary arts in Colorado.

Tacko Ndiaye, UNIFEM then ECA
Tacko Ndiaye has a multidisciplinary profile, with expertise in gender equality and equity, economic policy and NICTs. Her qualifications include a Diploma of Specialist Higher Studies (DESS) in the Organisation and Protection of Business Information Systems. She is the Programme Officer for African Women’s Security and Economic Rights at the Regional UNIFEM office in Dakar. One of the priorities of this programme is the promotion of an enabling environment for African women to influence all aspects of ICT use and policy on national, regional and international levels. In Senegal, this initiative has placed particular emphasis on ICT use for the promotion of human rights for handicapped women. Tacko Ndiaye has been heavily involved in the WSIS preparatory process on the African level.

Appendix 4 - Development Indicators

United Nations Development Programme (UNDP), 2004: "Human Development Report 2004"
http://hdr.undp.org/reports/global/2004

	BJ	BF	CM	ML	MR	SN
Human Development Index (HDI)						
Human Development Index (HDI), 2002 value	0,421	0,302	0,501	0,326	0,465	0,437
World HDI ranking, 2002 (out of 177)	161	175	141	174	152	157
Human Poverty Indicator, developing countries	45,7	5,5	36,9	58,9	48,3	44,1
Gender-related Development Index (GDI)						
Gender-related Development Index (GDI), ranking	130	143	111	142	124	128
Gender-related Development Index (GDI), value	0,406	0,291	0,491	0,309	0,456	0,429
Life expectancy at birth (years) 2002	50,7	45,8	46,8	48,5	52,3	52,7
Life expectancy at birth (years) 2002 (female)	53,1	46,3	48,1	49	53,9	54,9
Life expectancy at birth (years) 2002 (male)	48,5	45,1	45,6	47,9	50,7	50,6
Adult literacy rate (ages 15 and above) 2002	39,8	12,8	67,9	19	41,2	39,3
Adult literacy rate (ages 15 and above) 2002 (female)	25,5	8,1	59,8	11,9	31,3	29,7
Adult literacy rate (ages 15 and above) 2002 (male)	54,8	18,5	77	26,7	51,5	49
Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2001–2002	52	22	56	26	44	38
Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2001–2002 (female)	41	18	51	21	42	35
Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2001–2002 (male)	64	26	61	31	6	41
GDP per capita, in PPP, 2002	1070	1100	2000	930	2220	1580
Estimated earned income (PPP) 2002 (female)	876	855	1235	635	1581	1140
Estimated earned income (PPP) 2002 (male)	1268	1215	2787	1044	2840	2074
HDI rank minus GDI rank	0	0	2	0	0	0

Gender Empowerment Measure						
Seats in parliament held by women (% of total) March 1, 2004	7,2	11,7	8,9	10,2	4,4	19,2
Government positions held by women (% of total) 2001	10,5	8,6	5,8	33,3	13,6	15,6
Ratio of estimated female to male earned income	0,69	0,7	0,44	0,61	0,56	0,55
Gender Inequality in Education						
Adult literacy, female rate (% ages 15 and above), 2002	25,5	8,1	59,8	11,9	31,3	29,7
Adult literacy, female rate as % of male rate, 2002	47	44	78	44	61	61
Youth literacy, female rate (% ages 15–24), 2002	38,5	14	n.d.	16,9	41,8	44,5
Youth literacy, female rate as % of male rate, 2002	53	55	n.d.	52	73	72
Net primary enrolment, female ratio (%), 2001–2002	58	29	n.d.	32	65	54
Net primary enrolment, ratio of male to female, 2001–2002	0,69	0,71	n.d.	0,72	0,96	0,89
Net secondary enrolment, female ratio (%), 2001–2002	13	6	n.d.	n.d.	13	n.d.
Net secondary enrolment, ratio of female to male, 2001–2002	0,48	0,65	n.d.	n.d.	0,83	n.d.
Gross tertiary enrolment, female ratio (%), 2001–2002	1	1	4	n.d.	1	n.d.
Gross tertiary enrolment, ratio of female to male, 2001–2002	0,24	0,33	0,63	n.d.	0,27	n.d.
Gender Inequality in Economic Activity						
Female economic activity (ages 15 and above), rate (%), 2002	73,2	74,7	49,6	69,8	63,2	61,7
Female economic activity (ages 15 and above), Index, (1990=100), 2002	96	97	105	97	97	101
Female Economic activity (ages 15 and above) as % of male rate, 2002	90	85	59	79	74	72

ENDA: both an international organisation "Environmental Development Action in the Third World" and a common programme of many organisations, including:

UNESCO / BREDA
BP: 3311, 12, avenue L.S. Senghor, Dakar, Senegal
Telephone: (221) 849.23.23 / 849.23.41
Fax: (221) 823.83.93 / 822.36.82

The Austrian State Secretariat for International Cooperation, "Europe and Integration" supports Austrian and international NGOs in their technology appropriation and grassroots health projects.
Ministry of Foreign Affairs
Minoritenplatz, 2
A-1014 Vienna, (Austria)
Telephone: (43.1) 531.150 / 531.15.44.86
Fax: (43.1) 535.45.30

Swiss Agency for Development and Cooperation (SDC)
Federal Department of Foreign Affairs
Ergstrasse 73
3003 Berne (Switzerland)
Telephone: (41.31)322.21.11
Fax: (41.31)322.32.37

Ministry of Foreign Affairs
General Agency for International Cooperation and Development
Department of information and liaison with non-governmental organisations
Ministry for Cooperation and Development.
1 bis avenue de Villars, 75700 Paris (France).
Telephone: (331) 43.17.81.63
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Netherlands Ministry of Foreign Affairs
Royal Netherlands Embassy
37, rue Kléber – Dakar
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Ministry of Foreign Affairs, Trade and Cooperation of the Grand Duchy of Luxembourg.
Cooperation Mission of the Grandy Duchy of Luxembourg in Dakar.
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In Benin, Burkina Faso, Cameroon, Mali, Mauritania and Senegal, women overall have one chance in three less than men of benefiting from the African Information Society. This calls for public and civil society policymakers to implement actions towards a fairer and more inclusive society in terms of gender.

At a time when information and communications technologies (ICTs) are regarded as essential tools for poverty reduction, courageous political actions must be taken if the ICT sector is to equally benefit women and men, which is a prerequisite for sustainable human development.

The composite indicator of the gender digital divide developed within the framework of this research is based on four components (control, content, capacities, and connectivity), and uses a total of 18 indices. This indicator enables gender disparities to be measured with regard to access, use and mastery of the three information and communications technologies (computers, Internet, and mobile telephones) that are strategically important for the promotion of gender equality.

The results are hard-hitting in that they show the gender digital divide to be a harsh reality in each one of these areas, especially in terms of control, content and capacities. Only young girls with a secondary school education seem exempt from these gender disparities, but these women of tomorrow are still only being prepared for a secondary role as consumers and “helping-hands” in the information society.

Gender and ICT Network

An ENDA-OSIRIS-ART partnership