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Abbreviations and Acronyms

GIC Government Informations Centre (Sri Lanka)
ICTs Information and Communication Technologies
IDRC International Development Research Centre
IFAD International Fund for Agricultural Development
IICD International Institute for Communication and Development
IPRS Intellectual-property rights
IRM Integrated revenue management
ITES IT-enabled services
ITU International Telecommunication Union
m- Mobile, via mobile
MILS Market commodity and market linkage system
m-learning Education through mobile phones and devices
MANAGE The National Institute of Agricultural Extension Management
NDIS National Disaster Information System
NICI National Information and Communication Infrastructure
NSERC National Sciences and Engineering Research Council of Canada
PDA Personal digital assistant
PPP public-private (sector) partnership
PSI Population Services International
RCDP Rural Communications Development Plan
R & D research and development
SMEs Small and medium enterprises
SMMEs Small, micro and medium enterprises
SMS Short messaging service
SSA Sub-Saharan Africa
SSIRI Southern Sudan Interactive Radio Instruction
STF Straight Talk Foundation
TVET Technical and Vocational Education and Training
UIS UNESCO Institute for Statistics
UNDP United Nations Development Fund
UNESCO United Nations Educational, Scientific and Cultural Organization
UNIFEM United Nations Development Fund for Women
VOIP Voice over Internet Protocol
WOUGNET Women of Uganda Network
WSIS World Summit on the Information Society
**Gender, ICTs policy and e-Government**

Information and communications technologies (ICT) have become widely accepted as integral means for transforming the path of development. As envisaged in the Millennium Development Goals (MDGs), the importance of harnessing information and communication technologies for poverty eradication cannot be overemphasized. Yet, as statistics describing the growing digital divide demonstrate, women and girls are at particular risk for exclusion from opportunities presented by ICT to secure better livelihoods and other rights. The particular opportunities presented by ICT as means to foster women’s economic and social empowerment in Africa remain largely untapped. Constraints of infrastructure, cost and content as well as gender biases in the use and development of ICT constitute significant barriers to use for most African women and girls.

As a response to the challenges and opportunities presented by the information age, the United Nations Economic Commission for Africa (UNECA) launched the African Information Society Initiative (AISI). The basic objective of AISI is to set out a framework by which Africa could bridge the Information and Communication Technologies (ICTs) gap created between itself and the developed world and facilitate its entry into the information age. Recognizing the linkage between connectivity and national development, ECA in collaboration with partners initiated the National Information and Communication Infrastructure (NICI) policy and plan development process that aims at advising member States on the need to formulate and implement national information and communication strategies. Since the launch of AISI in 1996, ECA mounted various advisory services to member States that have not yet defined their national strategies and to those intending to implement sectoral Information and Communication Technologies (ICT) programs and projects in health, education, electronic commerce, etc.

One of the goals of AISI has been the adoption of policies and strategies to increase access to information and communication facilities, with priorities in serving the rural areas, grass-roots society and other disenfranchised groups, in particular, women and youth. As such the AISI intended to make special efforts to create awareness among those unfamiliar with the potential benefits of the African information infrastructure, with particular attention to gender equity.

The opportunities offered by ICTs identified by the AISI to promote gender and development include:
• Improving the rights of women through access to information and indicators which may be used for tracking gender issues and elimination of stereotypes;
• Ensuring the equitable access of women to information, technology and technological education;
• Enhancing the role of modern communications media to promote awareness of equality between women and men.

The advances in ICTs coupled with innovative ways of using them in development have led to the launching of various ICT enabled programmes in different sectors of society. One such application, e-Government is the use of ICTs to improve government efficiency in delivering services to its citizens. One of the prerequisites for the public to be beneficiary of e-Government services is the availability of electronic access points.

The gender gap in access to ICTs has been identified and been the subject of a number of research and discussion. Access to information for women on a truly equal status with men entails access not only to general education but also to education in ICTs.

In addition to the issue of access, the usage patterns of women and men are said to be different. The difference in the usage patterns, in the case of developing countries, is attributed to lack of skills, and lack of time and/or interest. Such a gap in the use of ICTs for one reason or another brings the whole issue of availing government services online questionable as half of the population in a given country may be further marginalized.

Addressing the gender gap in access to government services provided online through e-Government initiatives requires the close involvement of women in the planning and implementation of national e-Government strategies, plans and services. Elements of these issues identified so far include availability of sex- disaggregated data, local languages and local content and fragmented services.
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The Africa Information Society Initiative (AISI) has identified the use of information and communication technologies (ICTs) to enhance government efficiency and service delivery as one of the key challenges facing many African countries. E-government involves the use of ICTs for this purpose, to make governments more accountable, transparent, effective and responsive to citizens’ demands; and is based on a citizen-centred approach that tailors services to people’s needs rather than to the needs of the agency delivering them.

The purpose of e-government is to enhance access to and delivery of government services to benefit citizens. This involves increasing the effectiveness and transparency of governance to better manage a country’s social and economic resources for development. Long-term, organization-wide strategies to constantly improve operations will result in:

- the efficient and rapid delivery of goods and services to citizens, businesses, government employees and agencies;
- simplification of procedures and streamlining of application and approval processes for citizens and businesses; and
- facilitation of cross-agency coordination and collaboration to ensure appropriate and timely decision-making.

The challenges for e-government in Africa are great in many respects, but the potential benefits are also substantial. Governments across the region are facing the need to address poverty reduction, economic growth, environmental degradation, conflict and pandemics and improve basic infrastructure, as well as interacting meaningfully with their populations. Levels of infrastructure are low in many countries, especially in rural areas, but the spread of cell phones across the region provides an opportunity to capitalize on new approaches to internet access and communications, while telecentres can be effective vehicles for providing community ICT services. ICTs may offer avenues for providing information to citizens in order to improve their livelihoods and health; encourage market transactions and economic growth; and increase communication between governments and other stakeholders.

The gender dimensions of e-government pose an additional set of challenges. As in other regions, the gender-specific digital divide is very much in existence in Africa. This has two main ramifications for e-government: women are not able to access information on government services, health services and other issues which they need to support their livelihoods and well-being. Since much of the work of women is not measured and hence not taken into account in policy and programming (Chen et al: 2005), this potential economic force is not
as strong as it could be. Moreover, the lack of recognition of women’s information needs has meant that information that is relevant and useful to women is not created or made available.

Nevertheless, e-government poses an enormous opportunity to provide women with a range of benefits. It can transform communication avenues into opportunities for all groups, including those not currently included for reasons of distance, access to infrastructure, level of education and access to resources – groups in which women tend to predominate; e-government strategies and policies which understand the gender-disaggregated conditions of both access and use of ICTs will therefore have the potential to fully mobilize the contributions that women can make to national development.

This Handbook and the accompanying Action Plan on Gender and e-Government in Africa are placed within the major global and regional frameworks around gender, ICTs policy and e-government. Major international and regional policy bodies have recognized the opportunities for mobilizing e-government strategies which benefit both women and men in Africa:

- Goal 5 of the Connect Africa Summit calls for governments to adopt a national e-strategy and deploy at least one flagship e-government service as well as e-education, e-commerce and e-health services using accessible technologies by 2012, with the aim of making multiple e-government and other e-services widely available by 2015.

- The Protocol to the African Charter on Human and Peoples’ Rights on the Rights of Women in Africa, has identified participatory governance as a key issue for women. Countries are charged to “take specific positive action to promote participative governance and the equal participation of women in the political life of their countries through affirmative action, enabling national legislation and other measures to ensure...women are equal partners with men at all levels of development and implementation of State policies and development programmes” (Article 9, Right to Participation in the Political and Decision-Making Process).

- The World Summit on the Information Society (WSIS) in 2003 and 2005 was the first intergovernmental forum to address the role of ICTs and communication in development. In the Declaration of Principles for Building the Information Society agreed on in Geneva in 2003, governments committed to “ensuring that the Information Society enables women’s empowerment and their full participation on the basis of equality in all spheres of society and in all decision-making processes” (para 12), including in national e-strategy consultations and implementing ICT-related initiatives for development. The Geneva Plan of Action also emphasizes the role of ICTs as effective tools to promote peace, security and stability, and enhance democracy, social cohesion, good governance and the rule of law, at national, regional and international levels.
Para 1. Governments, in collaboration with stakeholders, are encouraged to formulate conducive ICT policies that foster entrepreneurship, innovation and investment, and with particular reference to the promotion of participation by women.

18. b) Facilitate access to the world’s medical knowledge and locally-relevant content resources for strengthening public health research and prevention programmes and promoting women’s and men’s health, such as content on sexual and reproductive health and sexually transmitted infections, and for diseases that attract full attention of the world including HIV/AIDS, malaria and tuberculosis.

e) Encourage the adoption of ICTs to improve and extend health care and health information systems to remote and underserved areas and vulnerable populations, recognizing women’s roles as health providers in their families and communities.

19. a) Encourage the development of best practices for e-workers and e-employers built, at the national level, on principles of fairness and gender equality, respecting all relevant international norms.

c) Promote teleworking to allow citizens, particularly in the developing countries, LDCs, and small economies, to live in their societies and work anywhere, and to increase employment opportunities for women, and for those with disabilities. In promoting teleworking, special attention should be given to strategies promoting job creation and the retention of the skilled working force.

d) Promote early intervention programmes in science and technology that should target young girls to increase the number of women in ICT careers.

23. h) Strengthen programmes focused on gender-sensitive curricula in formal and non-formal education for all and enhancing communication and media literacy for women with a view to building the capacity of girls and women to understand and to develop ICT content.

24. e) Promote balanced and diverse portrayals of women and men by the media.

27. The Digital Solidarity Agenda aims at putting in place the conditions for mobilizing human, financial and technological resources for inclusion of all men and women in the emerging Information Society. Close national, regional and international cooperation among all stakeholders in the implementation of this Agenda is vital. To overcome the digital divide, we need to use more efficiently existing approaches and mechanisms and fully explore new ones, in order to provide financing for the development of infrastructure, equipment, capacity building and content, which are essential for participation in the Information Society.

28. d) Gender-specific indicators on ICT use and needs should be developed, and measurable performance indicators should be identified to assess the impact of funded ICT projects on the lives of women and girls.

- In the run-up to WSIS, the forty-seventh Commission on the Status of Women in March 2003 developed a set of recommendations on “Participation and access of women to the media, sol information and communications technologies and their impact on and use as an instrument for the advancement and empowerment of women”. Several recommendations refer to the use of ICTs to promote e-governance and e-government, and to support national gender machineries, including to integrate gender perspectives and women’s participation in policy, legislation and programming relating to ICT, media and communications; strengthening partnerships to building women’s capacity to benefit from the information society, including
e-governance; and in particular, “Strengthen the capacity of national machineries for the advancement of women, including through the allocation of adequate and appropriate resources and the provision of technical expertise, to take a lead advocacy role with respect to media and ICT and gender equality, and support their involvement in national, regional and international processes related to media and ICT issues, and enhance coordination among ministries responsible for ICT, national machineries for the advancement of women, the private sector and gender advocacy NGOs within countries.”

1.1 The road to gender equality

Effective and gender-equal e-government addresses the commitments, challenges and opportunities for improving women’s status and gender equality in the region. In the 15 years since Beijing, international commitments to gender equality, equity and women’s empowerment have been reaffirmed in United Nations conferences and summits. They are contained in the Outcome and Way Forward and the Solemn Declaration on Gender Equality in Africa, emanating from the Seventh African Regional Conference on Women held in Dakar in October 2004 and endorsed in January 2005 by the African Heads of States and Governments as Africa’s common position in the post-Beijing era. The Dakar Platform outlines insightful measures to accelerate implementation of the BPFA and promote gender equality in Africa, based on the Beijing Platform for Action. The twelve critical areas of concern defined in the Beijing Platform for Action (BPFA) are assessed in the Beijing+10 Assessment of Outcomes in Africa.

Established in 2000, the Millennium Development Goals (MDGs) are another important international framework for assessing gender equality and women’s empowerment in the context of progress towards eradicating poverty in the region. In addition to Goal 3, ‘Promote gender equality and empower women’, several of the MDGs have gender dimensions or include gender indicators:

- Goal 1, Eradicate extreme poverty and hunger – includes an indicator on the poverty gap ratio, which is to include gender-disaggregated data where available
- Goal 2 Achieve universal primary education – includes the target of gender parity in primary education enrollment and retention up to Grade 5
- Goal 3: Promote gender equality and empower women – includes the targets of eliminating gender disparities in primary and secondary education by 2015
- Goal 5: Improve maternal health

Each of these dimensions intersect with the 12 areas of critical action in the BPFA: women and poverty; women and the economy; education and training for women; women and health; women in conflict situations; power and decision making, human rights of women; women in the media; women and the environment; the girl child; and institutional mechanisms for gender mainstreaming.
The Seventh African Regional Conference on Women (October 2004): Key challenges in Africa:

- Economic empowerment of women
- Maternal mortality
- Land management to ensure access by women
- Access to trade by women
- Gender issues of HIV/AIDS
- Strengthening Institutional Mechanisms
- Gender issues on peace promotion and conflict management/resolution.

Other important international and regional protocols include the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Protocol to the African Charter on Human and Peoples’ Rights on the Rights of Women in Africa. Fifty-one of the 53 African Member States have now ratified CEDAW and as of September 2008, 25 states had ratified the Protocol.

1.2 Situation of African women

1.2.1 Global perspective

While progress in attaining gender equality has been made, there are still great inequalities between women and men worldwide. Women work two-thirds of the world’s working hours, produce half of the world’s food, earn 10 per cent of the world’s income and own less than 1 per cent of the world’s property. Worldwide, a quarter of all women are raped during their lifetime, while between 10 per cent and 50 per cent of women report they have been physically abused by an intimate partner. Over 120 million women have undergone female genital mutilation. The global average for women in national parliaments is only 17.7 per cent. Women account for 64 per cent of the world’s 774 million illiterate adults.

Increasing numbers of women are entering the workplace, although they are often confined to the less productive sectors of economies: the informal sector and the service sector. They also tend to be over-represented in status groups that carry higher economic risk and a lesser likelihood of meeting the characteristics that define decent work, including access to social protection, basic rights and a voice at work.

In 2007, 1.2 billion women around the world worked (40 per cent of the world’s employed) – almost 200 million or 18.4 per cent more than ten years ago. The number of unemployed women grew from 70.2 to 81.6 million over the same period, and in 2007, women at the global level still had a higher likelihood of being unemployed than men, with an unemployment rate of 6.4 per cent compared to 5.7 per cent for men. Also, as a result of where women find employment (in terms of both sector and status), they often earn less than men. Nevertheless, education levels for women around the world continue to increase and gender gaps for certain labour market indicators are decreasing in many regions. The most successful region in terms of economic growth over the past decade, East Asia, is also the region with the highest regional labour force participation rate for women and low unemployment rates for both women and men coupled with relatively small gender gaps in sectoral as well as status distribution. The ability to build on the productive potential of both women and men could be one reason for the economic success of the region (ILO: 2008).
Fully 50 to 80 per cent of non-agricultural employment worldwide is in the informal sector. The proportion of women workers engaged in informal employment is generally greater than the proportion of men workers. Women are concentrated in the more precarious types of informal employment where the average earnings are too low in the absence of other sources of income to raise households out of poverty. Increasing the income generated from women's work in the informal sector is a critical aspect of poverty reduction. (Chen et al: 2005).
1.2.2 Poverty and economic empowerment in Africa

Women constitute over 50 per cent of the population in the region but do 60 per cent of the work, earn one-tenth of the income and own 1/100 of the assets. Gender inequalities in income and asset distribution, remunerated and unremunerated work, and the lack of recognition of the contributions of the household and care economies to the macroeconomy are some of the causes of marginalization of women. (ECA: 2005). The HIV/AIDS pandemic has disproportionately affected women in Africa, both as providers of health care and in terms of increasing rates of infection, so that more women than men are infected at present.

In Sub-Saharan and North Africa, women’s low access to productive resources including land, water, energy, credit, education, training, health, remunerated employment and communication has contributed to the situation whereby a larger proportion of women live in absolute and relative poverty today than ten years ago (ECA:2005). Clear data on the numbers of women compared to men living in poverty are not available, but it is known that the gender dimensions of poverty are marked. Some reports indicate that women make up 70 per cent of both the urban and rural poor in SSA, a result of limited access to productive resources (land, labour, credit, education, and technology – including information and communications technologies); difficulties in asserting their social, cultural and economic rights; and low access to social services. Women in Arab countries suffer higher levels of “human poverty” than men in terms of the three dimensions defined in the Human Development Index, namely health, knowledge and income (ECA: 2005; UNDP 2005).
Much of women’s burden of work and poverty remains “hidden” from official policies, resources and strategies for reducing poverty. Since 1990, the fastest-growing source of employment for women in Africa, especially sub-Saharan Africa, has been the non-formal sector where women engage in a wide range of activities, particularly trading. In 2007, the share of vulnerable employment (own-account workers and contributing family workers) for women’s employment was 81 per cent (ILO 2008). Because women predominate in non-market, informal sector, and household activities, they tend to be more adversely affected by the lack of policy, programme and resource support from governments and international organizations, which adds to their marginalization. A higher incidence of poverty in turn leads to increased workloads for poor women (ECA: 2001a; Chen et al: 2005).

In the formal economy, women are predominantly employed in the agricultural sector – especially in West Africa, Central Africa and Eastern and Southern Africa where it is estimated that they account for 60-80 per cent of the agricultural labour force – and are responsible for 70-80 per cent of the food production. Women make up 20 per cent of the labour force in non-agricultural employment in North Africa, and 37 per cent in sub-Saharan Africa (UN: 2007).

Of course, there are large variations by country in gender employment trends:

**Figure 1.3**
*Labour Force Composition - 2005 HDR*
In both North Africa and SSA, women are underrepresented in many occupations, especially in the scientific and technological fields. Employment in the industrial sector remains generally less than 5 per cent for the majority of countries, with the percentage of women in the services sector falling between industry and agriculture. In all sectors, women are severely underrepresented in management and decision-making positions. They tend to advance more slowly than their male counterparts both in terms of assigned responsibilities and wage increases, being therefore at greater risk from poverty and disempowerment (ECA: 2001b; UNDP: 2005; UN: 2007).

Many countries have made progress in rectifying these gender imbalances, taking a range of measures to increase the participation of women in economies of Africa. These include mobilization and gender-sensitive distribution of resources for small- and medium-scale enterprises, capacity building and empowerment of women in management and entrepreneurship, as well as enactment of gender-sensitive labour legislation (ECA: 2005b).

Additionally, progress has been made at national, subregional, and regional levels in identifying strategies and putting in place processes that prepare the groundwork for achieving gender equality. The majority of African countries reported that they had adopted plans of action for implementing the Beijing Platform for Action (BPFA) and also developed gender policies. Some successes were reported in increased school enrolment for girls, wider coverage of health services, awareness-raising campaigns and programmes on women’s human rights, increased participation of women in the economy and higher representation of women in governance structures (ECA: 2005).

### Mainstreaming gender into poverty reduction strategies:

All 13 African countries that had produced poverty reduction strategy papers (PRSPs) in 2001 reported having mainstreamed gender into their strategies. In the West Africa subregional Decade Review meeting in 2004, countries with poverty reduction plans reported having incorporated Millennium Development Goals 1 and 3 relating to poverty alleviation and gender equality into the national poverty reduction strategies, while between 1995-2002, 48 African countries prepared national plans of action for poverty reduction that included gender concerns.

### 1.3 Gender equality, the MDGs and the Beijing Platform for Action: How does Africa measure up?

BPFA and MDG indicators illustrate other important aspects of women’s situation in the region.

**Education and training for women and girls**

MDGs 2 and 3 call for the elimination of gender disparities in primary and secondary education by 2005 and at all levels by 2015. Gender disparity in educational enrolments derives from a number of socio-economic factors. In lower-income households, girls tend to be responsible for household work and are more likely to drop out of school when families experience economic and/or social hardships. Families are likely to choose to support the education of boys rather than girls.
Literacy has increased in Africa since 1994, primarily among young women. 79 per cent of young women in North Africa are literate, and 64 per cent in SSA, compared to 90 per cent and 72 per cent of men respectively. Nevertheless, the region continues to see the highest rate of illiteracy among women: overall, 71 per cent of male adults are literate, compared to 51.7 per cent female.

Globally, the number of children out of school has dropped sharply, from 96 million in 1999 to 72 million in 2005. SSA saw one of the most dramatic decreases, from 42 million children to 33 million. The share of out-of-school girls also dropped, although slightly, from 59 per cent to 57 per cent. Overall, SSA has a net enrollment ratio (NER) for both boys and girls of just over 72 per cent, a substantial increase of under 60 per cent in 1999 – a result of government action in this area indicated by an increase of 5 per cent in public expenditure on education between 1999 and 2005 (UNESCO: 2007).

Many governments have prioritized gender parity in education, especially at the primary level, although in most countries disparities in favour of boys continue to exist. 55 per cent of girls and 65 per cent of boys complete primary school. When girls do gain access to school, they tend to repeat grades more often than boys. (UIS: 2008) Three countries in Africa (Cape Verde, Sao Tome and Principe and Tunisia) have achieved gender parity at the primary level. Several countries, (such as Algeria, Egypt, Kenya, Mauritius, Rwanda, South Africa and Uganda) are very close to achieving universal primary education as well as gender parity at the primary level. There continues to be gender disparity in favour of males at secondary and tertiary levels in most sub-Saharan African countries, particularly in science–and-technology-related subjects (UNDP:2005; UN:2007; UNESCO: 2007).

In North Africa, the lowest enrollment rates are seen in the less developed Arab countries, such as Djibouti, and in those with the largest populations, such as Egypt, Morocco and the Sudan. Many countries are approaching gender parity in enrollment at the secondary level, with a greater enrollment of women than men at tertiary levels, although that may be due to less opportunity for females to go abroad (UNDP: 2005; UN: 2007). While sub-Saharan Africa is at a 0.8 ratio of girls to boys at the secondary level, at the tertiary level that ratio drops to 0.63, with some exceptions such as Angola, the Comoros, Djibouti, Madagascar, Namibia, the Niger, Sao Tome and Principe and Tunisia, which are at or close to gender parity. Mauritius and South Africa witness gender disparity in favour of girls at that level.

Women and health

Women’s and girls’ health concerns are addressed in MDG 4 (child mortality), 5 (maternal mortality) and 6 (combating HIV/AIDS, malaria and other diseases). The target to reduce by three quarters the maternal mortality ratio by 2015 faces its biggest challenge in sub-Saharan Africa and Asia, where most of the half million women who die during pregnancy or childbirth live. In sub-Saharan Africa, a woman’s risk of dying from complications in pregnancy and childbirth over the course of her lifetime is 1 in 16, compared to 1 in 3800 in the developed world (UN: 2007). For some of the poorer countries in North Africa, the rate is over 1,000 deaths per 100,000 live births. Similarly, SSA sees the lowest proportion of births attended by skilled health care personnel – 45 per cent – while distribution of health care services in rural areas is a continuing concern. In Northern Africa, the numbers are higher, at 75 per cent (UN 2007).
In many countries, including Benin, Botswana, Chad, Ghana, Liberia, Mauritius, Mozambique, Seychelles, South Africa, Swaziland, Tanzania and Zimbabwe, subsidized family planning services are incorporated into primary health care, along with provision of affordable preventive health services and training for grassroots health service providers such as village health workers and traditional birth attendants. Nevertheless, inequitable distribution of health care services continues, particularly in rural areas.

Women in Africa bear the brunt of the HIV/AIDS pandemic, either as principal providers of care or as the most affected and infected. Even in countries where overall HIV prevalence is low or has been reduced, the number of infected women is on the rise, up from 54 per cent to 59 per cent in sub-Saharan Africa and from 1 per cent to 23 per cent in North Africa. Rates of HIV prevalence for women have been increasing in most regions since 1990, although only in SSA and Oceania do women make up more than 50 per cent of infected, at 59 per cent (UN: 2007). The HIV/AIDS pandemic also adds increasing stress to health service delivery systems, which has increased numbers of persons needing care while reducing the human resources available. In the subregional Decade Review Meeting, all countries of Southern Africa reported that health standards had deteriorated as a result of the pandemic. In 2005, only 11 per cent of pregnant women in low- and middle-income countries who were HIV-positive were receiving services to prevent the transmission of the virus to their newborns. These trends are related to the absence of support structures enabling women’s reproductive rights in the form of family planning and reproductive health services: the percentage of women aged 15-49 using contraception who are married or in a union was 59 per cent in North Africa and 21 per cent in SSA in 2005 (ECA:2005c; UN: 2007).

Violence against women

The Beijing Platform for Action commits governments to implementing strategies to ensure the rights of women and girls in all areas, including legal rights, health, economic, political decision-making, education, situations of war and personal safety (ECA:2001c).

Violence against women, or gender-based violence, takes several forms in the region, including: female genital mutilation (FGM); trafficking, rape, and sexual slavery in conflict areas.

Examples of the Extent of Violence Against Women in Africa

- In the Democratic Republic of Congo 5,000 cases of rape, corresponding to an average of 40 a day, were recorded in the Uvira area by women’s associations since October 2002 (UN 2003). In Rwanda between 250,000 and 500,000 women, or about 20 per cent of women, were raped during the 1994 genocide (International Red Cross report, 2002). In Sierra Leone 94 per cent of displaced households surveyed had experienced sexual assaults, including rape, torture and sexual slavery (Physicians for Human Rights, 2002).

Trafficking in women and children is one of the most violent and fastest growing areas of organized crime. Women and girls are increasingly being trafficked within and across borders in the region. Honour killings continue to occur in several areas, while FGM is prevalent in many countries. The institutionalization of customary and traditional laws and practices, strong societal customs and economic adversity make it difficult for women to assert their personal, political, legal and economic rights (ECA: 2005c; UNDP: 2005).
In many countries in sub-Saharan Africa, gender-based violence (GBV) in both the public and the private sphere is now recognized as a punishable offence. Several countries have banned FGM: Burkina Faso, Central African Republic, Djibouti, Ghana, Senegal, South Africa, Tanzania and Togo. Adverse economic conditions, economic dependence on men and cultural and religious strictures combine to make it difficult for economically vulnerable women to leave abusive relationships (ECA: 2005c; UNDP: 2005).

In countries such as Ghana and Nigeria, preventive measures such as economic empowerment, education for livelihoods, capacity-building for safe migration, awareness raising and training, and special procedures to prevent trafficking, as well as victim support measures, including referral systems and legal measures have been taken to address both the root causes and outcomes of trafficking in women and girls (ECA: 2005c).

**Women in conflict situations**

In the 1990s, between 80 to 90 per cent of those killed, wounded, abused or displaced in conflict globally were civilians. Conflicts often involve the deliberate victimization of women and children. In Africa alone, over 5 million people are estimated to have lost their lives in wars and armed conflict since the late 1990s and many more are displaced as refugees and internally displaced persons (InternationalAlert:2004; ECA: 2005c).

Women are under-represented at all levels of decision-making in conflict resolution, peace-keeping, peace-building, and post-conflict reconciliation and reconstruction. The result is programmes that are insensitive to gender issues and which in effect exacerbate gender inequality, while support services to women in conflict locations are inadequate. Positive steps have been taken by government and civil society: the creation of the African Women’s Committee on Peace and Development (AWCPD) in 1998 by the OAU and ECA to mainstream women’s voices and concerns in peace negotiations and conflict resolution processes is one (ECA: 2005).

**Women in power and decision-making**

The commitments made by governments at the UN World Conference on Women, held in Beijing in 1995 to promote women’s participation in decision-making, included ensuring women’s access to and full participation in power structures and decision-making, and increasing women’s capacity to participate in decision-making and leadership. Representation of women in national houses of parliament is one of the indicators for MDG 3.

Although there has been an increase in the numbers of women in legislative bodies, generally they continue to be under-represented in all structures of power and decision-making, a reflection of cultural attitudes and economic status. At the national level, in 2007 women represented 17 per cent of houses of parliament worldwide, up from 13 per cent in 1990. The representation in SSA is similar, at 17 per cent, up from 7 per cent in 1990. Much of this increase comes from Rwanda which sees close to parity representation of women in parliament at 49 per cent, however, other countries also show progress: in Mozambique (34.8 per cent), South Africa (33 per cent), Namibia (30.8 per cent), Uganda (30.7 per cent), Tanzania (30.4 per cent), and Burundi (30.5 per cent) women make up 30 per cent or more of national parliaments. In Northern Africa for those countries reporting data, women's representation in parliaments overall has increased to 8 per cent from 3 per cent, with 22 per cent women in Tunisia’s parliament. The Gambia and Swaziland have both elected women as
presiding officers of the national legislature for the first time; while Ellen Johnson-Sirleaf has been President of Liberia since 2006.

Even where women are appointed into positions of power, they are often appointed to head ministries that are considered traditionally ‘female’, such as health, education, social services, gender and human resources – away from traditionally ‘male’ areas such as science and technology, justice, defence, finance and foreign trade.

**Human rights of women**

The Beijing Platform for Action (BPFA) commits governments to implementing strategies to ensure the rights of women and girls in all areas, including legal rights, health, economic political decision-making, education, situations of war and personal safety. Civil society organizations have contributed to raising women’s awareness about their rights.

Many countries have made legal provisions for equal rights of spouses in marriage, equal rights for women and men in inheritance, gender-sensitive labour laws, and equality of persons before the law. Several countries have implemented progressive policy and legislative changes against FGM: Burkina Faso, the Central African Republic, Djibouti, Ghana, Senegal, South Africa, Tanzania, Togo and Uganda, have all banned FGM (ECA:2001c).

In spite of these attempts, the institutionalization of customary and traditional laws and practices and the strong societal perceptions that support them continue to hamper attempts for change. Some countries still use laws which perpetuate *de jure* discrimination with regard to personal status, marital status and violence against women. In North Africa, two countries have implemented legislation granting women rights: In Tunisia women have full rights to act on their own behalf when entering into marriage and in Morocco women of legal age have full rights to act on their own behalf (ECA: 2001c; UNDP: 2005).

**Women in the media**

Two of the main objectives of the BPFA in this area are to: (a) facilitate women’s access to information and the media on an equal footing with men; (b) encourage the elimination of gender-based stereotypes through surveys and awareness campaigns in the media.
**BPFA Recommendations:**

- The establishment of gender-sensitive training programmes in communication for men and women in the profession;
- The adoption of communication policies specifically for the advancement of women;
- The mobilization of resources to train women in journalism, film-making and video techniques as well as in science and technology, environment, economics and political science;
- Acknowledgement, by officials and media practitioners, of the need to give greater coverage to women’s issues;
- The institution of a degree of media censorship to encourage the projection of a more positive image of women while countering the dissemination of negative stereotypes or the use of women and girls for pornographic purposes;
- The development and strengthening of alternative forms of communication (folklore, drama) particularly in the rural areas;
- The conduct of surveys and collection of information on gender issues, including gender relations, culture and the media;
- The review of communication policies to reflect gender concerns and to guarantee freedom of expression to all members of the society (ECA: 2005c).

A study of 12 countries in Southern Africa in 2002 found that women make up an average of only 17 per cent of media sources in Southern Africa although they make up 52 per cent of the population. A review of gender and public perception in the tabloid media in Mauritius, South Africa and Tanzania found that women constitute 25 per cent of tabloid sources; 35 per cent of the images; and that gender as a topic is rarely featured and that subtle and more blatant forms of stereotyping abound. It also found that while women read tabloids, the majority do not buy them, relying instead on papers bought by others (Gender Links: 2003; Lowe: 2008).

**Women and the environment**

This area intersects with Millennium Development Goal 7, Ensure environmental sustainability. While the indicators for this Goal are not disaggregated by gender, they have important gender implications. Data show that access to improved water sources and improved sanitation has improved somewhat over the past 15 years, although slowly. In rural areas in SSA, less than 30 per cent of the population has access to improved sanitation facilities, compared to 50 per cent of the population in urban areas. Overall, 63 per cent are without access to clean water, and 44 per cent are without access to sanitation. In the Middle East and North Africa, the numbers are 24 per cent and 11 per cent respectively. Related gender issues include access to clean water for drinking, household chores and agriculture, while lack of adequate sanitation at schools deters many girls and young women from attendance (UN: 2007).

Women in Africa play distinct roles in managing the environment: in managing plants and animals in forests, dry lands, wetlands and agriculture; in collecting water, fuel and fodder for domestic use and income generation; and in overseeing land and water resources. Gender equality in environmental protection and management is hampered by limited participation of women in decision-making, their limited access to technical skills, land and resources, and gender-insensitive environmental policies.

Women's extensive experience makes them an invaluable source of knowledge and expertise on environmental management and appropriate actions, and they are holders of much of the developing world's indigenous knowledge that can be utilized in environmental management.
However, their subordinate role in policy-making and project planning limits access to and use of such knowledge. Information needs include ability to prepare for and avoid environmental crises and disasters, as well as information on environmental and soil management (UNEP: 2004; Mienje Momo: 2000).

**The girl child**

In many countries in Africa, there has been progress in protecting the rights of the girl child, with widespread recognition of this issue resulting in increased rates of school enrolment and retention of girls, gender-sensitive school environments and enhanced attendance of girls in science classes. Attention is being paid to traditional practices that are harmful to girls, including trafficking, sexual abuse and exploitation (ECA: 2005c).

Nevertheless, challenges remain. At the Seventh African Regional Conference on Women (October 2004), challenges faced by the African girl child were identified as:

- Unfavourable and unsafe school environments where enrolment for girls is low, sexual harassment is serious and persistent, there are no counseling services for victims of harassment, and widespread sexual abuse and rape result in teenage pregnancies and unsafe abortions.
- The disproportionate effects of HIV and AIDS on the girl child due to her vulnerability to sexual abuse and risky traditional practices such as FGM, child labour and the burden of domestic responsibilities: the girl child is often exploited as domestic labour and many girls orphaned by AIDS are forced to leave school to care for other children.
- The absence of effective programmes for girl child soldiers and girls in conflict situations.
- Early pregnancies, which hinder girls from pursuing educational opportunities.
- Insufficient attention to the reproductive health needs of adolescent girls.
- Lack of social and legal protection from sexual exploitation and abuse (ECA: 2005c).

Child marriage is still prevalent in rural areas of sub-Saharan Africa, where 47 per cent of girls are married young; in urban areas that figure is 24 per cent. Adolescent fertility rates, or the number of births per 1,000 women between the ages of 15 and 19, have decreased in all regions since 1997, but the 2007 rate in Sub-Saharan Africa (119) is more than seven times greater than the rate in East Asia and the Pacific (16). In the Middle East and North Africa, the rate is about 30. Child labour rates, or labour by those between the ages of 6-14, are at 36 per cent for the region.

It is estimated that 2 million children are living with HIV in sub-Saharan Africa, while there are 12 million AIDS orphans in the region. Among young women and men aged 15-24 in 35 countries in SSA, 24 per cent women and 31 per cent men were found to have ‘comprehensive’ correct knowledge of HIV/AIDS – ability to identify the two major ways of preventing the sexual transmission of HIV (using condoms and limiting sex to one faithful, uninfected partner), rejection of two common local misconceptions, and awareness that a healthy-looking person can transmit the AIDS virus (UN: 2007).
Institutional mechanisms

This area has the strategic objective of creating and strengthening national machineries and other governmental bodies; integrating gender perspectives in legislation, public policies, programmes and projects; and to “generate and disseminate gender disaggregated data and information for planning and evaluation.”

Enhancing Capacity for Monitoring and Evaluation

In response to the recommendations of the African Plan of Action to build the capacity of monitoring mechanisms for gender equality and women’s empowerment at national level, in 2001 the African Centre for Gender and Development (ACGD) (ECA) developed a monitoring and evaluation programme to assist countries to monitor, evaluate and accelerate the implementation of the Dakar and Beijing Platforms for Action in 7 sectors. The main aim is to build capacity of African countries to accurately assess progress in implementation of the BPFA in the targeted sectors. The programme was planned to facilitate the regional preparations for the Decade Review Meetings in 2004 and 2005. Some 18 countries that participated in this programme produced evaluation reports that were more informative, with clearer performance indicators. In follow-up, the ACGD has just completed formulating a tool to evaluate the impact of gender mainstreaming on women in those same sectors (ECA: 2005c).

The lack of capacity to monitor and evaluate implementation of the plans from the BPFA and national gender policies continues to be a major challenge to the national mechanisms for the advancement of women in Africa. Most national institutional mechanisms lack capacity to monitor and evaluate performance in all sectors of the economy; they are poorly resourced (with insufficient staff and budgets); there is a lack the political power to oversee performance in other ministries, departments and parastatals; and they are hindered by the lack of political will.

Lack of coordination among gender focal points in different ministries is an additional barrier. The tasks of gender focal persons are often not clearly specified and not included as key performance areas. These staff sometimes lack the necessary gender analysis skills and are not in posts that are senior enough to enable them to supervise the outputs of the ministries/departments. There is also the critical problem of lack of national coordination mechanisms of the gender programme as well as accountability mechanisms for those charged with ensuring gender mainstreaming in all development sectors. Lack of effective accountability measures, monitoring mechanisms and programmes for sensitization on gender equality also pose barriers. There are very few role models and champions of gender equality among male policy-makers (ECA 2005c).
2.1 Regional ICT trends, status and priorities

African countries face a range of barriers to effective and widespread implementation of ICTs for development. The ECA SCAN-ICT project noted that in addition across the lack of infrastructure on the continent, a lack of enabling regulatory and policy environment exists to encourage innovation, along with lack of skills and institutions to adapt new technologies to local needs. A shortage of qualified staff & ICT experts exists in all sectors and particularly in rural or semi-urban areas with a concentration of training institutions in urban areas. Computers tend to be mainly used as traditional office tools, while there are limited on-the-job training opportunities across all sectors. The high cost of ICT equipment and connectivity is another factor (Nega: 2008).

ITU data indicate that Africa has the smallest proportion of total internet access by quite a large margin: 4.8 per cent compared to 11.8 per cent in Asia-Pacific and 37.1 per cent in the Americas. Fewer than four out of every 100 Africans have internet access while broadband penetration is below one per cent. Additionally, the digital divide between urban and rural areas in sub-Saharan African countries is greater than in the rest of the world: often over 75 per cent of a country’s telephone lines are concentrated in the capital cities, with little growth in the penetration of fixed telephone lines over the last 12 years (ICT Taskforce: 2002).

Figure 2.1
Internet users penetration by region, 2006
The numbers for mobile telephone use and subscription show quite high rates of growth and penetration, comparatively. While the numbers of mobile telephones in Africa are still low in comparison to other regions, the increase in growth of mobile penetration is greater than all other regions. In 2004 alone, almost 15 million people in Africa became mobile cellular subscribers – a figure equivalent to the total number of (fixed and mobile) telephone subscribers on the continent in 1996 (Gray: 2006). The ITU puts the numbers of mobile subscribers in Africa at about 250 million in 2007, up from 16 million in 2000. Investment in ICTs infrastructure in Africa is also improving, and stood at 8.0 billion USD in 2005, up from 3.5 billion in 2000.

Chart 2.3
Annual average growth rate in mobile subscribers, 2001-2006
Data emerging from the SCAN-ICT project provides some country snapshots. In the Gambia, the penetration rate of fixed lines is about 3 per cent – 1 per cent in rural areas and 6 per cent in urban areas. However, when combined with the spread of mobile phones the total telephone penetration rate increased from 18.35 per cent in 2005 to 21.6 per cent in 2006 (Gambia: 2007). Mauritius experienced huge growth in mobile and internet coverage between 2002 and 2006. In 2000 92 per cent of the population had mobile coverage, and by 2006, 98 per cent of the population had access to mobile coverage. The number of mobile subscribers increased by 300 per cent between 2002 and 2006, to 772,400, while the number of internet subscribers increased by the same percentage, from 35,000 to 137,500 (Central Statistics Office, Mauritius: 2006).

The rankings of African countries in e-government surveys reflect the low rates of ICT and Internet availability. In the 2008 UN e-Government Survey, there are no countries in the top 35 from the African, Caribbean, Central American, Central Asian, South American or Southern Asian regions. This is considered to be due to the high cost of deploying an infrastructure capable of handling e-government applications. The Survey also notes that competing social pressures in health, education and employment among others have been barriers to the implementation of e-government policies in these countries. South Africa is the highest-ranking African country in the Index, at number 61, with Mauritius and Seychelles following at 63 and 69, and Egypt at 79 (DESA: 2008).

2.2 The African gender divide

The rate of women’s use and access to ICTs is lower than the national average in almost all countries in Africa. The example of the Gambia is quite typical: the great majority of women have no access to ICTs. This is due to a number of factors, including lower levels of income and educational status, social class, illiteracy and geographic location. For example, we know that women make up the majority of the rural population where ICT infrastructure is least developed. Additionally, ICT infrastructure is largely urban-centred, and Internet content is overwhelmingly in English (Gambia: 2007).

As in other regions, data on women’s use of and access to ICTs in Africa is not regularly collected, aside from data on mobile use. The SCAN-ICT project found that gender-disaggregated information & data concerning the use of ICTs by girls and women is scattered. Some of the data that is available includes data for computer use in South Africa from 2002 which shows near gender parity, at 51 per cent male and 49 per cent female. A recent breakdown of online internet users in South Africa compiled by Neilson/Netratings indicates that Internet users are young, they access the internet from work, they speak English predominantly, they have higher income levels, and they live in urban centres. While the access rates for females were found to be very close to that of males, only a small proportion (about 9 per cent) of the South African population has internet access.

In Mauritius, another relatively high-income country, 24 per cent of households have a computer and 16 per cent have internet at home, so that internet access for most is mostly at work and in public spaces. Of computer users, the majority are those who have a computer or internet access at home.
Table 1
Persons aged 12 years and above using computer by place of use1 and sex, 2006

<table>
<thead>
<tr>
<th>Place of access to computer</th>
<th>Both sexes %</th>
<th>Male %</th>
<th>Female %</th>
</tr>
</thead>
<tbody>
<tr>
<td>At home</td>
<td>63.5</td>
<td>63.6</td>
<td>63.3</td>
</tr>
<tr>
<td>School/Educ institutions</td>
<td>33.8</td>
<td>31.7</td>
<td>36.1</td>
</tr>
<tr>
<td>Work place</td>
<td>33.5</td>
<td>35.8</td>
<td>30.8</td>
</tr>
<tr>
<td>Cybercafé</td>
<td>6.1</td>
<td>7.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Free public access facility</td>
<td>2.1</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Another person’s place</td>
<td>3.6</td>
<td>3.8</td>
<td>3.3</td>
</tr>
</tbody>
</table>

1 Persons may report more than one answer

Source: Continuous Multi Purpose Household Survey (CMPHS)

Existing data from less developed countries indicates a greater gender divide:

- In Mozambique 38 per cent of computer users in the schools are female, while overall female usage tends to be less than 50 per cent that of males
- In Senegal men make up 83 per cent of computer users
- In Ethiopia it was found that women professionals account for about 22 per cent of total IT experts, and females made up 27 per cent of IT students enrolled in the tertiary institutions in 2001-2002.

In Ethiopia, access even to “old” communications technologies such as radio, newspapers and TV, is quite limited: 86 per cent of women and 73 per cent of men have no access to even those media on a regular basis (Central Statistical Authority, Addis Ababa, Ethiopia, 2000).

Nevertheless, mobile, radio and print appear to present the most opportunity for widespread adoption over the shorter term in many countries, in view of available infrastructure, cost and literacy/language concerns. While television is an effective broadcast medium, its distribution is still quite limited in Africa. There are an estimated 100 radio receivers per 1000 people, but no more than 10 television receivers for the same number of people, concentrated in urban areas. Mobile in particular appears to have strong appeal and access for both men and women.
Table 2: Mobile phone ownership, selected African countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana (2005)</td>
<td>55.80%</td>
<td>44.2</td>
</tr>
<tr>
<td>Cameroon - Urban areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural areas:</td>
<td>49%</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>Ethiopia (of 1793 households surveyed) (2005)</td>
<td>0.2% of women</td>
<td>0.4% of men</td>
</tr>
<tr>
<td>South Africa (2007)</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Tanzania (2005)</td>
<td>48.40%</td>
<td>50.50%</td>
</tr>
</tbody>
</table>

Gender barriers can exist for women in accessing these “more accessible” technologies as well. In Zambia, a survey of the percentage of female parent/guardians who read a newspaper, watched television or listened to the radio once a week, found that of 2440 respondents, 9.7 per cent had access to all three media, and 86 per cent had access to none of them (Source: Central Statistical Office, Lusaka, Zambia and ORC Macro Calverton, DHS Ed Data Survey, 2002.) Women’s access to radio in Mali also varied according to location – half of women in the district of Bamako had a radio, compared to 22 per cent in the regions. Nearly half of the women were not able to listen to radios whenever they wished to and less than one third of the women surveyed listened to radio every day (DevTech Inc:2005). A survey of women’s access to ICTs in western Africa found that in some cases, men felt threatened by their wives’ use of internet and cell phones – monitoring and in some cases prohibiting their use (Regentic: 2005). In several regions, however, trends of mobile phone use and ownership in particular appear to indicate a positive move towards gender parity and in some countries, imbalance in favour of females (see Table 2).
GENDER DIGITAL DIVIDE IN FRANCOPHONE WEST AFRICA

A study measuring the gender digital divide was completed in six countries in West Africa: Benin, Burkina Faso, Cameroon, Mali, Mauritania and Senegal. The Regentic project was based on a survey of use of computers, the Internet and cell phones by women and men.

Findings:
- Generally, the gender gap in connectivity was found to be smaller than in skills and content. The largest gap was in decision-making in ICT structures, where women’s chances to participate were one-third of men’s. The major connectivity obstacles for women were related to place of access (safety and security issues), time constraints and technophobia.

- Women tend to use the Internet and cell phones more for personal and social use, and men for professional or work-related reasons.
- The gender gaps in connectivity and skills were lowest among young women educated at least to secondary school level, who were more likely to undergo training in computer use and work in a computer-related field. Nevertheless, they were mainly working at entry-level jobs and trained at elementary levels for secretarial or data-entry tasks, with little potential for advancement.
- Men frequently felt threatened by women’s use of cell phones and the Internet; the new freedoms afforded to women were perceived as destabilizing to relationships. In many cases men monitored the cell phone and Internet use of their partners.
- Very little local content relevant to gender issues was available, but most women did not notice this gap, revealing the need for more awareness about relevant content.
- Very few people were aware of any connection between gender and ICTs, and the notion of gender equity in access to and use of ICTs was not commonly understood or accepted.

Recommendations include:
- To help close the gender digital divide, ICT policy should move beyond access, where the gender gap is not large, into skills, content and decision-making.
- Young women should be encouraged to undertake ICT training beyond elementary levels.
- Before gender-equitable ICT policy can be elaborated, tools to monitor and evaluate the differential impacts of ICTs on men and women need to be developed.
- Universal access strategies are necessary for adult women living in poor areas to obtain access to ICTs.

(Source: Regentic, 2004).
2.3 ICT access strategies for gender equality

These data demonstrate the existence of a gender divide relating to equal access and use of ICTs by women and men in Africa. ICTs provide access to information, extend the reach of communication and dissemination programmes, improve monitoring programmes, and support economic growth and livelihoods, so that this divide poses major challenges for the region, both to achieve the MDGs and to fulfill the commitments made at the Beijing World Conference on Women in 1995 for gender equality and poverty reduction in the region.

As well as gender equality, information is an important contributor to poverty reduction, and is also a basis for a strong society more generally. When the poor do not have adequate access to information about rights, services, and opportunities, public institutions are often unresponsive to the needs of their society. Information and knowledge about basic hygiene and health helps to prevent disease, while information on crop prices, new farming techniques, and new markets will help farmers adapt to environmental and market changes, for better yields (McNamara 2002). For ICTs to be useful for achieving the MDGs and serving the needs of the poor, the focus should be not only on scaling up public and private service delivery, but on enabling development communication, participation and empowerment of the poor. This includes using ICTs to encourage increased investment in and support of income-generation of the poor as well as boosting local enterprises (Lal: 2005).

As in other regions, African women have a range of information needs for support of their health, income generation, education, food production and rights, with a lack of readily available information on women in society, culture and economy. Education needs include basic education and literacy training for the ability to improve their conditions of life. General information on hygiene, reproductive rights and health, avoiding sexually transmitted diseases and preventing early and frequent pregnancies are basic and critical needs for women and girls. Agricultural and environment information will contribute to increased food security and management of natural resources, and include improved techniques for seed selection and cultivation, irrigation, and fallowing, as well as appropriate technologies for harvesting and conserving food crops.

Women are particularly in need of information to improve and reinforce their economic independence such as information on exchange-rate fluctuations, international market trends, prices of foodstuffs and other commodities on the market, and bank transactions (conditions for obtaining credit, etc.). This entails enabling women to achieve gender equality in ICT access, knowledge and use – across all segments of the society. The aforementioned parameters are measured by levels of technology fluency; mastery of analytical skills, computer technology, information and communication concepts; ability to imagine innovative uses for technologies across a range of problems and subjects; and ability to find and use information and knowledge to bring about improvements in life and well-being, the ability to develop, find and effectively use information on cultures and traditional practices; modern life and their legal rights is lacking, while knowledge of other countries and regions as well as inputs into local and national decision making will help them contribute to charting paths of their societies (Huyer et al, 2005; Mienje Momo: 2000).

There are, none the less, a range of barriers which women and governments will need to work together to overcome. Access to ICTs is inextricably linked to the availability of the necessary infrastructure, which is in turn linked to location. In much of Asia, Sub-Saharan Africa, and parts of the Caribbean, women make up the majority of the population in rural areas, as
men migrate to the cities for work (UNIFEM 2000). In virtually all developing countries, telecommunications infrastructure, as well as electricity, is weaker and less available in rural and poor urban areas. In Africa in particular, reliable Internet connectivity is frequently available only within capital and major secondary cities. Linked to location, but also to religious and socio-cultural attitudes, the mobility of women (both in the sense of access to transport and ability to leave the home) is also more limited than that of men.

For women, gender roles and religious and socio-cultural customs can limit their access to and use of ICTs, especially the Internet. Women’s multiple roles limit the time they have available, compounded in many developing countries by little or no home-based access to ICTs so that women must travel to public-access venues. In a series of interviews with telecentre managers throughout Africa, all concurred that domestic responsibilities, socio-cultural constraints and economic hurdles were key impediments to women’s access (Johnson 2003). In addition, it is sometimes the case that public access centres are not open at times when women can visit them, or they may be open only in the evening when it is more difficult for women to visit them owing to safety concerns.

A major cultural variable that affects women’s ability to frequent information centres or cybercafés are norms governing men and women’s interaction in public places. Information centres or cybercafés are often located in places that women may not be comfortable frequenting or that are culturally inappropriate for them to visit. Having to interact closely with men may put off many women from visiting the telecentres.

Additionally, the confluence of culture and computers can also constrain women from accessing and using ICTs when the traditional cultures view female use of computers negatively or if the use of computers by women is seen to be a burden to current (and potential) families. For instance, young Muslim women in Seelampur, India were rejected as candidates for arranged marriages on the grounds that because they were computer-literate they would not adjust to the marital family. Similar instances have come to light in regard to enhanced dowry demands for computer-literate daughters. Class and education levels can keep women away from public ICT access. (Maindiratta and Maindiratta 2004; Etta and Parvyn-Wamahiu 2004; Creech et al: 2006; Hafkin 2003; Huyer et al, 2005).
Gender Barriers to Accessing and Using ICTs

Lack of time and infrastructure

- A series of national reports on the use of ICTs for distance learning found that electricity is not available in rural areas in many African countries, as well as in Vanuatu and Belize. In Malawi, for example, 84 per cent of the population lives in rural areas with no electricity, while 8 per cent of homes in Kenya and 10 per cent of the population in Tanzania has access to electricity (Green and Trevor-Deutsch 2002).
- Regional Reach provides rural populations in Kenya with information in local languages through community screening of videotapes focusing on current social problems. Female viewership is just 16 per cent during the week, as a result of household chores and responsibilities (Green and Trevor-Deutsch 2002).
- Interviews with women in Asia who had taken distance education courses found that household responsibilities were a major factor to be taken into account when undertaking distance courses (Kanwar and Taplin 2001). These time constraints also mean that women are often unable to invest in developing the skills necessary to effectively use ICTs (Johnson 2003).

Social norms

- In Seelampur and Sitakund, India, where there are community ICT training centres, Muslim women are restricted in travel or use of public spaces and girls from the community are not allowed to travel unaccompanied outside the confines of the city centre (Slater and Tacchi 2004). In another case, the nearest telecentre was too far for rural women farmers in South Africa to use it (Kiplang’at 2004).
- Kenyan women said they encountered problems if computers are located in meeting places regarded as men’s preserves, even in such seemingly innocuous locations as rural shopping centres, libraries and community centres. In Pakistan, if computers are located in study centres, there must be separate areas for girls and women (Green and Trevor-Deutsch 2002).

Education and employment

- An ICT survey of 1,800 people in Botswana, Ghana and Uganda (McKemey et al. 2003) found that the most important indicator of any kind of communication use was not related to gender but to the level of education. The higher the education, the higher the rate of use.
- A report of gender patterns of ICT for distance learning in Malaysia suggested that “women may be handicapped by their lower employment status.” In many regions, home or office access to and use of the Internet is less likely for women, as more men occupy the academic, management or technical positions that provide free access (Green and Trevor-Deutsch 2002).

Cultural constraints

- In Peru, a project to contribute to rural development by increasing the productive capacity of small farmers found that joint-sex meetings and training courses constrained women’s participation. Women reported that their greatest difficulty was not the level or the specialization of training courses, but men’s attitudes towards their participation: they were mocked by the men when they used computers (Hafkin 2002b).
- In Burundi, when national news comes on the radio, women report that their husbands take it to the pub. When he returns, he listens to the programmes of interest to him. Even if he is away, the women are not allowed to use the radio because of fears of breakage and battery use (Beardon 2004).
- In Bangladesh, 71 per cent of men and 44 per cent of women had access to a radio (Beardon 2004).

Telecentres/community access centres have been strongly promoted as an access strategy in Africa by international agencies such as IDRC, UNESCO, UNDP and the World Bank. Telecentres can be major catalysts for accessing and using information and knowledge that can create development opportunities and choices for rural communities. They can, under certain conditions, help improve the living conditions of the rural poor through better and more sustainable livelihood strategies (UN: 2004: 2-3). Rural telecentres can support access to information and services relevant to households for intensifying agricultural production, adopting diversified livelihoods, facilitate migration, or in enabling a combination of these. (Soriano: 2004)

It can hardly be gainsaid, however, that in Africa men use ICT facilities more often than women. Studies of ICT facilities usage in Kenya, Mali, Senegal and Uganda have shown that women represent a small percentage of ICT users (Thioune and Sene 2001; DOT-COM Alliance 2005). In Uganda women represented 29 per cent of telecentre users while the figure was 35 per cent in Mozambique, 23 per cent in Mali and 20 per cent in Accra (Johnson 2003). In Tanzania the female share of Internet café users was close to 40 per cent in the urban areas, but only 25 per cent in the rural areas studied. (Furuholt and Kristiansen, 2007). A telecentre set up in Mali was used primarily by students, NGO staff, and local health workers, all of whom would have had a certain level of education (Ndaula, 2005). A study of telecentres in rural south India similarly found that the centres were being used by a relatively small proportion of the village households – young, male, school or college students, relatively more educated, belonging to relatively higher-income households, and coming from socially and economically-advanced communities. Telecentres in certain situations may sustain existing socioeconomic inequalities within communities (Kumar: 2004).

An evaluation in India found that women use telecentres much less than men for a range of reasons:

- The design reflects models that meet the priorities and interests of male users.
- It is assumed that women do not have the disposable income to pay access fees.
- It is assumed that women will not feel comfortable with a one-on-one technical assistance situation with a man (Datamation: 2005).

Nevertheless, when barriers for women are addressed, they do use ICTs effectively for a range of activities and outcomes. In a study of telecentre use in Uganda it was found that women used telecentres to look for information on: farming techniques; improvements in selling their products; how to start small-scale businesses; and how to connect to microfinancing institutions for loans. Where women have been deliberately targeted for computer training programmes, there has been an increase in ongoing use of ICTs by women, their families and friends (Creech et al: 2006).

**2.3.1 Reaching women with ICTs**

For all these reasons, telecentres can be a good strategy to promote access to ICTs and e-government for women, but they will not reach all under-served groups “naturally” or automatically. Technology in this respect is not neutral, but provides an advantage to those with the resources, education, skills and capital required to use the technology – groups in which women tend not to be represented equally. A review in 2001 found that unless specific, targeted gender goals and strategies are implemented in ICT projects, women will not have access or benefit equally with men (Hafkin: 2002b).
A range of strategies can be used to address these gaps. Some of the questions to be asked include:

- Do men and women have equal access, skill training and use of ICT-based systems?
- Does the use of ICTs affect men and women differently?
- Are both men and women able to transmit their knowledge effectively?

In certain but not all situations, separate women- or men-only strategies are useful, while in others this may not be appropriate. In both situations, gender considerations to keep in mind include:

- Are women as well as men consulted in design of infrastructure services?
- What is the cost of infrastructure access and how does this determine who is able to use the technology?
- Are women gaining equal access with men to employment and participation in the design, implementation or maintenance of the infrastructure?
- Is affordable alternative power or transmission media (e.g. solar power, satellite or cell transmission) used where appropriate?
- Are the technologies accessible to women and men who are illiterate, possess low levels of education or are low-income?

Universal access strategies (discussed in Chapter 3) are an important means of reaching women and different social groups in urban and rural areas, while women-run and – managed telecentres have been proven effective in some situations. Successful access models can often include the use of “older” technologies, such as radio, TV, and print, or blended technology strategies which connect dissemination technologies such as radio to computers and the Internet. Radio in particular has the potential to be a useful technology for women, as it can be used in areas where electricity is irregular or non-existent; it is a medium which distributes programming in local languages and is relatively inexpensive. A study undertaken as part of a United Nations project on knowledge networks through ICT access points for disadvantaged communities found that radio played a prominent role in promoting women’s visibility and rights and in tackling gender issues (Mhlanga, 2007). In “radio listening clubs” community groups gather to listen to and discuss educational and informative programming. Two-way radio listening devices are also becoming more common, allowing listeners to respond to programming and/or public officials through radio programming. In South Kivu, DRC, Dimitra provides hand crank and solar radios to women’s groups as well as double-deck recorders which allow listeners to respond and transmit opinions and reactions to radio programming (Dimitra:2008). Radio Peace Harbel in Liberia bases its programming in community participation through live public shows, community debates as well as participation in management of the station and contributing to an environment of dialogue and local influence on decision-making. It has produced many shows with women and for women on HIV/AIDS, education and participation in the life of the society (Thomas: 2007).
The women-run telecentre

In Senegal, the Guédiawaye community telecentre is owned by a group of 1,200 members (957 women and 243 men), the SERBATIM Economic Interest Group (EIG), and managed by an appointed management committee that reports regularly to the members. All staff members come from the community, and there is collective responsibility for running the telecentre. It carried out various activities, ranging from dyeing to the production of wooden sculptures and other works of art to computer training. The group set up a hairdressing salon to provide training for youth, a savings and credit facility, a day-care nursery, and a private school. (Etta and Parvyn-Wamahiu, 2003).

While not as widespread in rural areas as other technologies, television programming is another device which can reach women in rural areas through entertainment and educational broadcasts. A study in India found that the introduction of cable television is associated with improvements in women’s status including greater autonomy, decreases in the reported acceptability of wife beating, decreases in reported son preference, increases in female school enrollment and decreases in birth rates (Jenson and Oster, 2007). TV is also a technology which does not necessarily require individual ownership: in Mali, while 15 per cent of women reported household ownership of a television, 65 per cent reported access to one (DevTech: 2005).

One of the potentially most interesting and important e-services media for Africa is the mobile phone. As well as keeping in touch with family and friends, mobiles are used as business tools for market information and communication with clients and suppliers. As the technology develops, it is being used as far more than a telephone, although that remains an extremely important function. M-banking and money transfer via mobile are becoming increasingly popular, and countries are scrambling to understand the regulatory, commercial and policy aspects of this growth. Internet access is becoming feasible through cell phones, and although it remains limited currently, new phones and PDAs with high-quality screens and multifunctionality are becoming more affordable. The potential for developing a range of e-health, e-government, e-education, e-banking and e-commerce is great. As indicated by emerging data, mobiles also have the potential to be a gender-equal technology in view of their low cost, ability to address language and literacy concerns, and their flexibility of use and payment schedule. With some exceptions, the rate of mobile use and ownership for women is close to equal to that of men.
ICT policy and gender equality

ICTs are affected by and will affect the different opportunities that exist for men and women with respect to education, training and skills development, employment and working conditions, content development and access to power structures and decision-making processes. (Huyer and Hafkin 2007). They are effective tools for governments to provide services to citizens; as well as for economic development and increased education and knowledge of citizens.

However, we know that women are vastly under-represented in government, business, political and social institutions; women continue to access and use ICTs to a much lesser extent than men; men still hold most of the management and control positions in telecommunication companies and regulatory or policy-making bodies; regulatory decisions are made without any gender-impact analysis; and service licences are attributed to companies without equal-opportunity policies (Jorge 2001, 1).

To be implemented, governments’ commitments to develop an information society for all members of society, including women, will need to be:

- flexible, based on enabling and feasible strategies which will allow planners to adapt to changing conditions and reach achievable transformation goals;
- appropriate to their contexts, and formulated on the basis of the conditions they seek to transform, entrench or challenge;
- targeted to specific groups, such as the underprivileged, women, youth, the elderly, those living in remote areas;
- promoting fair and healthy competition;
- implemented on the basis of transparency and equality of treatment of all users;
- respectful of privacy;
- aware of access to information and communication for all (universal access); and

Integrating gender awareness in all these aspects of ICT policy will both improve the quality of life of all citizens and also ensure that certain segments of the population are not overlooked. Effective technologies and infrastructure for all are characterized by consideration of the needs of women and do not further entrench gender disparities. Incorporating gender into ICT policy presents an opportunity to promote the well-being and inclusion of all citizens in a meaningful and positive way. ICT policy should also be integrated with other policy areas to ensure that efforts towards sustainable development are coordinated and cohesive.
The Africa Information Society Gender Working Group (AIS-GWG) distinguished between reactive policy which tends to take account of the needs of women which result from gender inequity, and a forward-looking transformative, engendered policy which takes account not only of women’s position and their practical requirements, but supports them to improve their status and contribute to society and the national economy in new and beneficial ways. Developing human resources in a gender-balanced way will promote the full range of expertise among women and go a long way to ensuring that countries benefit from all human resources available (AIS-GWG 1999).

Representation is also important, as those who are affected by policies are best able to represent their interests, mechanisms and practices must be developed to ensure the participation of women together with all other citizens in policy-formulation processes. This will allow women to make a greater contribution to formulating the conditions and regulations that will enable women to benefit from ICTs, as well as ensuring the accountability of the institutions that are responsible for ICT policy (Ramilo 2002).

### 3.1 What is gender-sensitive ICT policy?

The ECA Africa Information Society Initiative (AISI) considers women as both users and providers of information, recognizing that gender cuts across the major AISI ICT themes: policy, infrastructure, connectivity, human-resource development, and content creation. It calls for special efforts to create awareness of the potential benefits of an inclusive information society which includes gender equity.

Women may be restricted from accessing ICTs as a result of social, economic, cultural or technological constraints, even when they are available in their communities. Gender-sensitive ICT policy removes these barriers to access and promotes gender-sensitive development of information-society infrastructure. It has the following characteristics:

- ICT infrastructure is affordable to women at every socio-economic level.
- Location of infrastructure facilitates access for women. For example, the use of public access points provides an alternative to private online access. Public access points are located where women can easily and safely access them.
- Recognizing that women lag behind men in the technological field, special emphasis is placed on overcoming inequalities in the ICT sector. This includes providing training to women for capacity-building in ICTs and ICT literacy which is appropriate to low-literacy and low-IT-skill levels.
- Regulates the ICT industry to lower Internet access costs.
- Demonstrates policy coordination and coherence to promote gender-inclusion strategies in education, the workplace and at the community level.
- Implements strategies to encourage women to join the ICT sector as an effective way of achieving a critical mass of women in the ICT sector.
- Encourages civil society and women’s groups to play a more active role at the national level, including taking steps to bring more women into the higher echelons of ICT decision-making and policy-making.
- Addresses the gender divide in the context of local socio-economic factors. This translates into modelling the content and language to meet women’s interests and demand.
- Improves the rights of women through access to information and indicators which may be used for tracking gender issues and elimination of stereotypes; and enhances the role of modern communications media to promote awareness of equality between women and men.
- Ensures equitable access of women and girls to information, technology and technological education.
- Includes sectoral ICT policies which consider women’s use of ICTs in each sector a priority; notably, those in peri-urban and rural areas; disadvantaged sectors of the populations, young girls not in school, and rural women.

Finally, effective policies include monitoring and evaluation processes in which gender is embedded and indicators against which the outcomes of policy can be assessed. (DESA: 2005; AIS-GWG 1999; Nega, 2008). The NICI plans for Malawi and Rwanda include some model approaches. The Malawi plan commits to collecting data on the number of female students compared to male students studying technical non-traditional subjects, while the Rwanda NICI 2010 Plan states the intent to “Ensure that all data collection about ICTs, jobs, education, etc, includes relevant analysis of gender indicators”. SCAN-ICT also notes the importance of the gender-disaggregation of ICT data and indicators on access and use.

Table 3 presents examples of how some current Africa ICT policies incorporate gender mainstreaming and gender equality in the overall context, goals and objectives of these policies.¹

¹ See Appendix _ for a list of African ICT policies used as examples in this handbook which incorporate gender equality issues.
### Table 3.1
**Gender Mainstreaming in Selected NICI Policies in Africa**

<table>
<thead>
<tr>
<th>GE assessment/context</th>
<th>BF: In regard to access to information and to new information and communication technologies (NICTs)</th>
<th>Gambia: Empowerment of rural women in using ICTs towards the attainment of the objectives of Beijing + 10</th>
<th>Lesotho: Access to ICTs can have an empowering effect on youth and women through the acquisition of new skills and exposure to opportunities</th>
<th>Tanzania: ICT deployment is to be especially inclusive and to proactively take into account gender and disadvantaged groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Despite the presence of rural and community radios and programmes in national languages, women's access to information remains limited, and restricted to traditional channels; It is important for women to have access to ICTs, but restricted by illiteracy and lack of education; Support the community telecentres in rural areas, but access by women must be ensured to these new techs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainstreaming statement</td>
<td>Ghana: Put in place a mechanisms to ensure the participation of women in developing the information society and to ensure that information and communication policies at all levels are engendered, and geared toward meeting specific developmental needs of women</td>
<td>Zambia: Promote the use of ICTs as tools to eliminate all forms of inequalities between sexes;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>Comoros: The information society should be a given and become part of life. This entails raising awareness among young and old and using all possible vehicles and particularly the youth, who take a keener interest, and women, unfortunately, are victims of a whole range of inequalities.</td>
<td>Lesotho: Government is committed to deploying ICTs as tools in the process of ensuring gender equality, empowering and recognizing women and youth in the development process.</td>
<td>Zambia: there is need to address youths and women as special groups in society that can positively contribute to the growth of ICTs as well as the use of ICTs as empowerment tools in their daily activities</td>
<td></td>
</tr>
<tr>
<td>Failer</td>
<td>Cameroon: Gender and social development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td>Gambia: To make ICT access and affordable to all Gambian Women</td>
<td>Ghana: To accelerate the dev. Of women and eliminate gender inequalities in education, employment, decision making through the deployment and exploitation of ICTs by building capacities and providing opportunities for girls and women</td>
<td>Swaziland: Ensure that the benefits of ICTs are utilized in addressing gender (disadvantaged groups) inequalities in education, employment opportunities, and promoting ICT capacity building for the girl child and women is a must.</td>
<td>Zambia: To increase empowerment opportunities through ICTs, and the participation of youths and women in national development; (b) To promote ICT as an alternative career for youth and women in the informal and formal educational system and beyond; (c) To encourage creativity and innovation around ICTs among youths and women leading to entrepreneurship development; (d) To provide a forum for collaboration and exchange of ideas on matters affecting youths and women; (e) To enable full and equal participation of women and youths in creating the information society</td>
</tr>
</tbody>
</table>

3.2 What does gender-sensitive ICT policy look like?

In supporting ICT policy development through the National Information and Communications Infrastructure (NICI) programme, AISI starts from the MDGs to identify the main challenges and opportunities for ICT policy, namely: food security; education and research; gender and development; health; and man-made crises and natural disaster. Results of a Civil Society and ICTs Policy Conference on 6-8 November 2002 in Addis Ababa on the success and the impact of the NICI formulation process suggest that the gender dimensions of consultation processes and implementation should be carefully monitored, to encourage the participation of women’s groups in all phases, especially in relation to these key challenges. Gender concerns are explicitly set out in AISI: women are considered as both users and providers of information.

To understand the gender implications of ICT policies, we look at the three major categories: infrastructural, vertical and horizontal (Rowlands (1996). Infrastructural policies deal with the development of national infrastructure and are closely linked with telecommunications policy. Horizontal information policies affect broader societal aspects, such as freedom of information, but also tariffs and pricing and privacy and security. Finally, vertical information policies address sectoral strategies, in support of areas such as education, health, tourism and industry and are related to e-government. Potential strategies and approaches are discussed in more detail in Chapter 4.
Some national policies focus almost entirely on one area; most typically, one area will predominate, but the policy will include elements of all three. Virtually every component of each one of these categories can affect the majority of women differently than men, so that social and gender analysis is applied to each component. Some national governments may incorporate ICTs into telecommunications policy, while others will include ICTs with media in communications policy. A more recent tendency, recognizing the importance of people-centred rather than technology-centred policy, is the trend towards information policy which incorporates ICTs in the framework of information society goals. Additionally, sectoral policy in health, education, agriculture, labour and industry, among others, frequently include significant ICT components (Hafkin 2002a).

**Infrastructure and telecommunications policy**

While gender dimensions of this type of policy may not be immediately apparent, an understanding of how it affects users and the economy (entrepreneurs), along with how it promotes access will reveal gendered trends of benefit and opportunity.

Some of the key issues in this area include affordability and accessibility of infrastructure and technology. This includes availability of a range of technologies which allow for low-cost access; technologies and infrastructure which provide coverage in rural and peri-urban areas as well as capital cities. Steps can be taken by governments through incentives or regulation to encourage providers to offer cost-effective and appropriate solutions; through licensing requirements to set aside opportunities for women entrepreneurs and organizations; and through encouraging technology choice by providing an enabling environment for different internet technologies (such as WiFi and VOIP). Other important infrastructure issues include the ability and awareness of the population to use ICTs effectively, which require advertising, consultation with user populations, and training in technology use.

Gender issues relating to infrastructure and telecommunications policy are listed in Table 3.2.
Table 3.2
Gender-sensitive infrastructure and telecommunications policy

<table>
<thead>
<tr>
<th>Policy</th>
<th>Promoting equal access for women and men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network modernization</td>
<td>Implement infrastructure that is affordable to most</td>
</tr>
<tr>
<td>Network architecture</td>
<td>Implement requirements or incentives for equipment and service providers to offer cost-effective and appropriate solutions for women and men at all socio-economic levels.</td>
</tr>
<tr>
<td>Network deployment</td>
<td>Place an emphasis on universal access to ICTs using affordable and forward-looking technology such as wireless alternatives. Include women and women’s groups in technology training. Plan location of infrastructure in a way that facilitates access for women as well as men.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Deploy technologies in rural and peri-urban as well as urban areas. Make “high-technology” applications available outside of the capital and major cities.</td>
</tr>
<tr>
<td>Technology choice</td>
<td>Affordability and accessibility of service is a major gender issue. Encouraging new players and new technologies in the market will increase technology choice and help to bring down costs, e.g. Wi-Fi and VOIP (Voice Over Internet Protocol) telephony. While limitation on the choice of mobile standards (e.g. GSM, CDMA) can prevent fragmentation of markets in initial stages, continued insistence on standards can block the entry of mobile technologies that are cheap and effective for underserved areas. Undertake assessment and consultation to determine appropriate technology choices in terms of who will use it and for what purpose.</td>
</tr>
</tbody>
</table>


Universal access

While universal access falls under the category of infrastructure and telecommunication, it also incorporates issues of content, training and capacity-building. At WSIS governments committed to implementing universal access to ICT by 2015 and in general, universal access is a positive strategy for women. However, gender concerns in implementing these strategies exist, including the need to ensure that ICT is made available to all at an affordable cost, and that the development of infrastructure does not further disadvantage marginalized groups. Key components of universal-access strategies which will benefit women include:

- Implementing a range of affordable and accessible technologies such as mobile phones, public communication kiosks and mass media (radio, TV, video).
- Locating public access stations such as kiosks in places where women frequently and easily congregate can enhance women’s access to information.
- Setting up access centres at the local community level.
• Promote ICT and on-line literacy through training.
• Ensure that potential users are aware of the services being provided by government on-line.
• Ensure that the services available on-line and via mass media are relevant and give citizens a reason to use these services.
• Develop locally relevant and educational content for women.

In its review of the Uganda Rural Communications Development Fund, WOUGNET made the following recommendations for ensuring that women in Uganda are able to benefit equally with men:

• Ensure there is widespread dissemination of information on RCDF funds;
• Target women and marginalized populations to inform them of RCDF services and opportunities;
• Review RCDF policy to include specific gender-sensitive objectives, strategies and targets;
• Consult with key stakeholders;
• Ensure gender distribution of recipient/selected agencies in three sectors: education (including female only); private sector including women-owned enterprises; and civil society, including women’s organizations;
• RCDF contracts should spell out gender outcomes as part of all RCDF support, e.g. reaching out to women students and users;
• Gender-monitoring and evaluation approaches should be implemented;
• Selection criteria should encourage women to apply, including incentives for women proprietors, or encouraging women’s organizations to apply;
• Share knowledge about how to benefit rural communities and men and women (WOUGNET).

Some examples of approaches and strategies in African national policies include:

• Equal access to ICTs should be ensured for man and woman, boy and girl, and able and disabled (Swaziland National Information and Communications Infrastructure Policy and Plans).
• Facilitate and encourage the development of electronic networks and systems for associations and organizations engaged in the advancement of youth and women issues in the country (Zambia National ICT Policy).
• Provide infrastructure and affordable access to ICT tools and services in rural and urban areas (Zambia National ICT Policy).
• ICTs should be situated in gender-neutral environments such as libraries and schools (ICT Policy for the Republic of Namibia, 2002).

The Rwanda NICI 2010 Plan combines universal access approaches with strengthening of the national gender machinery by charging the Ministry of Gender and Women in Development with setting up MCTs in women’s centres throughout the country.
Horizontal information policies

Horizontal information policies such as freedom of information; tariffs and pricing; and privacy and security also carry clear gender consequences. For example, ending monopolies in the telecommunications and ICT sector can bring in additional investment and competition, bringing down prices. Since women tend to have lower levels of discretionary income, this is an important gender issue. Import duties and taxes on computer equipment and mobile telephones as well as high prices for telephone service also affect women and the poor disproportionately.

On the other hand, opening up the sector for competition, although expected to lower prices in the long run, is leading many countries to rebalance international and domestic tariffs in order to eliminate existing subsidies, most frequently on local service. This has led to higher rates for local calls in many places, which hit the poor the hardest. Among the ways to compensate for rebalancing costs include basing tariffs on forward-looking costs and establishing regional (e.g. rural vs. urban) tariffs.

Licensing is an area in which a few targeted activities can bring substantial benefits and opportunities for women operators and users. In return for granting licences, regulators can compel service providers to provide service to underserved areas or to provide community services (such as toll-free help lines). Regulatory frameworks permitting the resale of mobile phone services can promote women’s entrepreneurship at the local level. Additionally, regulatory frameworks can be set up to reduce licensing fees, spectrum prices and interconnection charges that can make ICTs more accessible to women.2

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2 Other horizontal issues include privacy and security, and are covered in vertical information policies below.
Table 3.3  
*Horizontal ICT policy – Gender-sensitive regulation and licensing*

<table>
<thead>
<tr>
<th>Policy</th>
<th>Promoting equal access for women and men</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector liberalization</strong></td>
<td>Opening the telecom and ICT sectors to competition can encourage investment and force down end-user prices.</td>
</tr>
</tbody>
</table>
| **Tariff policy**           | High Customs duties on mobile telephones and computer equipment as well as high prices for telephone services are deterrents to use by women’s businesses which tend to have less capital and less access to credit.  
Compenstate for rebalancing costs of technology services in a country by basing tariffs on forward-looking costs and establishing regional (e.g. rural vs. urban) tariffs. |
| **Independent regulators**  | An independent regulator can compel profit-driven private-sector players to deliver on social and gender policy objectives such as universal access.  
Regulators can encourage service providers to provide service to underserved areas through licensing incentives and permits.  
Regulators can provide funds for research, development and testing of technology that promotes technology choice and reaches under-served groups.  
Community service obligations which accompany licenses could contain specific gender-equality components. |
| **Regulatory frameworks**   | Resale of mobile phone services is often a successful business for women.  
Reduction of licensing fees, spectrum prices and interconnection charges can make ICTs more accessible to women and other under-served groups. |
| **Licensing**               | High licensing fees increase the cost of telephony and ICT services, discouraging women-owned communications businesses (including telecentres, phone-fax-Internet shops and mobile telephony).  
A certain number of telecommunications licenses could be allocated to women-owned businesses or businesses with women in management positions.  
A gender-equality licensing policy could waive license fees for communications businesses run by women entrepreneurs or those that provide services to underserved areas.  
Support operators with gender-equality and pro-handicapped employment policies by charging lower licensing fees.  
Ensure licensing procedures are transparent and accountable. |

**Vertical or sectoral information policies**

These have the clearest and most easily apparent gender implications. The table below demonstrates how ICT policy and strategies can promote gender equality and women’s empowerment in the BPFA areas. As a result of the AISI focus on food security, education and research, health and gender equality, many NICI policies and plans in Africa focus on these areas, and many mainstream gender into them; however, several also address a range of other key areas identified through the BPFA.
Table 3.4
Millenium Development Goals in relation to AISI

<table>
<thead>
<tr>
<th>Millenium Development Goals</th>
<th>AISI Challenges and Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Eradicate extreme poverty and hunger</td>
<td>Food security-related objectives</td>
</tr>
<tr>
<td>2 Achieve universal primary education</td>
<td>Education and research</td>
</tr>
<tr>
<td>3 Promote gender equality and empower women</td>
<td>Gender and development</td>
</tr>
<tr>
<td>4 Reduce child mortality</td>
<td>Health</td>
</tr>
<tr>
<td>5 Improve maternal health</td>
<td>Health</td>
</tr>
<tr>
<td>6 Combat HIV/AIDS, malaria, and other diseases</td>
<td>Health</td>
</tr>
<tr>
<td>7 Ensure environmental sustainability</td>
<td>Man-made crises and natural disasters</td>
</tr>
</tbody>
</table>

*Source:* Economic Commission for Africa

Appendix Two presents 22 countries in Africa which have incorporated gender into some aspect of their ICT/NICI policies and plans, either in their vision statements, objectives, pillars or specifically in one or more of the BPFA areas. In terms of overall vision, objectives, pillars, cross-cutting issues, and key drivers, eighteen countries include one or more references to gender and/or women. The policies of three countries refer to consultation with or participation of women’s organizations (both governmental and non-governmental) during the policy development or ratification process. Eight countries identify women in the context of a national universal-access policy. (Although Uganda is included in this group, references to women or gender are absent from its Rural Communications Development Plan.) In terms of the BPFA areas, those which see the greatest incidence of references to gender are (in order): Education and training (12); economy (including SMEs and income generation – 9); poverty (including food security) (6); human rights of women (6); media (5); power and decision-making (5) and three countries include references to gender, women or gender machineries in each of the following: health; the girl child; and institutional mechanisms.

Those countries with the highest number of references to gender in any of the categories included, are Swaziland (12); the Gambia (10); Rwanda (9); and Zambia (8). While Ghana makes 7 references in its NICI and ICT for Accelerated Development policies combined, it is the only African country to have developed a separate stand-alone National Strategy on Gender and ICTs. [to be included].

### 3.3 What are the implications of ICTs for gender policies?

In general, Table XXX provides guidelines for gender policy-makers on how ICTs can help promote the Beijing Platform for Action. A review of African gender policies finds only two which have incorporated ICTs: the Burkina Faso Politique Nationale de la Promotion de la Femme and the National Plan of Action for the Gender Programme of Mali, 2005-2008, which makes reference to the importance of ensuring women have access to technological information on natural resources management. Several national gender plans include references to enabling access for girls and women to science and technology subjects and training: Malawi, Mali, Tanzania and Zimbabwe.
The Tanzania Women in Development (WID) programme promotes the ability of women to acquire, utilize and promote science and technology which will reduce and ease their daily workload. It also calls for the amendment of laws and procedures in the educational system to enable women and girls to attend courses especially in the field of science and technology.

The Zimbabwe National Gender Policy refers to the intention to “eliminate all forms of discrimination against boys and girls in education and skills training which includes science and technology.”

While the mission and objectives of the Ministry of Promotion of Women, children and the Family in Mali are in part to improve women’s access to vocational training, science and technology education and continuing training with a view to their integration into the development process.

### 3.4 “Engendering” national ICT machineries

Work with both gender and ICT departments in government, both together and separately, will help both groups a) understand the value of gender-mainstreaming ICT policies and b) using ICTs to promote gender goals in a country, as well as c) what steps to take towards achieving this goal.

In addition to “engendering” ICT policies, a range of actions can also be taken to integrate women and gender-equality champions within ICT policy and regulatory agencies. The International Telecommunication Union (ITU) Gender-Aware Guidelines for Policy-Making and Regulatory Agencies suggest a range of strategies:

- Facilitate and promote the establishment of a Gender Unit within the regulatory agency, the Ministry and/or as an inter-agency effort.
- Review, revise or develop new regulations, circulars, issuances and procedures to remove any gender bias, such as for example, lack of child-care facilities, lack of maternity leave, and limited opportunities for training and advancement of women, will restrict opportunities for women within the agency.
- Promote gender analysis as a regular, ongoing component of the policy development, implementation and monitoring process.
- Develop and establish systems to gather gender statistics. The SCAN-ICT initiative offers support and guidelines for gathering gender-disaggregated ICT statistics.
- Implement equal hiring opportunities for all women and men, regardless of race, ethnicity, class and age; and provide support and training for their advancement in the agency.
- Eliminate wage disparities between men and women and implement equal pay processes.
- Promote gender-awareness training opportunities for women and men.
- Support technical and management programmes that train women professionals and create internship programmes with educational institutions (ITU, 2001).
Promoting women’s access to e-government in Africa

There are four types of e-government services:

1. **Government-to-citizen (G2C)** services include information dissemination and basic services such as licenses, birth/death/marriage certificates; tax information and filing; and education, health care, hospital information, and libraries. G2C services also involve providing opportunities to citizens to interact with their government, from filing of complaints to making inputs on policy and programmes, to participating in an informed way in elections. Gender issues relate to promoting women’s participation in elections and governance, as well as providing information, ensuring women benefit from basic services, and addressing the Beijing Platform-for-Action areas to support poverty reduction and gender equality.

2. **Government-to-business (G2B)** transactions consist of services exchanged between government and the business community, such as dissemination of policies, rules and regulations. They also include current business information, downloading application forms, renewing licenses, registering businesses, obtaining permits, payment of taxes and e-procurement. There is particular need to reach women’s enterprises and to promote women’s income-generating activities, which currently are not well-supported. Extra efforts supplemented by specific strategies to target women are needed, to ensure that they have equal opportunity and access.

3. **Government-to-employee (G2E)** services encompass G2C services but relate primarily to specialized services for government employees, such as the provision of human resource training and resources to improve day-to-day bureaucratic functions and interaction with the public. Support to national gender machineries, female government employees and female legislators is currently a gap in this sector.

4. **Government-to-government (G2G)** services occur at the local or domestic level as well as at the international level. They are transactions between governments as well as between department-level and attached agencies and bureaus. They can also be used as an instrument of international relations and diplomacy.

Considering the lack of access of African women to ICTs, particularly new technologies such as the computer and Internet, e-government and digitization of government services may further marginalize women unless they are targeted to women and take into account their situations and concerns. Women tend to make up the majority of those groups which are not currently included in governance structures, for reasons of distance, access to infrastructure, level of education and access to resources. E-government can provide an opportunity to reach
these groups by transforming communication avenues into opportunities to increase national growth and development; providing tools to overcome social and institutional barriers; and strengthening participation in economic and political processes (Nath, 2006).

**E-inclusion**

E-inclusion, as promoted by the European Union and the United Nations, refers to the “use of ICTs to provide public services that enrich citizen’s lives, stimulate public participation in the community, strengthen democracy and reach out to people at risk of social, economic or digital exclusion.” This includes ensuring that public services are usable and accessible by everyone – through accessibility standards and multilingual services; using different ways to reach citizens (Internet, mobile phones, kiosks, digital television), and promoting ICT literacy to enable citizens to access e-government services. The second dimension involves creating and implementing policies and services that deliver measurable benefits to all citizens (EU: 2006).

The Socially-Inclusive Governance for the Information Society Framework presented in the 2005 Global E-Readiness Report (DESA: 2005) is a model towards this end: it recognizes the need to focus on e-programmes and policies which suit a range of groups, so that the poor, women, and those living in rural areas are able to benefit from the use of ICTs and e-government services to gain social and economic empowerment. The framework emphasizes the building of capacities and reducing inequalities in life chances and deprivations of income, illiteracy, morbidity, persecution, security and lack of social choice. This kind of approach requires a set of allocational decisions and strategies which involve two main goals: 1) access to information and informed decision-making for all; and 2) a system of citizen input into public policy decision-making that shapes policies and programmes to reflect what citizens value.

Promoting access for women and understanding the gender dimensions of e-government and ICT policy is a core element of e-inclusion. Gender-inclusion requires steps to ensure that the gender divide does not widen further, but in fact narrows. This involves establishing an enabling environment to remove gender-specific barriers; recognizing gendered effects of ICT implementation; gearing e-government policies and programmes to integrate and promote female access, literacy, education and technical skills; and promoting awareness of the importance of including women in the information society (DESA: 2005).

### 4.1 Gender in e-government strategies

Some African countries have developed e-government strategies in support of their ICT policies (including the Gambia, and Uganda). The East African Community Regional e-Government strategy document addresses inequality issues in ICT access and use in the region. It further outlines a few action points in view of the potential use of ICT as a tool for gender equality, the MDGs, and poverty reduction objectives of partner states. They are:

- The need for e-government strategies to be geared to enhancing the productive capacity of the poor by promoting labour-saving devices for women, creating rural multimedia centres for women, access to credit/loan opportunities and information on online agricultural R&D;
- The launching of e-government initiatives/providing access at local area councils in delivering responsive social programmes to the poor;
• The need to address gender at national and local levels through using innovative ICT applications such as the rural multimedia centres for women that can act as the participatory hub/link to the national development processes/programmes;
• The institutionalizing of dialogue between government, civil society and donors, NGO/CSO links through NGO associations to mainstream gender dimensions in the e-government processes in the region;
• Providing education for regional human resources development to provide adults, unemployed, women and retrenched segments in the labour markets with ICT skills training to improve their employability and overall quality of life; and
• Awareness raising and facilitating inputs of women into national development processes and programmes.

At the national level, the Uganda e-government strategy includes a reference to the importance of including women in universal access; and gender is identified as a cross-cutting issue in the Gambian e-government strategy. Several national NICI plans or policies include a reference to gender and e-government, with that of Swaziland being most comprehensive: “develop a robust e-government programme that would promote the use of ICTs across all ministries and departments, with a deliberate gender bias”.

4.2 Supporting women through e-government

When gendered patterns of access, affordability, benefits and decision-making are taken into account, women can benefit from the increased information, knowledge and income-generating opportunities that ICTs can promote. E-government can be an important tool for achieving national development, the MDGs and the BPFA goals when set up in ways that make it accessible, affordable and relevant to women. Gender dimensions apply to G2C, G2B and G2E strategies.

In particular, m-Government, or provision of government services via mobile communication, poses a great opportunity for e-government in Africa. There is a large and increasing subscriber base of mobile devices, they enable users to demand services, and they are giving an increasing number of users an “Internet experience”. The private sector is already delivering a range of services over mobile devices, many of which can support the provision of e-government services, while device convergence means mobile devices now incorporate many of highly effective technologies such as Internet and radio. Moreover, because it is a two-way communication device, allowing users to transmit as well as receive information and communication, mobile devices have the potential to be the most effective technology for stimulating the demand and supply of public services through local e-content in a broad range of contexts and to stimulate citizen interaction with government. There is also evidence that low-income households are willing to spend relatively large amounts of their income on telecommunications such as mobile phones because it helps them save money in other areas (CTO: 2008; Bhavnani et al, 2008; Gray, 2006; Diga, 2008).

Given the growth of affordability and coverage of mobile telephony in developing countries and especially in Africa, m-government as it is called provides several advantages:

1. Affordability (demand-side): it offers affordability and choice, even for very low-income customers (i.e., through cheap handsets, micro prepayments, and top-up cards).
2. Affordability (supply-side): Setting up mobile towers is a relatively inexpensive way of reaching large and remote rural areas, compared to last mile cable for fixed lines.

3. Flexibility: both pricing models and use are flexible: mobiles are used for text and voice and in two-way communications.

Mobiles are increasing the inclusion of the most marginalized people in society, and could enable them to access public services currently out of their reach (CTO:2008). M-Government can in this way be a means of overcoming traditional cultural barriers around face-to-face communication, literacy and web-based technologies. Women in particular tend to use mobile technologies to access government services to a greater extent than before. Comfort levels with the voice-based technology, the ability of voice technologies to address information needs in each country studied, and the ability to enable authorities to respond faster to questions and grievances can all combine to contribute to increased accessibility and accountability to the people and their needs (Sharmaetal:2005). For all of these reasons, the mobile phone will continue to be an important communication and information device for the foreseeable future.

There are three main areas in which e-government and m-government can have real effects in improving women’s lives and incomes:

1. Promoting government-citizen interaction and participation (G2C)
2. Information services in critical sectors (G2C)
3. Support to women’s livelihoods (G2B)
4. Support to national gender machineries and women in government (G2E).

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Save time/travel of women
Affordable – women have greater access
Engage women (language)
No training required
Target rural and non-literate citizens
More services to citizens
Targeted content
In this framework, appropriate technologies and strategies can promote e-government and e-inclusion. In general, there is evidence to show that the use of ICTs by women increases their self-esteem, their social status and their sense of being able to take action in their own lives. This will have spill-over effects into other parts of their lives, including the (Beijing) 12 areas of critical action. But ICTs can also be used in specific areas to promote effective e-government in the 12 areas of critical concern in the BPFA.

4.2.1 Promoting government-citizen interaction and participation (G2C)

Providing information on and access to government services and programmes

Information on government services and programmes can expand the reach of these services, providing increased value, accountability and usefulness. Users can use e-government services to find: names and contact information of local officials and their roles and responsibilities; working hours of government offices; application forms, rules and regulations, etc. Women stand to benefit tremendously from these kinds of services, which allow them to interact with the government and local electoral representatives on issues such as redressing grievances, information on new services or on the status of existing services, reporting cases of corruption and harassment, and job applications (Nath, 2006). This saves transportation costs and time; in societies where it is not acceptable for women to interact with men outside of their families, online access can allow them to act on their own behalf.

In India, government service centres have been set up in rural areas across the country. Many are run by local women, providing them with an income-generation opportunity while expanding the reach of government services. e-Seva (E-Services) in West Godavari district, Andhra Pradesh (India) is an example. The project was initiated to introduce C2C (citizen-to-citizen) and C2G (citizen-to-government) services in rural areas, particularly to women. Internet kiosks or e-Seva centres at the block level were put under the control of women’s self-help groups. Over time, women managers became active users of the services and technologies offered at the centres, while the kiosks became an important interface for communication and transactions between the local administration and the community. The women managing the e-Seva centres have become information intermediaries and information leaders in their villages, with improved standing and increased influence as a result. Members of the collective also travel from village to village with a portable receipt printer to provide utility payment services (Nath, 2006).

In Nigeria, mixed communication and technology services were provided to poor communities to deal with unofficial fees, poor infrastructure and lack of transparency in management of funds allocated for primary schools under the Universal Basic Education Programme. It included toll-free telephone communication with service providers, computers for recording and storing complaints, requests and suggestions, and monitoring of status of complaints filed. In Pakistan, a system to monitor misallocation of resources and lack of upkeep and maintenance around water connections included a complaint e-centre, website, regular public meetings and telephone or face-to-face access to the complaint centre. Both systems improved transparency of local government processes; they also empowered local people, in particular women, to learn about and access government services. The voice access and local meeting centre were particularly important components of these systems Sharma et al: 2005.

The Integrated Revenue Management System in Ethiopia provides automated services to customers of the Revenue Agency of the Addis Ababa City Administration, including new taxpayer registration, assessment of tax types, payment and collection, and clearance certificate generation. It has enabled the Tax Authority to collect more revenue in tracking outstanding liabilities. (ECA: 2007). A planned initiative to distribute property tax bills via SMS in India could be a complementary approach to municipal and federal e-tax systems (Jadhav: 2008).

The Community Empowerment Programme established by the Government of Mauritius National Computer Board is an example of e-government facilitating communities to make use of ICT to fully participate in socio-economic development. The programme brings together the country’s development stakeholders in an online network of local, regional and global development communities to democratize access to information; provide comprehensive, high-quality information about the country and its economic and social situation; help reduce the “Digital Divide” by providing online information; and stimulate the development and production of local content on the Internet.

The aim of the programme is to empower communities to use the Internet more effectively to find solutions to development challenges; provide a common platform for sharing local knowledge; and establish a marketplace for project proposals, discussion forums, and thematic web directories. It will also enable communities to formulate and implement their own development projects by collaborating with donors and other stakeholders. The projects identified in the planning phase of the Mauritius Gateway Project will be implemented under the CEP and will be hosted at the level of the Government Online Centre as part of the Citizens portal.4

Promoting political participation of women

ICTs can support electoral processes through provision of information on elections and candidates. This is particularly important for women, who in many African countries tend to have less access to public spaces, meetings and civic events, and as a result less information on elections or candidate registration. It can also be used to remind citizens of poll locations and encourage them to vote. In Tanzania, the District Commission uses radio to persuade women to run for local office – more women are now contesting elections. (Creech et al: 2006). SMS has also been used in various ways to make elections more meaningful exercises by encouraging increased voter registration and turn-out. In Macedonia, messages were sent via mobile phone to encourage votes for women in the 2006 National Elections which was considered to have contributed to the increased representation of women (29 per cent) in the Macedonian parliament (Lallana 2007).

ICTs and e-government can also improve efficiency within government, provide networking support to women policy-makers, and improve communication and interactions with citizens. In Uganda, the Forum for Women in Democracy (FOWODE) found information for female members of parliament on the Internet to support their contribution to parliamentary debate and investigate issues around new bills introduced in the House (Opoku-Mensah 1999). Women Mayors’ Link was developed in 2002 in the 12 countries and territories of the Stability Pact (SP) Region in South Eastern Europe. Largely communicating through email, the network strengthens women mayors’ leadership skills, lobbies for the better representation of women in local government, promotes cooperation between women mayors and local women’s

4  http://www.gov.mu/portal/sites/ncbnew/main.jsp
networks in designing projects to improve the quality of life of women and children, and exchanges best practices with other groups regionally and internationally\textsuperscript{5} (in Nath: 2006).

\subsection*{4.2.2 E- Services}

As identified by AISI, ICTs can promote many of the MDGs and BPFA areas by focusing on information and services in five key areas: food security and agricultural information; education; health; gender equality and development and disaster notification and mitigation (through enhanced environmental management practices, for example).

\textbf{General services}

Projet Radio (ALT/PR) in Southern Madagascar broadcasts on topics such as HIV/AIDS, family planning, mother and child health, environmental issues, social and administrative issues, and gender inequality, involving local radio stations, village listening groups, and local (governmental and non-governmental) service providers. These changes are influencing increased use of health services, enrolment in literacy classes, construction of environmentally-friendly woodstoves, tree-planting, agricultural yields, and awareness of strategies for poverty reduction through income generation and community associations. ALT carries out this work by involving local radio stations, village listening groups, and 49 local (governmental and non-governmental) service providers. It trains, provides materials, and facilitates a network between these groups.\textsuperscript{6} In Rwanda, Electrogaz SMS Utility Payment System allows customers to pay their utility bills using cash power cards of various denominations. Based on scratch card technology, a consumer sends an SMS message to the Electrogaz server with the metre serial number and validation number on a scratch card. They will then almost instantly receive an SMS message with a 20-digit credit voucher for their bill (ECA: 2007).

\textbf{Increasing food security and agricultural information}

Governments in many countries are setting up SMS and telephone answer services in agricultural information and marketing for farmers. WOUGNET in Uganda has introduced mobile phones to women for weather forecasting and the repackaging of agricultural products, while fees can be charged for their use by other members of the community. Women were also trained in the use of a range of ICTs which they have not only used to access information but also to provide feedback and share their own experiences. ICTs used include radio, mobile phones, audio/video tapes, and the Internet. While 300 women are direct beneficiaries of the project, the wider community has also benefited: it’s now a little easier for government officials, such as the District Agricultural Office to disseminate information to the farmers or for traders to know when the farm produce is ready for purchase. (Dimitra: 2008; WOUGNET: 2007). Manobi in Senegal signed up 40,000 customers for a service by which farmers and fishermen can access a Web-based trading platform via Internet-enabled phones. Users can also request prices and make trades via SMS. Using this service, some farmers linked up with the French army and made arrangements to supply one of its ships when it docked in Dakar (Slocombe 2005). In India, information kiosks collect, digitize and put up agricultural information on a local web site. Local groups also use them to get information on government programmes, technical agricultural information, weather forecasts, market prices, job opportunities, and news\textsuperscript{7}. Phone and SMS-based services can provide technical information in local languages.

\textsuperscript{5} Gender and ICT Awards. 2003. Women Mayors’ Link: Romania. (http://www.genderawards.net/winners/wml.htm)
\textsuperscript{6} http://www.comminit.com/en/node/113895/347
\textsuperscript{7} National Institute of Agricultural Extension Management, MANAGE:n.d.
Farm Radio International supports food production and farmers in Africa in two ways: it develops radio content for smallholder farmers and helps build skills and knowledge of partners for providing farmers with better communication services. It produces radio scripts on crop production, environment management, farm and household management, food safety, nutrition, HIV/AIDS and agriculture, children on farms, farm safety, youth in rural areas, farm income, and women farmers. The scripts are provided free of charge, in English and French, to partners in sub-Saharan Africa, where they are adapted to local conditions, translated into hundreds of languages, and broadcast to a potential audience of several hundred million people. The scripts are also made available by web and email. Primary beneficiaries are smallholder farmers, small plot gardeners and farm labourers – especially women, who are often excluded from traditional agricultural extension services.

In a project in Kenya, poor women and men farmers were organized in radio listening groups. The groups documented on audiocassettes their knowledge, skills and priority issues in crop growing and keeping animals, health and nutrition. These discussions were provided to research scientists who answered the farmers by writing papers on the issues raised and which were used to base radio scripts broadcast by the national broadcasting corporation at a time chosen by farmers. These Radio Listening Groups then discussed the information contained in radio broadcasts as well as audiocassettes, booklets written in local languages, and each other in deciding messages to adapt, adopt and reject. Some of the results of the project were: increased agricultural knowledge, increased confidence on the part of some of the women involved in their own knowledge and increased knowledge-sharing among participants (Ngechu: 2008).

In remote areas, audio cassettes, face-to-face meetings, and songs can be used to spread agricultural information. The Crops Research Institute of Ghana worked with women farmer groups in 2005 to explore the use of ICTs to increase their access to agricultural information for vegetable production. The project found that in this situation older ICTs such as radio, audio cassette recordings when combined with learning networks such as farmer radio fora and use of agricultural information centres increased access to agricultural information by women farmers (Nkrumah: 2008).

FRI also supports development of skills of rural radio broadcasters to better meet the needs of farmers. This includes promotion of training resources and opportunities offered by other organizations as well as the publication of guidelines, best practices, tips, and information about African farming issues. The materials are intended to help broadcasters understand farmers’ problems and concerns and produce programmes that provide reliable, practical information based on scientific research as well as traditional knowledge.8

Increasingly, mobiles are being used to track production trends and potential crisis issues. In Orissa, India, an SMS-based reporting system was implemented by the state government in 2007 to track the health of livestock and breeding services. Villages and prevailing livestock diseases were codified in order to source data from about 10,000 officials, including 2,000 veterinary doctors, working across the state. The animal husbandry field staff, working at the grassroots level, send weekly reports via cell phone using SMS capacity to their directorate, which compiles the data for a consolidated weekly report that includes a critical analysis and a list of appropriate remedial measures (Dash, 2008).  

8 www.farmradio.org
Expanding the range of education and training

ICTs can help to reach those who have not been reached through the educational system (both children and adults); and increase the quality of the learning experience. A range of ICTs can provide different approaches to and levels of education, according to geographical location; age and socioeconomic level. It is also an effective teacher training medium.

Literacy training strategies can equip learners with functional literacy and provide non-formal education, while training local teachers to use computers and other media to develop locally-informed curricula. A community-based learning centre (CLC) in Zambia taught on health (malaria, diarrhea and HIV/AIDS) and organic farming. Trainers and teachers used computers, video and digital cameras to develop learning materials based on local issues, experience and situation (Farrell: 2004). Classe Rurale en Langues Nationales is a distance learning programme in Burkina Faso which provides curriculum in local languages, targeting rural people at any level of education, including illiterate people, through combined use of sound, images and text (ECA:2007).

In school settings, computers, internet, radio and video can enhance the learning experience and expand the curriculum. Computer and internet strategies are used to encourage inter-cultural awareness and understanding and in the development of educational content, promotion of cross-cultural learning and ICT literacy:

- Global Teenager Ghana, part of Schoolnet Africa, supports exchanges among schools and teachers over the Internet to encourage inter-cultural awareness and understanding. The project uses ICTs to connect both local and international teachers and students and to develop educational content, promote cross-cultural learning and increase ICT literacy. The project promotes new ways of learning, new teaching methods, local capacity development and networking using ICTs (Isaacs: 2006).9

- Isiolo Girls Secondary School, a boarding school with an enrolment of about 200 students, became the launch school in Kenya for the New Partnership for Africa’s Development (NEPAD) e-Schools Initiative. It received a new computer lab with 24 desktops networked with a server, plus computers with internet access in the Principal’s office and staff room. A new media room has a computer with Internet access, a TV with satellite dish that can access channels such as Mindset and Discovery and a VCR for recording programmes. The teachers, most of whom had little or no experience with computers, received a week of training, followed by shorter sessions and continue to develop their skills through peer training. Impacts have included increased enrolment as well as taking first place at a provincial congress on science and technology.10

- Interactive radio instruction (IRI) is also a highly effective educational medium. The Southern Sudan Interactive Radio Instruction (SSIRI) programme works with appropriate and cost-effective technologies (solar-powered and wind-up radios) to provide learning opportunities for children, adults, and teachers in southern Sudan. Three grades of interactive radio instruction (IRI) programmes complement and accelerate learning in core curriculum areas including initial literacy and numeracy. The lessons use a combination of games, songs, and stories to introduce educational content. The broadcasts also instruct teachers to include girls and boys in the activities equally, a significant departure from traditional classroom practice.11

9 http://www.itu.int/ITU-D/ict stories/themes/education.html
10 http://www.itu.int/ITU-D/ict stories/themes/education.html
11 http://www.comminit.com/en/node/134510/376
• At higher educational levels, the virtual university model can be an effective channel for women's education in that it allows for flexibility of location; flexible learning schedules; and is more affordable than a traditional university education. The African Virtual University is a good model.

Despite the success of the Kenya project, it is more likely that coordinated, flexible and blended approaches to e- and ICT-based learning will be more successful in many countries. The Ethiopia Government in conjunction with state-level TVET (technical and vocational education and training) authorities and representatives of the ICT sector are developing a strategy for the development of ICT and blended learning (including e-learning), including issues such as e-module development, development of distance education in TVET, necessary human resource development and other factors influencing the availability of ICT in the TVET sector (Ethiopia).

The Intel Teach programme is an example of a public-private partnership (PPP) approach to strengthening educational curriculum and teaching. It focuses on training educators to use technology and integrate computers in the classroom, through improving their basic computer skills in word processing, multimedia, and educational online content, and encouraging a more interactive learning experience. Teachers then train each other, providing both face-to-face and online instruction. In Egypt, 40 ‘master’ teachers distributed among 26 governorates were trained to coach 1,000 others who will then go on to train other teachers. More than 400,000 teachers from Egypt, Jordan, Lebanon, Morocco, and Saudi Arabia have graduated from the programme, according to a press release from the foundation. The ministry of education in each country nominates teachers to take part in the programme and Intel provides the curriculum, online tools, compact discs and books, and incentives for participants to complete the training (Ghosn, 2008).

Although limited in content provision, m-learning – education through mobile phones and devices – presents several other advantages: mobiles are cheaper than computers; they are flexible in mode of content (text, email and voice); they are widespread and provide wireless access to educational materials, other students, and internet resources. The platform can carry different topics and types of educational content and can encourage personalized curriculum content and progress. (Traxler: 2005). They can also carry non-formal educational campaigns on health and other issues in an entertaining and easy-to-read format. Examples of m-learning for non-formal education include the ZMQ project in India which uses mobile phones for Hindi-speakers. Popular regional content is converted into m-learning material for under-privileged and semi-literate people. “My classroom” presents information on epidemics and how they spread; “Save your village” is an animated short series to prevent the spread of HIV/AIDS in villages; and “Spread the red ribbon” is an interactive game to spread awareness of HIV/AIDS (Traxler and A. Kukulska-Hulme, 2005).
The National Science and Engineering Research Council (NSERC) Canada Chairs for Women in Science and Engineering is a public-private partnership launched in 1996 with the goal to increase the participation of women in science and engineering and to provide role models for women active in and considering careers in these fields. NSERC funding is matched by cash contributions from corporate sponsors to set up research chairs at Canadian universities. The purpose of the Chairs is to develop, implement, and communicate strategies to raise the level of participation of women in science and engineering as students and as professionals. Chairs are jointly sponsored by Hewlett-Packard (University of Guelph); Petro-Canada Chair (Memorial University of Newfoundland); Cameco (University of Saskatchewan); General Motors (University of British Columbia) and Industrial Alliance Insurance and Financial Services Inc (Laval University, Quebec).

Providing health services and information

Increased use of ICTs by households has been shown to correspond with improved health status. Access to timely information on health services in turn generates increased demand both for telecommunications infrastructure and medical facilities (Micevksa: 2005). Health challenges in Africa include the diseases themselves as well as supporting facilities: human resources and physical infrastructure. (Litho 2007) e-Health can contribute in situations of lack of specialized staff, shortage of medical expertise (particularly in rural areas), limited access to medical education and scarce data on health-related issues. It also has the potential of supporting women and men to understand their own health, including prevention and dealing with health concerns. A study of 70 countries in Asia and Sub-Saharan Africa found a significant correlation between telephone density and TV density to reducing malaria deaths. Telephones do this by providing connections to larger social networks and facilitating rapid diagnosis and treatment, while TV can provide disease awareness among the population, encourage people to adopt healthy behaviour and communicate risk mitigation actions (Mozumder and Marathe, 2007).

The use of ICTs in support of improved health is quite widespread so that there is a strong base of experience to build on. The Rwanda TRACnet System is an example of a flexible mixed-technology, mix-used system which supports users at different levels of ICT access by connecting a range of technologies (computer, internet fixed-line and mobile phone, PDA) to collect, sort, retrieve and disseminate programme, patient and drug information for care and treatment. Data on patients, lab results, drug supply and programme indicators are entered by the health worker either via phone or Internet, (through web or interactive voice services) which can also send automatic alerts through SMS and email. It allows health workers and policy makers to view, analyse and map the data in real-time to make more informed decisions. Of 152 facilities using the TRACnet system in Rwanda, 86 per cent access it via phone, and 14 per cent via the Internet. PDAs and cell phones can be used in the field; automatic alerts are sent through both SMS and email (Cishayao, 2007).

Many examples of the use of mobile phones to disseminate and collect health-related information exist in Africa:

- On Cue is a phone system which reminds patients via text message to take their medication in one of three languages and in a range of styles to ensure they do not become boring (IICD: 2003).
- Pesinet in Coura, a district of Bamako, allows the monitoring of infant health through
regular checks on weight gain. Children are weighed at home twice a week by local women who also check for fever, diarrhea, coughing and vomiting. The data is entered on mobile phones and sent to a database monitored by pediatricians who identify infants at risk of malnutrition, malaria, or other health problems. Medical consultations and medicine can then be provided. In a similar project in Saint-Louis in Senegal, the infant mortality rate fell from 120 per thousand to 8 per thousand. (Chibomba 2007).

- In Mali, text messages with health slogans are sent twice a month to 350,000 clients, free of charge. HIV/AIDS and malaria prevention slogans are also being printed on one million pre-paid phone cards – specific, concrete messages such as “Anyone can get HIV - everyone can prevent it” and “Protect your family against malaria - use an insecticide-treated mosquito net”. All of the HIV messages in this social marketing campaign also refer to an interactive sexual health website created by PSI/Mali for young, urban Malians. (Telegraph:2006)

- Games HIV-AIDS topics for mobile phones are being developed and released in, Kenya, Malawi, Mozambique, Namibia, Tanzania, and Uganda by Freedom HIV/AIDS in collaboration with Hivos. The programme also plans to launch a mobile Care Support and Treatment Manager System for people living with HIV/AIDS; and in 2008 the intent is to develop games and mobile learning applications on TB and malaria.\(^\text{12}\)

A critical and under-recognized role for ICTs is in the provision of information in formats which are understandable and relevant to the layperson. Soul-City multimedia campaigns in South Africa broadcast information on HIV-ADS, high blood pressure and stigma, with a notable effect on listeners’ knowledge. After the broadcast, 63 per cent of people surveyed disagreed with the statement that people with HIV and AIDS should be kept away from other people to prevent spread of the disease, up from 43 per cent. AfriAfya in Kenya provides locally-relevant up-to-date health information through repackaging and dissemination to community-based health intervention sites via e-mail, printed material, text message, CD ROMs, and even folksongs and traditional media (ICD, 2006; DESA: 2005a; Ballantyne, 2002).

Videos, radios, PDAs and of course the Internet can be used for distance education of health workers.

**Promoting women’s human rights and fighting violence against women**

ICTs can be a tool for promoting and monitoring the rights of women: the UmNyandgo project in South Africa is an example of how SMS and pod-casting technology can be used to disseminate information as well as allow reporting of human rights violations relating to domestic violence; women's exclusion from access and control of land; participation in government; conflict; and access to justice.

ICTs can also act as tools for avoiding and addressing human rights abuses. Women and girls can avoid trafficking by finding direct information through the internet and phone communication for employment abroad on visa requirements, access to legitimate job announcements, and making direct contact with potential employers. They can be a tool to find people who have disappeared, allowing rapid exchange of information among groups. Website and email lists

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provide resources, information, and support for targets of security abuses, and also monitor and expose activities of perpetrators and stalkers (Huyer et al 2005).

Abuses and practices such as female circumcision can be counted, documented and publicised both online and through media such as computers, posters, CD ROMs and podcasts. 101.5 Koch FM - Kenya is a private radio station owned and run by youth in the Korogocho informal settlement in Nairobi. The station was started in 2001 to respond to rising sexual abuse in the area. Its intent is to increase security in the settlement, create awareness of abuse of women and provide entertainment.13

Other groups use ICTs to work with men on issues of gender violence. EngenderHealth/ Men as Partners produced a 10-minute DVD on “redefining masculinity” in the era of gender-based violence, HIV, and AIDS. It follows 3 characters who talk about their experiences with HIV and what it means to “be a man” in a democratic South Africa. They highlight key HIV prevention messages, such as getting tested for HIV, choosing abstinence, and confronting sexual harassment.14

They can also be used by governments as an effective public consultation mechanism. In India, an e-discussion on implementation of a new Domestic Violence Act helped the gender community formulate a Memorandum for the Ministry of Women and Child Development. Suggestions from the e-discussion are being used to develop monitoring indicators for the Act.15

**Supporting women in conflict situations, conflict resolution and rebuilding**

Women’s experiences in situations of armed conflict, the roles they play, the effects of these experiences and coping strategies in post-conflict situations are documented using a range of ICTs. In Northern Uganda experiences in conflict were documented by women war survivors and local leaders using tape recorders, video recording, photography and face-to-face interaction. This approach enabled both women and men, educated and illiterate, to understand the causes of conflict, the physical and psychological effects of conflict on women and men, and the need for harmonious and peaceful living. The project prompted the Ministry of Gender and Community Development in Uganda to incorporate the issue of peace as a cross-cutting issue in the National Action Plan (DESA: 2005a).

Radio has also been used to raise awareness about conflict and peace issues and their relation to women’s lives. Women Talk Peace is a series of radio productions on United Nations Security Council Resolution 1325, in six languages. It provides information on the Resolution and specifically addresses the impact of war on women and women’s contributions to conflict resolution and sustainable peace, including reconstruction in Liberia.16

Telephone access will help families connect and find each other in situations of conflict and refugee camps. The United Nations High Commission for Refugees (UNHCR) set up a phone service in 2004 linking Western Saharan refugees residing in El Aulin camp in southern Algeria with their relatives in the Western Sahara Territory. This was an expansion of the service provided in a call centre in the 27 February refugee camp used by over 2,700 refugees

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14 http://www.comminit.com/en/node/270018/38
16 www.iwtc.org
from neighbouring camps to communicate with relatives in the Territory. Multistakeholder partnerships are being set up to provide mobiles for refugees. Ericsson is partnering with the GSMA Development Fund, MTN Uganda, and the United Nations High Commissioner for Refugees (UNHCR) to provide connectivity in refugee camps in northern Uganda (Marketwire: 2007).

**Increasing impact of women in the media**

Improved access to information and communication technologies (ICTs) has enabled an increasing number of women to contribute and share knowledge. Some countries have national strategies for gender sensitization and training for media reporters (Mauritius, Tanzania and Uganda). Capacity-building workshops for women media professionals can provide training on Internet services and Internet search tools for different types of content (text, audio, picture and video), advanced search techniques and features, web page development and blogging. University-level courses such as the Botswana Media Women Association (BOMWA) course provide training on online reporting, finding online resources and gender stereotypes as well as information on the national cyber-crime bill at the University of Botswana on Video libraries such as GlobalHealthReporting.org provide reporters and filmmakers with AIDS-related, rights-free footage of Africa, Asia, the Caribbean, India and Latin America.

Improved access to information and communication technologies (ICTs) has enabled an increasing number of women to contribute and share knowledge through the media. Some countries have national strategies for gender sensitization and training for media reporters (Mauritius, Tanzania and Uganda) and others have national policies on ICT dedicated to the promotion of women and gender issues (Burkina Faso, Egypt, Mali, Namibia, Tanzania, Tunisia and Uganda).

Several countries such as Ghana and Mozambique see a greater percentage of women involved as journalists, managers and volunteers in community radio. The Forum of Community Radios (FORCOM) in Mozambique assists the national women’s community radio network in fundraising, coordination, supporting regional networks, organizing training and meetings, and distributing its newsletter. (AMARC-WIN: 2007). The ECA Information Technology Centre for Africa (ITCA) held a capacity-building workshop for Ethiopian women media professionals in August 2007. The training focused on Internet services and tools used for searching the Internet for different types of content (text, audio, picture and video), advanced search techniques and features, web page development and blogging. The trainees were provided with supporting materials and documents to help them continue their learning at home.

**Environmental management and disaster notification and mitigation**

Information needs here include the ability to prepare and avoid environmental crises and disasters, as well as information on environmental and soil management. In Burkina Faso computers, solar-powered internet connectivity, digital cameras and projectors are used to communicate the use and management of water. Documenting, promoting and acknowledging the knowledge and innovations of communities and individuals at the grassroots level will help the owners of this knowledge protect and benefit from their IPRs. The Honey Bee Network in India promotes the knowledge women already possess by
collecting, documenting, promoting and acknowledging the knowledge and innovations of communities and individuals at the grassroots level. It helps the owners of this knowledge (both women and men) protect and benefit from their IPRs. Media for this resource include a newsletter in six Indian languages and an online database of traditional knowledge and grassroots innovations.20

The Multilingual Mobile Messenger in India is a Natural Disaster Information System (NDIS) developed to inform people about any disaster in the country, in local languages over mobile phones (SMS), landlines and specially set up Wireless Public Address System (WPAS) in their locality. Messages are distributed across the network in less than a minute (Pandey: 2006). In Uganda, NETWAS will launch an SMS-based service for rural communities which will allow them to ask a range of water-based questions on topics such as sanitation, hygiene, water harvesting and water technologies (Muwanga:2008).

**Empowering the girl child**

In view of the high populations of children and youth in many developing countries and the ability of youth to gain information literacy rapidly, the use of ICTs can be an important tool to reach girls and young women. Training programmes can provide information on various topics such as exploitation for cheap labour, sexual harassment and abuse, and sexual violence in schools through email, internet and computer training, while also providing girls with employment training.21 In Senegal, youth interest in ICTs is being used to provide information on FGM, with a different study on use of computers in schools in the same country found that girls used their internet access to obtain information on reproductive rights and health issues which they were unable to get at home (Niombre, 2007; Gadio, 2001). Straight Talk Foundation in Uganda produces mass media communication programme to bring information about sexual and reproductive health to young people. They have been particularly effective on the topic of sexually transmitted infections, with adolescents exposed to this programming more likely to use condoms. Other results include the finding that STF programmes appear to promote empowerment among female adolescents: females exposed to the materials were twice as likely to report high self-confidence, twice as likely to possess more equitable attitudes about gender, and four times more likely to abstain from sex if they had a boyfriend.22

In Kenya, mobiles were used by community watchdog groups to monitor and report rights violations involving women and HIV/AIDS orphans. The watchdog groups work with NGOs, government institutions, traditional leaders, faith-based organizations (FBOs) and provincial administrators. The mobile phone became a tool that facilitated mentoring among the chiefs from the four regions, who are being presented with unlawful land grabbing cases by the watchdog groups. Through short messaging service (sms) and direct calls, they receive guidance and information on succession law and procedures from the chief who acts as mentor and advisor. This is complemented by the use of community radio which works to create awareness about the property rights of women and orphans in the broader community. Grassroots women and members of watchdog groups also use mobile phones to report cases of property grabbing to the chiefs, and to provide support to victims of disinheritance.23

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WOUGNET ran a campaign in conjunction with International Women’s Day campaign in February and March 2008 to raise awareness of the plight of the girl-child in Kenya during the post-election violence in the country. It drew over 240 participants from 20 countries in Africa, Europe and the Caribbean (WOUGNET, 2008a).

Radio remains an effective media in terms of reach, language and variety of content format. A radio serial drama in Niger entitled Gobe da Haske (Tomorrow Will be a Brighter Day) raised awareness on child trafficking, exploitation of children, and related issues such as family planning and HIV/AIDS. It broadcast information for parents and community members about the practice of child trafficking and preventive measures as well as related issues of child education, child health, children’s rights and the links between child trafficking and exploitation and related poverty-inducing factors such as unplanned parenthood and HIV/AIDS. The series was produced in the Hausa language by the Population Media Centre country office in Niamey, Niger in collaboration with Initiative Jeunes, a non-governmental youth-focused organization. It was distributed via satellite by First Voice International to 73 radio stations, of which 69 were community radio stations, three were rural radio stations, and one was a national radio station (ORTN Voice of the Sahel). The programme, consisting of 144 episodes, finished its initial broadcast run on January 14 2007.24

4.2.3 Supporting Women’s Livelihoods and Employment Opportunities (G2B)

The use of ICTs to support women’s livelihoods is an area where e-government and m-government strategies can make a noticeable difference by improving the profits, quality and efficiency of women’s small, micro and medium enterprises (SMMEs). M-commerce via cell phones is becoming a major business tool in Africa as in other regions and offers particular opportunities for women who can access mobiles more readily than other forms of ICT. M- and e-commerce improve communication with customers and suppliers and save time and travel costs as well as improving profits; act as conduits for training and information; and provide access to and information on markets, products and pricing in different areas.

‘Sente’ and m-banking are increasingly popular forms of money transfer and transaction systems which facilitate the ease and speed of money transfer both within and between countries; m-Pesa in Kenya is a joint product of the Vodafone/Safaricom mobile phone company, the Commercial Bank of Africa and Faulu Kenya, a micro-finance organization. Customers deposit money with a registered agent or phone vendor who then credits the phone account. Users can send between 100 Kenyan shillings ($1.5) and 35,000 shillings ($530) via a text message. The recipient obtains the transferred cash from a Safaricom agent by entering a secret code and showing personal identification. Similar services are now available in the Democratic Republic of the Congo, South Africa and Zambia. In Zambia, Celpay, a product of First National Bank of South Africa, allows businesses to pay for services and receive payments via mobile phone accounts. Celpay currently processes up to $10 million in payments per month.25

Cell phone and small-scale IT support can increase productivity and efficiency of SMMEs through support of trade and business operations; access to clients and suppliers; access to auction sites to buy and sell products, and even access to financial resources and credit through m-banking. Other potential business support services via mobile include access to toll-free directories for on-line databases with information on suppliers and distributions

24  http://www.comminit.com/en/node/270336/376
25  http://www.developments.org.uk/articles/loose-talk-saves-lives/
channels; information on competition, potential partners and export possibilities.

When targeted to women, computer-based training activities can support women both by providing education and training on business management as well as by teaching them how to use the internet and ICTs to improve production and marketing and increase cross-border trade opportunities:

- Nyamata Telecentre in Rwanda organized a workshop for 45 women genocide survivors. The workshop focused on how to create and manage small enterprises as well as how to negotiate loans from microfinance and gain practical skills on business planning, financing, and accounting, as well as how to use the Internet (Ugabytes, 2008).
- The Zambia - COMESA SMEToolkit is a computer web-based business/SMEs information portal with training resources, business forms and tools covering eight core business management areas: accounting and finance, HR, IT, International business, operations and management, legal and insurance, sales and marketing, and business planning.
- The Mauritius National Computer Board set up a one-year ICT training programme targeting SMEs, to provide SMEs with the necessary information and knowledge on ICT productivity tools and technologies and promote the use of new technologies for new entrepreneurial possibilities. The programme was made up of six sessions of six modules each on 1) ICT productivity tools in business; 2) Networking for SMEs; 3) Effective use of Internet in business; 4) The new communications technologies; 5) Engaging in e-commerce: A guide for SMEs; and 6) Brainstorming and personal queries. The programme targeted mainly SMEs operating in non-ICT sectors such as agro-based manufacturing, handicraft and services. It also organized the Regional Incubation Manager Training for both local and international participants within the African Incubator Network (AIN). Participation was free of cost and participants were invited to share their experience and lessons learned in their local communities. In all, 45 participants attended and 10 of the 27 foreign participants were women. Local participants were the major stakeholders of the National Computer Board – ICT Incubator Centre, including the University of Mauritius, the Development Bank of Mauritius Ltd, the University of Technology Mauritius, the SME Partnership Fund, the Ministry of Finance and Economic Development, the Ministry of Industry, Small and Medium Enterprises, Commerce and Cooperatives, the Small Enterprises & Handicraft Development Authority (SEHDA), the National Productivity & Competitiveness Council (NPCC) and the National Women Entrepreneur Council (NWEC).
- The Kenya Agricultural Commodity Exchange is a market information and market linkage system (MILS) designed to make agricultural markets work better (more efficiently) for farmers, especially smallholder farmers. It provides reliable and timely market information and links farmers to better markets through matching commodity offers and bids. Products and services provide farmers and market intermediaries with relevant and timely marketing information and intelligence to improve their bargaining power and competitiveness in the market place and facilitates interaction between sellers and buyers, exporters.

26 Industry Canada web site. (?)  
27 http://event.stockholmchallenge.se/project/2008/Economic-Development/Zambia-COMESA-SMEToolkit-Project  
and importers of agricultural commodities through a virtual trading floor.29

- TradeNet is Africa’s first “mobile2mobile” trading platform, providing market information and SMS communication tools to producers and traders and their associations across the continent. A web-managed SMS platform distributes data and trade contacts over mobile networks. Services offered allow individuals to set up a webpage on Tradenet, describe their goods and services, and post offers to buy and sell.30

- A rural women’s producer group in Tanzania receives regular information on markets through their mobile phones. They are now able to work directly with processors and traders to find out about prices in markets far beyond their traditional immediate trading partners. As a result, price transparency and profits are increased all along the market chain. Information gained through mobile phones is posted daily on a village bulletin board. As one member said, “We are no longer ignorant, and when they [middlemen] come and say 10,000, while in Dar the maize sells for 30,000, we say No. We are now in a position to bargain fairly.” (IFAD: 2008).

Finally, the ITES – IT enabled services31 – sector is a promising source of employment for women, although evening and overnight hours to access the North American market and cultural and language differences can lead to high staff turnover. Promoting women’s employment in these sectors will increase income-generation opportunities for women as well as promote their more active participation in the information economy. In Ghana, the World Bank assisted the Government of Ghana to generate growth and employment through the eGhana project which aims to use ICT and public-private partnerships to:

i) develop the ITES industry and
ii) contribute to improved government efficiency and transparency through e-government applications.

Women hold 70 per cent of existing BPO (business process offshoring) jobs in Ghana for a range of reasons, including flexible working hours; relatively high salaries; accessibility via short and affordable re-training courses (2-6 month courses cost approximately $150); a secure work environment; and the fact that there are more women graduates in administration in the country.

The government developed a gender and ICT strategy for this sector in support of two main targets: achieving a 50 per cent annual increase in new jobs held by women and increasing the percentage of women in managerial and non-managerial positions. Elements of the strategy include development of a more focused roadmap and interventions for sustainable development of women in ICT and collaboration with UNDP on training for women. To-date, about 300 women have been trained in data entry, call/contact centre and medical transcription services. It is also working actively with BPO companies to increase gender sensitivity (Ampah, 2008).

Other important G2B services for women include targeting women in e-procurement and licensing strategies. As discussed in Chapter 4, promoting mobile phone resale services

31 IT services such as call centers, data entry operations, medical transcription services, etc.
with women has been shown to be a successful poverty-reduction strategy. Lowering licensing fees will contribute to increased development of women-owned communications businesses (such as telecentres, cybercafes and Internet shops, and mobile-telephony-based services). Allocating a number of telecom licenses to women-owned businesses or businesses with women in management; or waiving or lowering licence fees for women-owned communications enterprises will all support women’s entry into this sector. Finally, ensuring that licensing procedures are transparent and accountable will contribute to equal opportunity for all groups.

### 4.2.4 Supporting national gender machineries (G2E)

National gender machineries and women in government tend not to be equally represented in G2E e-government strategies. A review of web pages of African governments indicates that gender and social ministries do not develop an active and updated web presence to the same extent that IT, communications and S&T ministries do. A range of successful ICT strategies for national gender machineries in Africa were identified at the Panel on Strengthening the Capacity of National Machineries through the Effective use of Information and Communication Technologies in Tunis on 18 November 2005. They include: combining new technologies, such as computers and mobile phones, with traditional communication channels, such as radio and print media.

The Panel also noted that:

- cell phones were used in some national machineries as substitutes for lack of computers and fax.
- cellular phones are more accessible to women than computers, especially illiterate women.
- the Internet has proven crucial for linking up with services supporting women, such as domestic violence and child maintenance programmes.
- The need for strategic alliances and partnerships, including with the ICT sector, was stressed. In Seychelles, the national machinery obtained cheaper ICT equipment in this way.
- IT is also important for national machineries to make their challenges known in order to form constructive alliances with other government bodies as well as with civil society, including non-governmental organizations, media and the private sector.
- a focus on collaboration and coordination among the different sectors will avoid duplication among different stakeholders.
- basic infrastructure, illiteracy and low levels of girls’ education are among some of the fundamental barriers towards integration of ICTs into development.
Improving the ICT capacity of the national gender machinery in Malawi

The Malawi Strategic Plan for the Ministry of Gender, Child Welfare and Community addresses ICT as an institutional capacity building mechanism. Strategy 3 of the Plan calls for the establishment of a “comprehensive and integrated and information communication technology (ICT) system for programme implementation and coordination.”

Actions taken include: a review and update of the existing system; installation of a new ICT system to cover all programme functional requirements; training for Ministry staff in ICT; a regular statistical bulletin; and the promotion of new data-management practices.

NGMnet hosted by the ECA is an information portal and networking tool for National Gender Machineries in Africa which encourages the use of web-based resources to inform national gender planning and to make departmental policies and information publicly available.

In Sri Lanka, the Government Information Centre programme (GIC) included the Women’s Bureau and the Department of Child Care and Protection among 20 government departments in a project to provide public access to government information. One phone number which works for all departments across the country provides accurate, up-to-date information in three national languages. GIC coordinators were appointed in each department who were trained in the programme and participated in the beta-testing phase (Pushpakumara 2007).

Building on the opportunities and challenges for ensuring that e-government strategies contribute to gender equality in the region, Governments of Africa met together in three workshops during 2006-2008 to develop and ratify a Plan of Action on Gender and e-Government in Africa. It is presented in the next chapter.
Action Plan on Gender and e-Government in Africa

Note: this Plan combines recommendations made at the Tunis and Maputo workshops. Suggestions for additional recommendations/strategies are bracketed.

Under the framework of the Global ePolicy Resource Network (ePolNet), the Economic Commission for Africa (ECA) and the Canada ePolicy Resource Centre (CePRC) organized two workshops in Tunis, Tunisia and Maputo, Mozambique on “Gender and e-Government” in June 2006 and March 2007, respectively. The recommendations developed at these meetings form the basis of this Action Plan on Gender and e-Government in Africa.

The overall objective of this Action Plan on Gender and e-Government is to provide and use ICTs as tools for empowering and benefiting women and men, for full inclusion in e-government programming and service delivery.

Overall Context

Participants at these workshops recommended:

That all States commit to defining a vision for an Information Society that integrates gender in accordance with the Copenhagen Convention for the Elimination of All Forms of Discrimination Against Women, and the commitments made by the States at the World Summit on the Information Society in the Geneva Declaration of Principles, in the Tunis Agenda and Commitment that recognizing that a gender divide existed as part of the digital divide in society and we reaffirming their commitment to women’s empowerment and to a gender equality perspective in order to overcome that divide; and that the full participation of women in the Information Society was necessary to ensure the inclusiveness and respect for human rights within the Information Society, encourage all stakeholders to support women’s participation in decision-making processes and to contribute to shaping all spheres of the Information Society at international, regional and national levels.

States and all stakeholders involved in shaping a national ICT policy are urged to ensure the inclusiveness of women at all stages of the process: awareness and consultation, establishment of an institutional framework for developing the strategy, needs assessment by developing sex-disaggregated indicators, shaping of sector policies, shaping and implementation of action plans, mobilization of resources and follow-up/assessment of progress made.
Additionally, stakeholders commit to:

- setting up a proper mechanism for broad and prompt dissemination of information;
- making rural and urban women aware of the rights and environment offered to them by e-government services;
- encouraging the emergence of innovative careers for women through e-government activities in community call centres.

States, national stakeholders and international partners commit to undertaking activities in the following Action Plan Pillars:

**Action Plan Pillars**

2. Countries to develop and maintain an enabling environment for the formulation and implementation of gender sensitive e-government policies, including appropriate legal, regulatory and institutional arrangements.
3. Countries in implementing ICT strategies and programmes.
4. Raising awareness of e-government services and enhancing the role and participation of women in e-government.
5. Promote capacity-building in ICT education, training, use and literacy.
6. Develop gender mainstreaming indicators and time-bound target.
7. Encourage countries to develop infrastructures that reach the rural areas.

1. **Countries in mainstreaming gender in ICT policy and e-government processes**

- Provide technical expertise on gender mainstreaming in ICT policy and e-government to gender machineries;
- Ensure that gender machineries are empowered and participate in the e-government process;
- Domesticate regional and international instruments on ICT and gender in national policies and programmes;
- Incorporate national gender instruments into e-government policies;
- Raise awareness among policy decision-makers on the importance of systematically and continually integrating gender in national ICT policies in general, and e-government sector policies in particular;
- Train national committee members in charge of coordinating the shaping and implementation of national ICT policies on the ways and means of integrating gender;
• Develop handbooks, guidelines and models for mainstreaming gender in ICT policy and e-government processes in different sectors;
• Organize ICT and e-government training sessions aimed at women in government;
• Develop training sessions within the public service to allow women to acquire decision-making positions regarding e-government content;
• Position women as advocators or vice-advocators in e-government project management;
• Include representatives from Women’s Bureaus, national women’s organizations and gender experts on ICT policy, planning and review committees at national, regional, and subnational levels;
• Support NGOs to develop e-government strategies and make information available via website and other channels;
• Develop national multistakeholder committees made of up government, private sector, NGOs, academia and other sectors to develop gender and ICT mainstreaming strategies;
• Integrate gender analysis, disaggregated data, input from women’s organizations, and monitoring into all stages of the national and sectoral ICT policy process, and in particular:
  – Consult with women’s organizations to determine national priorities;
  – Include gender experts on the policy framework development team;
  – Ensure that understanding of key gender areas informs the identification and selection process, either in developing women-targeted programmes, or developing programmes in areas critical for women;
  – Employ gender budgeting in resource allocation and deployment;
  – Work with women’s representatives in government and civil society in planning, development and implementation;
  – Integrate gender-disaggregated data and gender analysis in SCAN-ICT planning, assessment and M&E and include gender-disaggregated data in the basic infrastructure and access, business, education and government access and household indicators;
  – Develop gender analyses in sectoral and village ICT initiative plans (SICI and VICI) in key gender areas, such as education and literacy, health, agriculture, employment, ICT-based entrepreneurship and universal access;
  – Mainstream gender into the “Common NICI themes” identified by the ECA: agriculture, education, environment, public administration, tourism, health and government;

• Develop guidelines and training for integrating ICT indicators and accountability mechanisms into the Indicators for Monitoring the Implementation of National Gender Plans;
• Put in place national monitoring systems for implementation of international and regional commitments in gender and e-government.
2. **Countries to develop and maintain an enabling environment for the formulation and implementation of gender-sensitive e-government policies, including appropriate legal, regulatory and institutional arrangements**

- Review national cyber laws to adequately address gender issues;
- Develop cyber laws that are gender sensitive;
- Insert specific budget items for developing and implementing programmes and activities for women in relation to e-government and integrating gender when shaping sector policies;
- Having regulators lower connection costs by encouraging competition and having the private sector offer preferential prices to women for the acquisition of equipment;
- Implement universal access strategies that recognize and respond to the situations and barriers of men and women in using ICTs;
- Explore models for regulatory frameworks that can reduce licensing fees, spectrum prices and interconnection charges;
- Implement regulatory frameworks which allow the resale of mobile phone services.

3. **Countries in implementing ICT strategies and programmes**

- Mobilize financial resources and develop financing mechanisms (e.g. tax levy);
- Introduce incentives to enhance women’s recognition (e.g. Women of Excellence Award – Gambia; Presidential Awards for Best Female Science Students – Rwanda);
- Organize ministerial meetings of ICT & Gender ministers;
- Assist countries to develop gender-friendly e-content in local languages for the community multimedia centres;
- Promote e-networking for countries to exchange information, experiences, lessons learned;
- Promote subregional comparison of best practices;
- Create a multistakeholder network for integrating ICT in women’s associations for the use of e-government services;
- Reserve one or more TIGA awards for a project that demonstrates participation of or benefits to women or gender machineries in its achievements.

4. **Raising awareness of e-government services and enhancing the role and participation of women in e-government**

It is recommended that States systematically take into consideration, when establishing e-government services, raising awareness among women at the local, regional and national level, while also making men aware of the role of women in developing, implementing and using e-government services by:

- Establishing awareness programmes for urban and rural women;
- Creating the training curriculum to enable women to acquire skills to be developers, facilitators or users of e-government;
• Networking and training women’s organizations to use the resources made available to them so that they may take full advantage of e-government services;
• Promoting e-awareness through print and electronic media;
• Informing and raising awareness among decision-makers;
• Taking gender into consideration when training technicians and facilitators;
• Encouraging men to get involved in the actions taken for women to use e-government services;
• Implement awareness-raising actions (seminars, conferences, etc.) for women for proper use of e-government services;
• Targeting special sessions for gender machineries and women political leaders and decision-makers in the African e-Learning initiative courses;
• Integrating gender into e-government courses for government employees;
• Encouraging and supporting a caucus of women parliamentarians and ensure they are provided with the necessary training, research and ICT skills to ensure effective participation when elected.

5. **Develop capacity-building in ICT education, training, use and literacy**

• Promote the demystification of ICTs and ICT literacy among women;
• Promote the acquisition of ICT materials by women;
• Provide training on gender and ICT issues;
• Develop ICT curriculum that is gender sensitive;
• Promote girls’ education in S&T;
• Use ICTs to increase the access of women and girls to literacy and education at all levels, both formal and nonformal;
• Promote and encourage the participation of women in all technical education, including vocational ed; S&T education; and IT education and skills training;
• Promote female researchers in S&T and take steps to help them overcome barriers in entering and remaining in the workforce;
• Promote exchange programmes on bilateral, regional and international levels;
• Develop public-private partnerships such as the Canada Chairs on Women in Science and Engineering to promote women in S&T research and industry;
• Raise awareness among all members of society, particularly in the local language, on the opportunities offered by ICTs to African women, especially those living in rural areas;
• Have training centres offer group discounts for training women in ICT;
• Build capacity of different actors, including civil society and women’s representatives, to make a significant contribution to development of ICT and e-government policy and services.
6. **Develop gender-mainstreaming indicators and time-bound targets, and collect disaggregated data**

- Undertake national surveys on the gender and ICT situation, incorporating sex-disaggregated data on ICT employment opportunities; ICT access and use; literacy; and rural and urban differences;
- Promote data collection to include relevant analysis of gender indicators;
- Share best practices on gender and ICT;
- Integrate sex-disaggregated data and gender indicators into SCAN-ICT reports;
- Monitoring & evaluation;
- Pull out subregional, regional and international commitments made on ICT & gender for benchmarking;
- Develop indicators through regional working group on ICT & gender, building on existing frameworks such as the Africa Gender Digital Index, and exploring other relevant frameworks;
- Add a gender component to e-government indices;
- Assess national ICT policies in relation to the Beijing 12 Critical Areas of Concern, WSIS and the MDGs; and
- Design gender-specific indicators for evaluating actions and plans designed to promote access and use of ICT and deployment of technology infrastructure; including through universal access strategies.

7. **Encourage and support countries to develop infrastructures and access strategies that reach the rural areas**

- Promote widespread deployment and access to ICT infrastructure in the rural areas of countries using a range of accessible, affordable and appropriate technologies and blended technology strategies to reach women such as radio, mobile phones, TV and video;
- Promote technologies which use alternative energy sources, such as radio and solar power;
- Create community ICT access centres managed by and for African women;
- Create incubators for gender and ICT projects at the national and sub-regional level which support and promote women’s economic generating activities and livelihoods;
- Encourage the free use of recyclable equipment from administration in community centres, taking in account the ecological dimension when refurbishing them;
- Integrate gender concerns and language into national Universal Access policies;
- Ensure that women and marginalized populations in target areas are made aware of universal access opportunities by using a range of information dissemination strategies;
- Review universal access policy in a consultative approach to include specific gender sensitive objectives, strategies and targets;
- Ensure distribution of recipient/selected agencies in three sectors: education
(including female only); private sector including women-owned enterprises; and civil society, including women's organizations.

8. **Promote gender-friendly and local content**

- Promote the development of local content in local languages in all media (print and electronic);
- Promote development of content that reflects women's local knowledge and is of value to their daily lives;
- Promote participation of women in the production of content;
- Support retention and benefitting from the IPRs of locally developed content;
- Design content in official languages, giving priority to needs, e.g., by producing educational software; and
- Focus on development of e-government services and content which address the key MDG areas of health; food security; education and training; and gender equality.

9. **Way Forward**

9.1 *Regional cooperation, exchange and coordination*

- Set up joint ICT & gender technical/working groups to plan and monitor implementation;
- Hold joint meetings to assess progress with countries from all subregions in Africa;
- Create ongoing inter-departmental gender and ICT networks at the national level, strengthening its members’ capacities, creating a web site on gender and ICT activities;
- Use the ECA Gender and e-Government website to post documents from both workshops in French and English;
- Coordinate with and promote collaboration among regional initiatives and networks on both gender and ICT, such as the Women Parliamentarian’s network;
- Share outputs of both workshops with participants;
- Develop a Web site on gender and ICT activities on the model of and connected to NGMnet;
- Organize an ICT and gender forum;
- UNECA and its partners facilitate the establishment of an electronic discussion list for seminar participants;
- The Action Plan on Gender and e-Government should be forwarded to governments using ECA channels; and
- Participants should be encouraged to lobby their national committees.
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Appendix

Selected African NICI Policies with inclusion of gender equality issues


Nigerian National Policy for Information Technology.


Kingdom of Swaziland, NICI Policy and Plans.

The United Republic of Tanzania, National ICT Policy, 2003.
