Zimbabwe Country Report

# thetha

the sangonet regional ICT dicussion forum project

# Contextualising ICT for Development in Zimbabwe

Margaret Zunguze

E-Knowledge for Women in Southern Africa (EKOWISA)

July 2009

sangonet

linking civil society through ICTs

EKOWISA

e-knowledge for women in southern africa

ICTs For Sustainable Community Development

Title: Contextualising ICT for Development in Zimbabwe



**Country Research Partner:**
Margaret Zunguze
E-Knowledge for Women in Southern Africa (EKOWISA)
Tel: +263 4 49 2789 / E-mail: margaret@ekowisa.org.zw

**Project Coordination:**
David Barnard
Southern African NGO Network (SANGONeT)
Tel: +27 11 403 4935 / E-mail: dbarnard@sangonet.org.za

**Editing and Research Coordination:**
Tina James
Icteum consulting
Tel: +27 12 346 8264 / E-mail: tjames@intekom.co.za

This report forms part of the Thetha - Regional ICT Discussion Forum Project.



The project is funded by the Open Society Initiative for Southern Africa (OSISA) and the Embassy of Finland (South Africa).

**www.thetha.org**

# PREFACE

To be requested from Minister

# ACKNOWLEDGEMENTS

First and foremost, I would like to thank the EKOWISA Research Team of dedicated personnel who gave their enthusiasm, time and expertise to this research. The team comprised of Unganai Makombe, Tsitsi Mhlanga, Alison Mafemba, and Nellie Nyamai; this team not only carried out the research but also provided the necessary administrative and logistical support for both the research

As the EKOWISA research team, we would like to appreciate the various ICT stakeholders that shared with us their information, knowledge and understanding of the ICT4D issues and helped in making the whole exercise a success. Gratitude is due also to the staff of the Ministry of Information and Communication Technologies (ICT). Special thanks are due to the Permanent Secretary of the ICT Ministry, Engineer Sam Kundishora and to the Minister, Honourable Nelson Chamisa.

We are grateful to Tina James for editing the draft report and for the many valuable comments and inputs. This was efficiently done despite the many computer disk failures Tina encountered during the process!

Thanks are due also to SANGONeT for initiating the innovative project that allowed Zimbabwean ICT4D experts to share and exchange ideas and strategise on priority areas for the next ten years. This intervention was critical as Zimbabwe is currently reviewing its policy, legislative and regulatory frameworks. We as EKOWISA are truly grateful for the opportunity to work with SANGONeT, the ICT giants of the region.

Finally, we are grateful to the Open Society Initiative for Southern Africa (OSISA) and the Embassy of Finland (South Africa) who provided the funds to make the research and this publication possible.

**Margaret Zunguze**
Executive Director
E-Knowledge for Women in Southern Africa (EKOWISA)
July 2009

# TABLE OF CONTENTS

*List of Tables* ..... *iv*
*List of Figures* ..... *iv*
*Acronyms* ..... *v*
*Executive summary* ..... *vii*

1. The ICT4D Agenda ..... 1
   1.1 Introduction ..... 1
   1.2 Determinants of the ICT4D Agenda ..... 2
   1.3 The ICT Environment - Mobile, Telephone and Internet Usage ..... 3
   1.4 State of Infrastructure ..... 5
      1.4.1 Energy and Supportive Infrastructure ..... 6
      1.4.2 Human Resources Skill Base ..... 7
2. Socio-Economic Development Context ..... 8
   2.1 Development Context ..... 8
   2.2 Government of National Unity (GNU) ..... 10
      2.2.1 Short Term Emergency Recovery Programme (STERP) ..... 11
   2.3 Priority Sectors for ICT4D ..... 11
      2.3.1 Education and ICT Literacy ..... 12
      2.3.2 e-Government ..... 13
      2.3.3 e-Health ..... 13
      2.3.4 Commerce and SME Development ..... 14
   2.4 Selected Examples of Civil Society Work on ICT4D in Zimbabwe ..... 14
      2.4.1 Radio Dialogue ..... 14
      2.4.2 Kubatana Trust ..... 15
      2.4.3 Development through Radio (DTR) ..... 15
      2.4.4 EKOWISA Community ICT Project ..... 16
      2.4.5 Tonga.Online project ..... 16
   2.5 Conclusion ..... 17
3. ICT4D Enabling Policy, Legal, & Regulatory Framework ..... 18
   3.1 Introduction ..... 18
   3.2 Broadcasting Services Act [Chapter 12:06], (Act No. 3 of 2001) ..... 19
   3.3 Postal and Telecommunications Act [Chapter 12:05], (Act No. 4 of 2000) ..... 19
      3.3.1 Universal Service Fund ..... 20
   3.4 Access to Information and Protection of Privacy Act [Chapter 10:27), (Act No. 5 of 2002). 21
   3.5 The Interception of Communications Act [Chapter 11:20] (Act No. 6 of 2007) ..... 21
   3.6 Challenges and Gaps in the Current Legal and Regulatory Framework on ICT4D ..... 22
   3.7 Institutional Mechanisms ..... 24
   3.8 Conclusion ..... 24
4. Research Methodology ..... 26
5. Research Findings, Analysis, Conclusions and Recommendations ..... 27
   5.1 Analysis of Respondents ..... 27
   5.2 Structure of the Survey Form ..... 29
   5.3 Findings and Analysis ..... 29
   5.4 Recommendations ..... 40

Appendix I: Useful Resource Materials ..... 41
Appendix II: About The Author ..... 43

# LIST OF TABLES

Table 1: Internet users from 2000-2008 ..... viii
Table 2: Internet users from 2000-2008 ..... 3
Table 3: Penetration Rate Of Mobile Subscribers in Selected African Countries ..... 4
Table 4: ICT Diffusion in Zimbabwe ..... 5
Table 5: Rural and Urban Demographics ..... 8
Table 6: Network Infrastructure at Four Zimbabwean Tertiary Institutions (2008) ..... 12
Table 7: Survey Responses ..... 29
Table 8: Responses about the Draft ICT Bill ..... 30
Table 9: Responses Relating to the Development of Solutions ..... 33
Table 10: Responses Regarding the Importance of Developing Solutions ..... 34
Table 11: Responses Regarding Key Aspects in the Provision of ICT4D ..... 35

# LIST OF FIGURES

Figure 1: % Category of Respondents in this Survey ..... x
Figure 2: Subscriber Statistics for the Period 1998 - 2008 ..... 4
Figure 3: % Category of Respondents ..... 27
Figure 4: Breakdown by Participant - Internet interest ..... 28
Figure 5: Respondents' Principal Places for Internet Access ..... 28

# ACRONYMS

| | |
|---|---|
| AACL | Association of African Communication Lawyers |
| FM | Frequency Modulation |
| ACP | African, Caribbean, Pacific countries |
| AIDS | Acquired Immune Deficiency Syndrome |
| AIPPA | Access to Information and Protection of Privacy Act |
| APDIP | Asia Pacific Development Information Program |
| ARV | Anti-Retroviral Vaccines |
| AZFA | Austria Zimbabwe Friendship Association |
| BAZ | Broadcasting Authority of Zimbabwe |
| BF | Broadcasting Fund |
| CCZ | Consumer Council of Zimbabwe |
| COMESA | Common Market for East and Southern Africa |
| DSL | Digital Subscriber Link |
| DTR | Development through Radio |
| EKOWISA | E-knowledge for Women in Southern Africa |
| EMCOZ | Employers Confederation of Zimbabwe |
| FAMW | Federation of Media women |
| FDI | Foreign Direct Investment |
| GDP | Gross Domestic Product |
| GNU | Government of National Unity |
| HIV | Human Immuno-deficiency Virus |
| HUG | Harvard University Guide |
| ICT | Information Communication Technology |
| ICT4D | Information Communication Technology for Development |
| IT | Information Technology |
| ITU | International Telecommunications Unit |
| JHEA | Journal Of Higher Education in Africa |
| MDC-T | Movement for Democratic Change-Tsvangirai |
| MDG | Millennium Development Goals |
| MIC | Media Information Commission |
| MISA | Media Institute of Southern Africa |
| MSTD | Minister of Science and Technology Development |
| NECF | National Economic Consultative Forum |
| NERP | National Economic Recovery Programme |
| NGO | Non-Governmental Organisation |
| NNAP | NGO Network Alliance Project |
| POSA | Public Order and Security Act |
| POTRAZ | Postal and Telecommunications Authority |
| PTC | Post and Telecommunication Corporation |
| R&D | Research and Development |
| REA | Rural Electrification Authority |
| S&T | Science and Technology |

| | |
|---|---|
| SADC | Southern Africa Development Community |
| SME | Small and Medium Enterprise |
| STERP | Short Term Emergency Recovery Plan |
| TV | Television |
| UNDP | United Nations Development Program |
| USD | United States Dollar |
| USF | Universal Services Fund |
| VAT | Value Added Tax |
| VoIP | Voice over Internet Protocol |
| VSAT | Very Small Aperture Technology |
| ZESA | Zimbabwe Electricity Supply Authority |
| WI/R | Wireless Internet Connection |
| WSIS | World Summit on Information Society |

# EXECUTIVE SUMMARY

## Background

This initiative forms part of a five-country study in Botswana, Mozambique, Tanzania, Zambia and Zimbabwe to provide opportunities for dialogue among Southern African key players in ICT for Development. The discussions will focus on national challenges and opportunities in ICT4D over the next five to ten years and will aim to develop a comprehensive understanding of national ICT4D issues through in-country research processes, stakeholder consultations, and discussions of these findings on a country level through fora (called *Thetha* Fora).

Each of the five participating countries has undertaken preparatory research, led by a team of local researchers. This report is the result of that effort in Zimbabwe and was undertaken during the months of November 2008 to April 2009.

The *Thetha* project has been ongoing since 2003, when the Southern African NGO Network (SANGONeT) undertook a series of *Thetha*s in South Africa. This was followed by a second phase in 2005-2007 which included five Southern African countries (Angola, Botswana, Lesotho, Namibia and Swaziland). The *Thetha* project now continues with funding from the Open Society Initiative for Southern Africa (OSISA) and the Embassy of Finland (South Africa), The ongoing regional roll-out of the *Thetha* project will provide an important opportunity for a broad range of ICT stakeholders, including government, private sector, academic and CSO representatives, to engage with the ICT challenges and opportunities relevant to the future development of the Southern African region.

## The Context

The period during which the research was undertaken saw the swearing in of an inclusive government in the context of an economy with many challenges. According to the Zimbabwe Millennium Development Goals (MDG) Report 2004, at independence (1980), Zimbabwe inherited a dual economy characterised by a well developed modern sector and poorly developed rural sector accommodating more than 80% of the population. The period 1980-1995 was characterised by very strong growth in social indicators such that by 1995, Zimbabwe had registered a net primary school enrolment rate of 86%, signalling a near attainment of universal primary education. Some key social indicators began to deteriorate during the late 1990s. The Zimbabwean MDG Report states that the human development index which had peaked in 1985 at 0.621, had fallen to 0.496 by 2001. The life expectancy of 61 years in 1991 had fallen to 43 years for the period 2000-2005. During the period 2005-2008, the political and socioeconomic situation in Zimbabwe deteriorated further to unprecedented levels. The country was beset with unparalleled economic challenges characterised by a sustained period of negative gross domestic product (GDP) growth rates[1], massive devaluation of local currency, skyrocketing food price increases, loss of jobs, a crumbling health care system, brain drain leading to a shortage of teachers in schools, and subsequent deterioration of the educational system, massive de-industrialisation, general despondency and dismal performance from the once thriving agricultural sector.

[1] Short Term Emergency Recovery Plan (STERP) 2009, Zimbabwe Government Publication

## The ICT Environment – Telephony and the Internet

As of March 2008, there are 1,351,000 Internet users, representing 10.9% of the population, according to the International Telecommunications Union (ITU). ***Table 1*** shows the growth of internet access in relation to population growth since 2000.

**Table 1: Internet users from 2000-2008**

| YEAR | Users | Population | % Penetration | Usage Source |
|---|---|---|---|---|
| 2000 | 50,000 | 14,712,000 | 0.3 % | ITU |
| 2002 | 500,000 | 13,874,610 | 3.6 % | ITU |
| 2005 | 820,000 | 12,247,589 | 6.7 % | ITU |
| 2007 | 1,000,000 | 12,398,897 | 8.1 % | ITU |
| 2008 | 1,351,000 | 12,382,920 | 10.9% | ITU |

Reproduced from http://www.internetworldstats.com/af/zw.htm

There are three mobile service providers - NetOne, Econet and Telecel - and one fixed line operator (TelOne) with a subscriber base of less than three million. The operators blame the shortage of foreign currency for their inability to carry out expansion projects but are hopeful that the dollarization of the economy will reverse the trend. In early 2009, the acting Finance Minister lowered VAT from 22.5% to 15% in a move to reduce tariffs charged by operators. These measures should increase the use of mobile phones in Zimbabwe. In 2008, the subscriber base grew by 33% for mobile operators and by 7% for TelOne, despite the dire socio-economic situations that faced the country.

## The ICT Policy, Legal, Regulatory Framework

The research focused on the policy, legislative and regulatory landscape supporting ICT4D. This deliberate focus resulted from the observation that other ICT sectors were not performing maximally due to the political and socio-economic problems in the country.

The role of ICTs in development has been recognised by the Zimbabwean government through such landmark measures as the e-Readiness Survey (2004), and the National ICT Policy Framework (2005) that recommended the institution of a National Information and Communication Technology Authority and a Converged Regulator. This has led to the current participatory work on the draft ICT Bill which sets out the key legislation and regulation framework regarding the access and use of ICTs in Zimbabwe. These measures provide for an enabling ICT environment for business, public administration and services delivery, education, and communications. In the Government of National Unity (GNU), a new Ministry for ICTs was established; this should ensure that ICTs receive budget allocations and the attention they deserve, with expectations of reforms, growth and development in the sector.

Four Acts regulate the development of media and ICTs in Zimbabwe:

- Broadcasting Act (2001);
- Post and Telecommunications Act (2000);

- Access to Information and Protection of Privacy Act (2002); and
- Interceptions to Communications Act (2007).

The Regulatory Authorities instituted by these Acts are the: Broadcasting Authority of Zimbabwe (BAZ), Postal and Telecommunications Authority (POTRAZ), Media and Information Commission and the Communications Monitoring Centre. Universal access should be achieved by two funds; the Broadcasting Fund (BF) under BAZ and the Universal Services Fund (USF) under POTRAZ, where service providers contribute 5% of their profits to service rural and underserviced communities. However, the funds collected from 2001-2008 were eroded by inflation before they could be put to use. The Media Institute of Southern Africa (MISA) (2007) believes the problem arose because the USF did not have provisions that facilitated independent monitoring of the fund's management and disbursement procedures. There are calls for the current ICT Bill to include provisions that mandate the regulators to ensure that USF funds are disbursed to fund universal services projects on a quarterly basis. Audits of how the funds were used should be made available to stakeholders at pre-determined intervals. There are also calls to unify the BF and USF in recognition of the convergence of technologies. The Government of Zimbabwe, in recognition of this convergence, is now calling for a converged regulator to replace the four regulators mentioned above. The ICT Bill, which is also the subject of this research, is an attempt at creating an instrument that will govern the converged regulator.

The proposed national *Thetha* forum in July 2009 should allow for more informed debate about the proposed ICT policy process. Moreover, the new inclusive government has prioritised the revamp of the national constitution and media laws; this is an opportunity to ensure that ICT4D foundations are laid out in this principal tool of governance and democracy.

## Methodology

The following is a summary of the research methodology used:

- Desktop research was used to assess the current status of ICT4D issues in Zimbabwe. The literature research covered both published and unpublished sources to ensure a deeper understanding of the issues.

- Open-ended research questions were formulated, pre-tested and then applied during the field research which covered private, public and civil society sector players in ICT. Since the research focused on the ICT Policy and the draft ICT Bill, the survey was administered only to those who had taken an active role in the drafting phase of the ICT Bill and the subsequent validation workshops. A total of twenty one interviews were held. ***Figure 1*** below shows the spread of respondents. All private sector respondents preferred to label themselves consultants despite the fact that the sample included both small firms and large corporates.

- Twenty one face-to-face discussions using the open research questions were also held with individual ICT4D players and one focus group discussion was conducted with women SMEs.

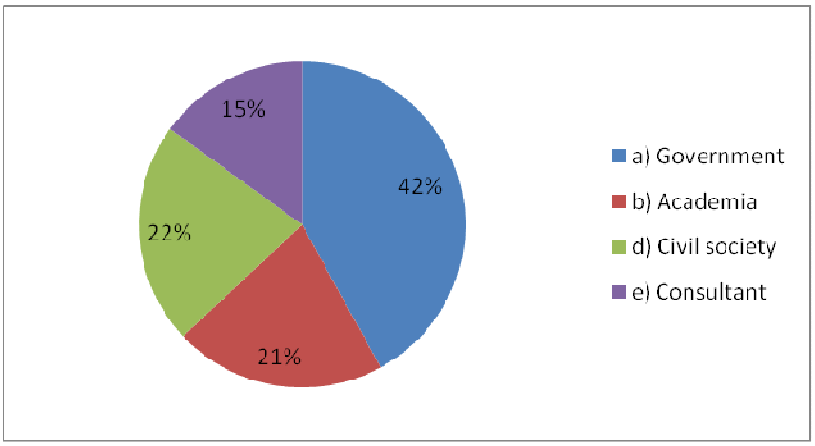



***Figure 1: % Category of Respondents in this Survey***

## Key Findings

Based on an analysis of the survey results, the following key findings emerged:

- Infrastructure deployment and development issues continue to dog the development of ICT4D. Access, availability and affordability need serious attention and there is need to address gender-based discrepancies if universal access is to be attained. In addition, poor electricity infrastructure and telephone services to rural areas, where the majority of Zimbabweans live, have to be improved.

- The policy, legal and regulatory environment has been detrimental to the development of ICT4D. Several gaps and challenges have been identified and are articulated in ***Chapter 3***.

- Several detrimental media laws stifle the growth of ICT4D in Zimbabwe. This is discussed further in ***Chapter 3.***

- The adoption of a converged regulator still needs to spell out how the various institutions would interact for maximum impact.

- The draft ICT Bill does not contain sufficient provisions to cater for all internet governance issues articulated in the survey form (see ***Chapter 4).*** This Bill is thus a work in progress and requires more work.

- Financing for ICT4D projects and programmes should be high on the priority list of the ICT Ministry, especially those focusing on the role of public-private partnerships in mobilising resources for infrastructure development and the employment of alternative technologies to ensure universal access.

- Expensive international bandwidth is causing the licensing and pricing regimes to be out of reach of the majority of Zimbabweans. Only TelOne has access to international bandwidth; if it has no funds to pay the fees needed, everyone goes without bandwidth.
- Women make up 80% of rural dwellers, requiring a gender dimension to be brought into the ICT policy, legal and regulatory frameworks. The universal service fund must be revisited to ensure that universal access is achieved.
- Attention needs to be given to lowering the high costs of ICT equipment, due to categorization of computer hardware as luxury goods.
- There are few public access points due high costs of connectivity and insufficient bandwidth.
- Appointment of the National ICT Authority Board must be transparent and should embody aspects of governance and democracy.
- There is a need for prioritised research and development, and human resource development.

*The three most significant initiatives that will make a difference in the next 5 – 10 years*

The major issues can be grouped into the following ICT4D categories:

- Infrastructure development and deployment i.e. availability, affordability and, accessibility;
- Human resource development and capacity building;
- Financing/Resource mobilisation drive in support of ICT4D activities; and
- Development of a converged licensing framework that will set the parameters for ICT investment in the country

*Opportunities for Zimbabweans to exploit ICTs for development*

The opportunities that Zimbabweans have in exploiting ICTs are grouped into three categories:

- Infrastructure development - the first opportunity cited is the wide choice of available technology to achieve universal access. Overall, the respondents called for greater investment in infrastructure and improvement of access by the implementation of several strategies as discussed in ***Chapter 4***;
- The second opportunity area is in the implementation and application of an effective ICT policy, legal and regulatory environment ; and thirdly,
- Human resources and ICT literacy training is needed to deepen training in the use of ICT at institutions of learning where learners and educators adopt and integrate ICTs within pedagogy. There was also a call for basic ICT literacy for every Zimbabwean.

*Steps to promote universal access to ICT*

Four steps are required to promote universal access:

- Put in place a converged licensing framework that is technology and service neutral. This should open up the market to wider competition using solutions that are low cost.
- Develop ICT Infrastructure.
- Address human resource development and ICT literacy.
- Promote research and development and provide incubation for emerging innovative business approaches on ICT4D. This should also provide for the creation of linkages between tertiary institutions and ICT businesses by establishing secondments for students and involving lecturers in research and development that has practical applications.

*The greatest barriers that should be tackled in exploiting ICT4D in Zimbabwe*

Barriers to be tackled as the Zimbabwean government exploits ICT4D are categorized into three groups that represent; financing; infrastructure development; and an enabling policy environment and enforcement.

- The first challenge is that of financing ICT4D, highlighting the need for private-public partnerships that can mobilise resources and human resources to maximise the opportunities offered by ICT4D.
- The second challenge is to develop policies that include all stakeholders' participation. The focus is on crafting policies that are responsive to the felt needs of Zimbabweans and their lived realities. This means that government must work towards creating a competitive business environment where access becomes affordable for the average citizen.
- The third challenge is that of Infrastructural development and access issues focusing on the role, management and allocation of the universal services fund.

### CONCLUSIONS

The overall message that emerges from the research is that ICT for Development is in its infancy in Zimbabwe and there is plenty of room for growth development in the sector. Market potential for any prospective investment nature is very high.

## Recommendations

1. There is a general optimism on the role and importance of ICTs for development and its role in alleviating poverty. Most governments, the Zimbabwean government included, have looked to ICTs to facilitate the achievement of reaching of the Millennium Development Goals. The enthusiasm on ICT policy issues, as exhibited by government in establishing a ministry of ICT and moving towards a converged regulator, are issues on which to hold constructive dialogues/discussions across all stakeholders of Zimbabwe and the region at large. The aim of

these dialogues would be to capitalise on the technical innovations and developments that have the capacity to work for human progress and development.

2. The research has revealed those ICT4D issues that have not been fully addressed in the current ICT Bill. This opens the doors for further discussion and remodelling of provisions to ensure that legal and regulatory provisions are responsive to peoples' felt needs and lived realities. Discussing these issues in greater depth allows the stakeholders across various sectors of the development landscape of Zimbabwe to discuss and share ideas as they move forward in exchanging old mind sets for new progressive ones.

3. There is a need to tie ICT4D dialogues to the achievement of socio-economic plans for the country such as STERP and thus make ICT4D relevant and appropriate. As Zimbabwe develops its e-strategies, these must continue to be rooted in the specific priorities and demands of Zimbabwe.

4. A competitive regulatory environment needs to be combined with targeted pro-poor policies; clear and enforced legal frameworks; licenses for operator and service providers including obligations to contribute to services in disadvantaged areas.

5. Zimbabwe should focus on a combination of market driven processes, development cooperation and public-private partnerships geared towards supporting the development and the implementation of nationally owned e-development strategies that seek to harness ICT to enhance development and the achievement of the MDGs.

# 1. THE ICT4D AGENDA

## 1.1 Introduction

The goal of ICT4D, according to Labelle 20032, is 'to promote human development and reduce and eliminate poverty by bridging the digital divide' – it is not just about the use of ICTs. The main focus of the research presented here is therefore to reveal ICT4D issues and their role in tackling social and economic problems. As part of this objective, the report also includes an assessment and analysis of the institutional, legislative and regulatory landscape in Zimbabwe in terms of how they support ICT4D. This deliberate focus resulted from the observation that other ICT sectors were not performing maximally due to the political and socio-economic problems in the country. In addition, the policy and regulatory process had attracted government, the National Economic Constitution Forum (NECF) and donor funding in recent years, leading to some concerted activities. For example, the Ministry of Science and Technology, with funding from the Common Market for East and Southern Africa (COMESA), spearheaded the work on the ICT Bill. The draft document on e-strategies and implementation framework was developed concurrently with the ICT Policy Framework, with funding from UNDP. The ICT Policy Framework was officially launched in 2005 while work on the e-strategies and implementation was shelved until the institutional, legal and legislative processes recommended by the ICT Policy were established.

The role of ICTs in development has been recognised by the Zimbabwean government through such landmark measures as the e-Readiness Survey (2004), and the National ICT Policy Framework (2005), which recommended the institution of a National Information and Communication Technology Authority and a Converged Regulator. This has led to the current participatory work on the draft ICT Bill which sets out the key legislation and regulation framework regarding the access and use of ICTs in Zimbabwe. These measures provide for an enabling ICT environment for business, public administration and services delivery, education and communications. In the Government of National Unity, a new Ministry for ICTs was established; this should ensure that ICTs receive budget allocations and the attention they deserve, with expectations of reforms, growth and development in the sector.

The author believes that building on these processes provides adequate scope for discussions and consultations at the proposed national Thetha forum to be in July 2009 and will allow for more informed debate. Moreover, the new inclusive government has prioritised the revamp of the national constitution; this is an opportunity to ensure that ICT4D foundations are laid out in this principal tool of governance and democracy.

[2] Labelle, R (2003*) Information and communication technologies for development in national human development reports* : UNDP New York

## 1.2 Determinants of the ICT4D Agenda

The baseline for the ICT4D agenda is described in the e-Readiness Survey report of 2005 which painted a picture that was used to craft the necessary policy, legal and regulatory environment to make ICT4D a reality. The e-Readiness Report used teledensity, infrastructure deployment availability and affordability as major indicators. The e-Readiness report shows a keen interest in the gender dimension and notes that the majority of the population resides in rural areas (86% of rural dwellers are women[3]) where infrastructure development is least developed. It is however silent on social issues that determine the power, control and access of ICTs. Several authors have discussed the gendered nature of ICTs (Hafkin and Taggart, 2001; Jensen (2009); Jorge (2000)).

The Zimbabwe national ICT agenda is set by the ICT Policy Framework document. The vision is to transform Zimbabwe into a knowledge-based society by the year 2020[4]. The mission is to accelerate the development and application of ICTs in support of sustainable socio-economic growth and development in Zimbabwe. There was a deliberate move to link ICTs with the developmental agenda for Zimbabwe and the guiding principles that underpin the national ICT policy were derived from the following documents:

1. ***Vision 2020,*** which sees Zimbabwe emerging as a strong, democratic, prosperous and egalitarian nation with a high quality of life for all by 2020. Vision 2020 has a strong emphasis on the exploitation of science and technology, especially ICTs, in support of sustainable development.

2. ***Science and Technology (S&T) Policy (2002),*** which seeks to promote national scientific and technological self-reliance, and provides a comprehensive framework for the country to develop and harness S&T for development as well as provide direction for research and development (R&D) in all sectors of the economy. A chapter on ICTs in the S & T Policy prioritises the coordination of R&D in the key ICT subsectors of telecommunications, broadcasting, information technology and k-commerce and ensures that the research results can be used to improve everyday lives of the majority of Zimbabweans. The document also discusses the role of social sciences to promote development and the effective dissemination of new technologies. These and many policy thrusts expounded in the S&T policy have been picked up and developed further in the ICT Policy (2005).

3. ***National Economic Recovery Programme (NERP) 2004-2006),*** which addresses the serious socio-economic challenges brought about by droughts and compounded by a hostile external environment.

4. ***Nziramasanga Education Commission Report (1999),*** which recommended the introduction and mainstreaming of computer-based teaching and learning in the pedagogy of schools, colleges and institutions of higher learning.

[3] Government of Zimbabwe (2005). Gender Policy Document
[4] National Information and Communication Technology (ICT) Policy Framework 2005 accessible at www.ict.org.zw

5. ***Industrialization Policy (2004),*** which advocates for the development and use of ICTs in the manufacturing sector where ICTs are seen as indispensable in the effective marketing of industrial products both on the domestic and international markets.

6. ***WSIS Declaration and Plan of Action (2003),*** which recommends that governments create policy environments that facilitate the development and utilisation of ICTs.

7. ***Zimbabwe Millennium Development Goals (MDGs) 2005***. The MDG Report of 2005 launched by His Excellency President R G Mugabe recognises the role of ICTs as tools that add value and contribute significantly to the achievement of the MDGs by 2015.

8. ***Short Term Emergency Recovery Plan (STERP) (March 2009),*** which is a socio-economic blueprint whose priorities are to ensure political stability and good governance, social protection and promoting macro-economic stabilisation. This was developed soon after the swearing in of the Inclusive Government of National Unity involving three major parties in parliament. It mentions reforming media laws that have clauses which curtail freedoms of expression and association. STERP mentions a new Information Communication Technology [ICT] Bill to reform the telecommunication sector along the lines of the SADC model.

9. ***The Budget Review Statement (2009),*** which named the Public Order and Security Act [POSA], the Access to Information and Protection of Privacy Act [AIPPA] and the Criminal Code as needing amendment.

## 1.3 The ICT Environment - Mobile, Telephone and Internet Usage

As of March 2008, there are 1,351,000 Internet users, representing 10.9% of the population, (ITU). ***Table 2*** shows the growth of internet access in relation to population growth since 2000.

**Table 2: Internet users from 2000-2008**

| YEAR | Users | Population | % Penetration | Usage Source |
|---|---|---|---|---|
| 2000 | 50,000 | 14,712,000 | 0.3 % | ITU |
| 2002 | 500,000 | 13,874,610 | 3.6 % | ITU |
| 2005 | 820,000 | 12,247,589 | 6.7 % | ITU |
| 2007 | 1,000,000 | 12,398,897 | 8.1 % | ITU |
| 2008 | 1,351,000 | 12,382,920 | 10.9% | ITU |

Reproduced from http://www.internetworldstats.com/af/zw.htm

In 2005, 25 people out of 1000 had access to telephone lines and 54 people out of 1000 had access to mobile telephones. The penetration rate is calculated as the percentage of population with access to telecommunication services. ***Table 2*** shows the number of mobile subscribers and penetration rate of some African countries.

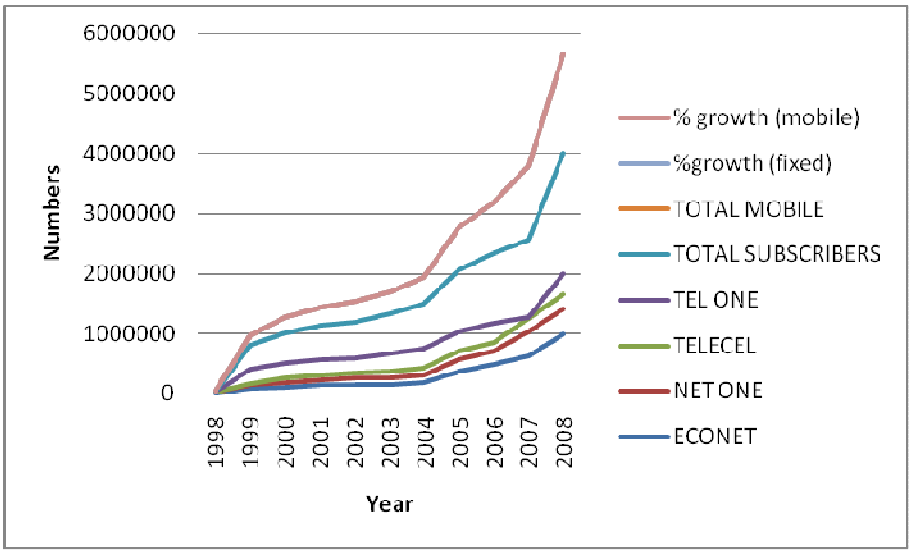
**Table 3: Penetration Rate Of Mobile Subscribers in Selected African Countries**

| COUNTRY | NUMBER OF SUBSCRIBERS | PENETRATION RATE |
|---|---|---|
| ZIMBABWE | 1,65 million | 13.4% |
| MALAWI | 1.42 million | 14% |
| MORROCCO | 22.82 million | 74% |
| MOZAMBIQUE | 3.3 million | 27% |
| SOUTH AFRICA | 44.51 million | 104% |
| TANZANIA | 10.1 million | 36% |
| UGANDA | 8.2 million | 25% |
| ZAMBIA | 2.7 million | 23% |

Reproduced from POTRAZ Figures (February, 2009)

***Table 3*** shows that South Africa has the highest penetration rate having surpassed the 100% mark at the end of 2008. Zimbabwe has the lowest penetration rate, confirming statements by Sandu (2009)[5]; *"Zimbabwe ranks below all the SADC countries except the Democratic Republic of Congo. Ten years ago, Zimbabwe had the second fastest growing ICT sector in sub-Saharan Africa after South Africa; but years of neglect meant the sector was not adequately supported despite the availability of policies crafted to support the industry"*.

There are three mobile service providers - NetOne, Econet and Telecel - and one fixed line provider TelOne (see ***Figure 2*** for subscriber statistics since 1998) with a subscriber base of less than three million.




Reproduced from POTRAZ Figures (February, 2009)

***Figure 2: Subscriber Statistics for the Period 1998 - 2008***

The operators blame the shortage of foreign currency for their inability to carry out expansion projects but are hopeful the dollarization of the economy will reverse the trend. In early 2009, the

[5] Sandu, N. (2009). Zim Lagging Far Behind in ICT: Report. An article in The Standard Newspaper, (4 April 2009)

acting Finance Minister lowered VAT from 22.5% to 15% in a move aimed at reducing tariffs charged by operators. Measures are currently underway to remove mobile phones, sim cards, and other computer equipment from the luxuries list which carries high import duties. According to Sandu (2009), mobile operators have been battling for the past two years to receive frequencies from the regulatory body to roll out 3G networks. These measures should increase the use of mobile phones in Zimbabwe and improve the access of online information by the general public.

In 2008, subscribers grew by 33% for mobile operators and by 7% for TelOne, despite the dire socio-economic situations that faced the country. A teledensity of 2.5 gives an indication of available infrastructure but the real use of ICT is a function of both teledensity and the cost of using ICTs relative to the income of the users.

***Table 3*** shows the percentage of the population with access to electricity, television, computers and radio. The most prevalent ICT is radio, accessed by more than 50% of the population. Measured on the Harvard University Guide (HUG)[6] scale, the state of e-Readiness in Zimbabwe stands at 1.4.

**Table 4: ICT Diffusion in Zimbabwe**

| VARIABLE | NUMBER OF HOUSEHOLDS | % OF POPULATION |
|---|---|---|
| ELECTRICITY | 872 008 | 36.9 |
| TELEVISION | 542 541 | 23 |
| COMPUTER | 18 116 | 0.8% |
| RADIO | 1 265 548 | 53.5 |

Source: Mutseyekwa, 2007

According to the Global Information Technology Report 2008-2009, Zimbabwe was ranked 132 out of 134 countries on the network readiness index, ahead of East Timor and Chad. Infrastructure is concentrated in the central business district of major towns with very little serving the high density areas and even less serving the rural community areas which have little to no infrastructure at all. Universal service funds were expected to service rural communities but the funds collected during 2001-2008 were eroded by inflation (see C***hapter 3***).

## 1.4 State of Infrastructure

The eReadiness Report identified four levels of infrastructure: energy; supportive infrastructure such as roads and telecommunications infrastructure; substantive infrastructure such as communication networks, computers and audio visual equipment; enabling infrastructure such as the legal framework; governance; investments; the creation of investment partnerships; and the human resources skills base. This section looks at energy and supportive infrastructure, transport and telecommunications infrastructure and the human resource base.

[6] The HUG is an internationally recognised model whose measurements lie on a scale of 1 to 4 where 1 = state of low readiness and 4 = state of ideal readiness.

## 1.4.1 Energy and Supportive Infrastructure

*Energy*

Zimbabwe has been importing energy from Zambia (ZESCOM, DCR (SNEL), South Africa (ESKOM) and Mozambique (Cabora Bassa) to augment its dwindling supplies. Although the national grid transverses the country, homeowners have to pay to be connected. Rural homes are characterised by low incomes and hence an inability to pay for these connection costs. The government has thus embarked on a rural electrification programme aimed at connecting as many homes as possible with electricity. No figures are publicly available but from a scan of the STERP document, it appears this was not a successful project as STERP calls for a resuscitation of the programme. Reliable electricity supply is critical to ICT rollout and is a critical limiting factor. In the past few years, power outages experienced by Zimbabwean homes and industries have worsened. Internet connections and access to mobile networks are frequently down because the ISP has experienced a power outage. Ndlovu (2009) states "*ISPs have been forced to install diesel powered generators to ensure continuity of services to customers; this has effectively pushed up their operation costs. This calls for an elevated sense of urgency to resuscitate and improve power generation, transmission and distribution capacity*". There is a need for policy and decision makers to look at alternative sources of power such as solar, wind and biogas.

*Transport and Telecommunications Infrastructure*

Zimbabwe has 180 000km of road infrastructure. Fifty percent of this is bituminous and the rest is gravel. Gravel roads, concentrated mostly in rural areas, are difficult to navigate during the rainy season. Recently, due to shortages of equipment spares, fuel shortages and lack of foreign currency maintenance and repair services on existing road networks have been far and few, rendering the road network poor with many potholes making driving on these roads a challenge. There is also 2 700Km of railway track used for transporting passengers and goods such as coal. This rail network has also been developed to carry data communications.

According to the eReadiness Survey, most of the telecommunications infrastructure is based on old circuit switched technologies. Other emerging technologies such as fibre optics, satellite, wireless and VSAT are in limited use. Zimbabwe Electricity Supply Authority (ZESA), through its subsidiary Powertel, installed a communications infrastructure initially targeting its own internal communications but later decided to open it up for public use and thus started a commercial enterprise in data-communications competing with NetOne and TelOne. Ndlovu (2009) [7] states, "*At this stage Zimbabwe has serious complications that basically point to a collapsed economy. Cellular operators have managed just to stay afloat in a very un-business like environment. This has made it impossible for the operators to increase both capacity and coverage at a time when spares and maintenance were made in hard currency whilst users were paying in a currency that long lost its value. Stabilization of the economy should allow cellular companies to increase their coverage to more areas*".

[7] Ndlovu R (2009); ICT Guide Zimbabwe; article on www.kubatana.net website (Accessed 3 April 2009)

*Comment on Energy and Support Infrastructure*

*The rural areas where the majority of Zimbabweans live are still largely without substantial infrastructure. Deterioration of infrastructure is open for all to see on the road networks, railway lines and the telephone networks. This is a result of a compound of problems including shortages of foreign currency, high inflation and fuel shortages limiting repair and maintenance work on most infrastructures and stopping any further development. Zimbabwean industries and manufacturing sectors have been starved of electricity and are hence not producing items that would ordinarily be used to service and maintain the infrastructure. The impact of these issues has been a deterioration of the ICT sector in terms of services provided to the*

### 1.4.2 Human Resources Skill Base

University colleges offer computer science degrees and computer appreciation courses to their students. Most primary and secondary schools offer computer appreciation courses. There are also several registered and non registered colleges that offer IT courses. Participants in the eReadiness survey highlighted several problems and their impact on the ICT sector. One major problem which may need further interrogation is the fact that the ICT industry does not have any standards that regulate and provide guidelines on the remuneration of practitioners. ICT skilled personnel are leaving Zimbabwe for greener pastures elsewhere in the region resulting in an insufficient human resource base to perform activities to support ICT4D. There is thus high irregularity in remuneration and high levels dissatisfaction among practitioners. Several think-tanks have proposed ways to rescue the human resources sector by instituting mechanisms that retain the human resource still remaining in Zimbabwe.

# 2. SOCIO-ECONOMIC DEVELOPMENT CONTEXT

## 2.1 Development Context

Zimbabwe is a landlocked country covering an area of 390,757 km$^2$ of which 85% is agricultural land and the remainder comprising national parks, state forests and urban land. According to the Reserve Bank of Zimbabwe Supplement to the January Monetary Policy Statement[8] the urban population is about 34.7%, with a rural population estimated at 65.3%. ***Table 4*** shows the rural and urban population demographics.

**Table 5: Rural and Urban Demographics**

| PROVINCE | URBAN | RURAL | URBAN SHARE | RURAL SHARE |
|---|---|---|---|---|
| HARARE METROPOLITAN | 1,896,134 | 0 | 16,1% | 0% |
| BULAWAYO METROPOLITAN | 676,650 | 0 | 5.8% | 0% |
| MANICALAND | 259,495 | 1,309,435 | 2.2% | 11.3% |
| MASHONALAND CENTRAL | 102,873 | 892,554 | 0.9% | 7.7% |
| MASHONALAND EAST | 117,521 | 1,009,892 | 1.0% | 8.7% |
| MASHONALAND WEST | 344,806 | 879,864 | 3.0% | 7.6% |
| MATEBELAND NORTH | 102,948 | 602,000 | 0.9% | 5.2% |
| MATEBELELAND SOUTH | 68,457 | 584,597 | 0.6% | 5.0% |
| MIDLANDS | 349,595 | 1,114,398 | 3.0% | 9.6% |
| MASVINGO | 134,251 | 1,186,187 | 12% | 10.2% |
| **TOTALS** | **4,052,730** | **7,578,927** | **34.7%** | **65.3%** |

Source: CSO Census, 2002 National Report quoted in RBZ Supplementary Report to January Monetary Policy Statement (2009)

While women constitute 52% of the overall population, 86% of rural dwellers are women according to the Gender Policy Document (2005). The Human Development Report (2008) puts the adult literacy rate of Zimbabwe at 89.4% (2005 figures); the youth literacy rate is higher at 97.7%. The net primary school enrolment rate is 82%; estimators put this figure at a much lower rate due to high inflation, cash and food shortages with families focussing on daily survival issues and not on education. During the latter part of 2008-2009, teachers did not attend to their duties citing high transport costs chargeable in USD while the salaries remained at ridiculously low levels of the inflationary local currency. Only after the swearing in of the Government of National Unity (GNU) on 11 February 2009 did schools and colleges re-open; teachers had boycotted the classrooms demanding to be paid in foreign currency. Extensive discussions were held between teacher association representatives and officials from the new Ministry of Education, Sport and Culture (MDC-T) and promises were made that facilitated teachers to return to work. According to the

[8] Gono, G. (2009), Reserve Bank of Zimbabwe Supplement to January 2009 Monetary Policy Statement: Practical Advice and Policy Interventions to Support the Youth, Women Groups and Other Vulnerable members of Society

Zimbabwe Millennium Development Goals Report 2004, at independence (1980), Zimbabwe inherited a dual economy characterised by a well developed modern sector and poorly developed rural sector accommodating more than 80% of the population. The period 1980 -1995 was characterised by very strong growth in social indicators such that by 1995, Zimbabwe had registered a net enrolment rate of 86%, signalling a near attainment of universal primary education.

Some key social indicators began to deteriorate during the late 1990s. The Zimbabwean MDG's Report states that the human development index which had peaked in 1985 at 0.621 had fallen to 0.496 by 2001. The life expectancy was 61 years in 1991 but had fallen to 43 years for the period 2000-2005. The impact of HIV/AIDs on life expectancy and other social indicators has continued to undermine the progress made during the earlier years. The period 2000-2005 was also characterised by an ongoing accelerated deterioration of social indicators.

Zimbabwe embarked on several home-grown reform programmes to turn around the economy. These programmes were implemented in a period characterised by political instability, reported human right violations, withdrawal of donor and international support, negative impacts of recurring droughts and floods, and the HIV/AIDs epidemic to mention a few. As part of continuing efforts to redress past inequalities and reduce poverty, the government of Zimbabwe embarked on general asset redistribution and land reform, encouraged the general public to own shares on the stock market and encouraged small to medium enterprise (SME) development.

During the period 2005-2008, the political and socioeconomic situation in Zimbabwe deteriorated further to unprecedented levels. The country was beset by unparalleled economic challenges with sustained periods of negative gross domestic product (GDP) growth rates[9]; massive devaluation of the local currency; rocketing food price increases; loss of jobs; a crumbling health care system; brain drain leading to shortage of teachers in schools, and the subsequent deterioration of the educational system; massive de-industrialisation; general despondency and dismal performance from the once thriving agricultural sector. All these issues happened in a highly charged political environment that lead to human rights violation accusations and the imposition of sanctions from western developed countries. Cholera outbreaks claimed many lives and brought the dire plight of socio-economic problems of Zimbabwe to the forefront of many international news reporters[10]. These tremendous economic challenges resulted in near stagnation in the growth of the ICT sector mainly due to foreign currency shortages which hampered any efforts to expand and modernise existing networks. In an attempt to resuscitate the sector, the government, in January 2009, granted mobile phone networks permission to bill subscribers in foreign currency. The Media Institute of Southern Africa (MISA) slated the move as a violation of the rights of impoverished citizens to communicate.

[9] Short Term Emergency Recovery Plan (STERP) 2009, Zimbabwe Government Publication
[10] www.bbc.com, www.cnn.com,

**Women's voices:** National level decisions about infrastructure can impact gender and affect women's opportunities to use new technologies – including decisions about what systems to put in place (at what cost to the consumer?), which suppliers of communications services (will they have universal service obligations?), and where facilities will be located (will they be available in rural areas?).

Hafkin and Taggart (2001). 'Gender, Information Technology, and Developing Countries: An Analytic Study.'

*"The demands for payment in foreign currency for mobile telephone use means that communication will no longer be affordable as the majority of Zimbabweans have no access to foreign currency since the few who are still employed are paid in Zimbabwean dollars, and the majority of Zimbabweans have no hope of using a mobile phone at such costs".* MISA - statement made available to ITNewsAfrica[11].

Despite these socio-economic challenges, ICTs have remained prominent on the developmental agenda for Zimbabwe because of the existence of ICT champions; the President R G Mugabe sourced many computers (exact figures unknown) and distributed them to schools and health centres. COMESA has since injected some funds for work on the ICT Bill. The new Prime Minister, Mr Morgan Tsvangirai in his first few days in office opened a website through which he expects to interact with the general public in monitoring and evaluating the work government is doing and also in a bid to promote transparency. The new Minister of ICTs promised to revamp the legislative framework on ICTs; thus Zimbabwe has several role players in the area of ICTs.

## 2.2 Government of National Unity (GNU)

The Global Political Agreement (GPA) was signed on 15 September 2008 by the three political parties represented in the Zimbabwean Parliament. The new Inclusive government took office in the context of an economy with many challenges as described above. Zimbabweans beaten and tired by various socio-economic woes were filled with optimism and a new hope for Zimbabwe. The newly-appointed Minister of Technology, Nelson Chamisa, said he was hopeful that some measures devised by the GNU would breathe life into the sector. In an interview reported on www.itnews.com, Chamisa stated that "*The inauguration of a Government of National Unity in Zimbabwe has introduced some changes worth noting. A new ICT Ministry was created and has taken over ICT-related functions previously housed under the former Ministry of Transport and Communications. Recently, Zimbabwe introduced a phased liberalisation of exchange controls as well as trade in foreign currency. This has resulted in business charging for goods and services in foreign currency. It is hoped that these initiatives will enable ICT companies to recapitalize and improve the quality of their service provision*".

The official declaration on the use of multiple currencies in the purchase of goods made in the latter part of 2008 started the process of halting escalating food prices. According to the Consumer Council[12] there has been a real reduction in the cost of the food basket for the low-income urban

[11] www.itnews.com

[12] Consumer Council of Zimbabwe : Lower Income Urban Earner Monthly Budget for family of Six Monthly Reports January and February 2009

earner (family of six) from USD 219 December 2008, to USD 153.63 in January and further down to USD 135.25 in February 2009. These decreases are attributed to competition in the market and zero duty on basic food stuffs. However, there are real increases in the basket for transport, rent, water and electricity, telecommunication costs, health services, education, clothing and footwear from USD214.00 in January to USD239.00 for February 2009. The GNU focus should be on revitalising local manufacturing companies whose current production levels are reportedly at 20-30%.[13] According to the analysis by the Consumer Council of Zimbabwe (CCZ), many of these companies have resorted to importing finished goods for sale to make up for the deficit. The manufacturing sector has not recovered from the deep-seated inflation and related challenges of the previous years.

### 2.2.1 Short Term Emergency Recovery Programme (STERP)

With the swearing in of the Inclusive Government, the time was ripe for a forward looking economic recovery programme. STERP, covering the period February to December 2009,[14] is a programme designed to get Zimbabwe moving again. It aims to stabilise the macro- and micro-economy, recover the levels of savings, investment and growth, and lay the basis of a more transformative mid-term to long-term economic programme that will turn Zimbabwe into a progressive developmental state. It describes key priority areas which include: political and governance issues, social protection and stabilisation actions. The political and governance issues are of particular relevance to this research since these promise to focus on the constitution and constitution making process; media and media reforms and legislative reforms aimed at strengthening governance and accountability, promote governance and rule of law and promote equality, fairness including gender equality. ICT growth and development in Zimbabwe hinges on the relaxation of media laws and the liberalisation of the industry. There is a real opportunity in holding the SANGONeT *Thetha* workshop in July 2009 to discuss ICT4D issues, internet governance, including gender and ICT policy issues.

## 2.3 Priority Sectors for ICT4D

Based on socio-economic development mapping, the following sectors need special mention: education, health, agriculture, e-government, environment and small to medium enterprise development to mention a few. These sectors tend to feature greatly in most development efforts and these are the areas impacting on the larger population groups (especially women, youth, and the disabled). According to Gairola *et al* (2004)[15], ICTs are powerful tools for development because of their ability to facilitate information flow and to open up opportunities for development at national and sub-national levels. Thus within ICT4D it is important to see ICTs as tools that enhance the development process and not as outcomes of development. Moreover, information and knowledge are known to be critical components of poverty alleviation strategies and ICTs are great enablers in this regard.[16] ICT4D can be used to expedite development goals; in this respect we then

[13] Remuneration Policy for Economic Recovery: Paper presented by Rosemary Siyachitema CCZ at the EMCOZ Discussion Breakfast, 13 February 2009

[14] Short Term Emergency Recovery Programme, Government of Zimbabwe Publication, March 2009

[15] Gairola, B., Chandra, M., Mall, P., Chacko, J.G., Sayo, P., Loh, H. (ed) (2004). Information and Communication Technology for Development: A Sourcebook for Parliamentarians. United Nations Development Programme – Asia Pacific Development Information programme (UNDP-APDIP), Reed Elsevier India Private Limited

[16] World Bank, 1998; Duncombe, R. and Heeks, R. (2001) *Information and Communication Technologies and Small Enterprise in Africa* accessed at http://idpm.man.ac.uk/idpm/ictsmesfs1.html

focus on the whole spectrum of ICTs including the traditional tools (drums songs and folklore), old ICTs (radio, television), and new ICTs (computers, mobile phones).

The STERP document focuses on social protection programmes that include education, health delivery, specially-targeted vulnerable groups and humanitarian assistance. The draft ICT Bill also focuses on these sectors in its national e-strategy discourse. The draft ICT Bill mandates the Minister of ICTs to develop a three-year national e-strategy for Zimbabwe within 24 months of the promulgation of the ICT Act and is instructed to make implementation a national priority. The following section describes the status of ICT4D in each of these sectors and gives examples of ongoing initiatives by civil society.

### 2.3.1 Education and ICT Literacy

According to Gairola (2004), the use of ICTs in education aims to improve the quality of teaching and learning as well as democratise access to education. The Zimbabwean ICT Policy (2005) places a premium on the importance of ICTs in education and human resource development and emphasises the provision of equitable access to ICTs to enable education and training in all parts of the country including disadvantaged communities; build skills in the sector; promoting software development; promoting e-learning and embed ICT literacy in the pedagogy of schools, colleges, and universities.

The World Links Zimbabwe programme, described below, set up 45 computer networks in schools (both primary and secondary) and trained teachers to use ICTs in the classroom. This project was effectively complemented by the Discovery Channel Project which deployed satellite connections, and provided TV and VCR sets for use in teaching. Chitanana *et al* (2008)[17] found limited developments in relation to e-learning infrastructure in the universities. The number of network points compared to the numbers of users at each university shows that there is a low computer-user ratio. The bandwidth size is too small for university needs; a summary of the network infrastructure in universities is shown in ***Table 6.***

**Table 6: Network Infrastructure at Four Zimbabwean Tertiary Institutions (2008)**

| Network Service | University of Zimbabwe | Midlands State University | Chinhoyi University of Technology | National University of Science and Technology |
|---|---|---|---|---|
| No. of Network Points | 3 000 | 1 000 | 350 | 4 000 |
| No. of Users | 12 000 | 10 000 | 1 560 | 6 000 |
| Size of Bandwidth | 2Mbps | 1 Mbps | 2 Mbps | 2 Mbps |
| Cost of Bandwidth / Month | (Z$)140 million | (Z$)120 million | (Z$)130 million | (Z$)10 million |
| Type of Internet Link | Leased line | Leased line / fibre optics | Leased line | Radio Link & dial-up |

Reproduced from Chitanana, Makaza & Madzima (2008)

Another challenge faced by educational institutions in their quest to use ICTs in education is the lack of electricity or the more common power outages and load shedding. Due to the Rural Electrification

[17] Chitanana, L., Makaza, D., & Madzima, K. (2008, July 5). The current state of e-learning at universities in Zimbabwe: Opportunities and challenges. *International Journal of Education and Development using ICT*[17] [Online], 4(2).

Authority (REA) which operates under the Ministry of Energy, more than fifty schools and health centres have been provided with solar energy. Through a donation by the Italian Government, REA has capacity to dispatch and install solar installations into 500 more schools and health centres[18]. The solar installations provide sufficient power for all energy requirements for lighting and plugs.

Another limiting factor in the use of ICTs in the education sector is the development of electronic content (e-content)[19] including electronic learning (e-learning) that promotes teaching and learning and stimulates local content production by faculty and students. STERP took stock of the deplorable state of the educational sector which was once the best in Africa. STERP gives priority to the resuscitation of the educational sector by putting in place incentives to attract teachers that had dispersed into the Diaspora and by improving conditions of service for teachers. An initial budget of US$440 million has been ear marked to fund this process.

### 2.3.2 e-Government

One key challenge facing many African governments, Zimbabwe included, is how to introduce ICTs to enhance government efficiency[20]. e-Government is based on a citizen-centred approach that tailors services to people's needs rather than to the needs of the agency delivering them. According to Gairola *et al* (2004[21]) e-government can be broadly defined as the government's use of ICTs to promote more efficient and effective government and to facilitate access to more government services. Because many government departments are not computerised; and even those that have computers are not networked, there is no actual e-government in Zimbabwe. The voting and election monitoring system is networked and works very well. Services such as passport applications, birth and death registrations are still operating on manual systems and need to be computerized and be online for citizens' convenience.

The draft ICT bill has a full section on e-government showing high prioritisation in this regard; this has to be a part of a major reform process to improve government coordination and implementation.

### 2.3.3 e-Health

The Zimbabwean ICT Policy prioritises the development and use of ICTs in the delivery of health services, for surveillance and control of diseases. The draft ICT Bill is however silent on the role of ICTs in health systems and delivery. Presumably issues of ICT mainstreaming would be dealt with under each specific sector, but there is need for specific mention of this aspect in the ICT Bill. The Health sector faces many challenges which include: deterioration of health infrastructure, brain drain, and lack of equipment, drug shortages and the drastic decline in the quality of public health services. According to the STERP document (2009), 68% of posts for doctors are vacant. Staff attendance to duty in most hospitals ranged between 15-50% and the average drug stocks averaged at 36%. Most fixed medical support services such as laundry, kitchen and laboratory equipment had

[18] Verbal communications from Director of Energy in Ministry of Energy Development, March 2009

[19] Adams, L. (2003). Information and Communications Technology in Higher Education in Africa: Initiatives and Challenges, article published in Journal of Higher Education in Africa Vol 1. No 1 pp. 195-221

[20] Briefing Paper: Government with an e. ECA publication

[21] Ibid

broken down due to lack of maintenance. As a result many Zimbabweans were dying from preventable diseases such as malaria, HIV/AIDs, tuberculosis, diarrhoea and maternal care.

An example of the severity of the situation has been the much publicised cholera problem of 2008. UNICEF and the Ministry of Health ran several campaigns using various ICTs (print, radio, TV, and even new media) to bring information on how cholera is spread and how it can be treated. One of the campaigns involved the use of SMS messaging on mobile phones, which has the capacity to reach all mobile owners, including the deaf. Under STERP, the government hopes to raise required resources to capacitate Natpharm, a local pharmaceutical company, to increase its production of drugs. Several examples of telemedicine operations are managed by medical doctor associations. Other funds are required for the acquisition of equipment, transport, rehabilitation of infrastructure as well as health care and operations. Several challenges common to other sectors in Zimbabwe exist in the quest of using ICTs to improve delivery of health services; these include poor or lack of sufficient infrastructure, and the shortage of skilled personnel in the use and maintenance of ICTs.

### 2.3.4 Commerce and SME Development

STERP recognises the role SME development has in employment creation and growth as well as the consolidation of indigenous ownership of resources. The Zimbabwean ICT Policy also sees SMEs as the foundation for economic growth, social progress and prime drivers of the economy, as evidenced through the establishment of the Ministry of SME Development. The draft ICT Bill specifically mentions the use of appropriate use of ICTs to promote SME development in Article 80. In a recent research study to assess the extent to which SMEs in the export and import business have adopted ICTs to grow and develop their businesses, Zunguze (2008)[22] found that

> '*several policy modalities to facilitate and enable SMEs to access and use ICTs effectively in business operations include the following: increase competition in the telecommunications sector to bring down costs of services and make them more accessible for the customer, increase broadband, increase connectivity options for the consumer (e.g. leased lines, broadband, wireless and satellite) and institute incubator programs and projects for SMEs focusing on ICT applications'*.

## 2.4 Selected Examples of Civil Society Work on ICT4D in Zimbabwe

### 2.4.1 Radio Dialogue

Radio Dialogue is a non-profit community radio station aspiring to broadcast to the community of Bulawayo and surrounding areas. Radio Dialogue aims at providing a channel for debate and information sharing on economic, political, social, cultural and developmental issues. Radio Dialogue

[22] Zunguze, M. (2008), Investigations into the extent SMEs have embraced the use of ICTs in their business operations: A case for import and export SMEs. www.ekowisa.org.zw

awaits the Broadcasting Authority of Zimbabwe's call for community radio applications. In the meantime Radio Dialogue has a recording and production studio offering its services to the community of Bulawayo and at the same time advocating for the licensing of community broadcasters in Zimbabwe. Contact: www.radiodialogue.com

### 2.4.2 Kubatana Trust

The Kubatana Trust of Zimbabwe, incorporating the NGO Network Alliance Project (NNAP), aims to build the capacity of Zimbabwean non-profit organisations to communicate and mobilise by incorporating electronic tools such as email and the internet into their media strategies. Kubatana makes human rights and civic education information accessible to the general public from a centralised, electronic source. Immediate objectives of the project are to:

- Develop a central Zimbabwean development and human rights portal: the portal will contain material highlighting the work of the organisations hosted on the portal together with that of other individuals and organisations who focus on Zimbabwe;
- Develop an electronic fact sheet for each organisation hosted on the portal;
- Develop an e-activism page for on-line campaigns;
- Link existing Zimbabwean non-profit organisations and civil society web sites to the portal; and
- Advertise the portal widely: locally, regionally and globally.

By focusing solely on Zimbabwe and being committed to the regular updating and development of the portal, it is believed that www.kubatana.net becomes the most important source of Zimbabwean human rights and development information on the internet. Kubatana means "working together".

### 2.4.3 Development through Radio (DTR)

DTR was established in 2001 by the Federation of Media Women (FAMW) to give rural people access to radio and radio service. The project, popularly known as Radio Listening Clubs, provides training for women to encourage and develop their leadership skills so that they become more self-reliant. It also promotes interactions among communities so that they can exchange information and share experiences. The DTR project links rural people with policy makers and non-governmental organizations (NGOs) that offer solutions and resources, respectively. Using participatory procedures, the project encourages members to engage in dialogue and debate on current and critical issues that affect them and their communities. By sharing their knowledge and understanding, the DTR clubs are reinforced and strengthened, thus aiding collective development, which in turn benefits the communities as a whole. Groups of women are trained to produce their own radio programmes. This training makes the process of programme production and broadcasting easy and more manageable, which enables women to have a voice and to set their own agenda. Ultimately the DTR training programmes encourage women to become agents of change, and equip them with skills to help alleviate poverty, as well as to address issues such as the marginalization of and discrimination against women. Subsequent to the success of the DTR project, the FAMW has prompted many other African countries to adopt the approach. The project has now been replicated in Angola, Ghana, Malawi, Namibia, Nigeria, Sierra Leone, South Africa and Zambia.

## 2.4.4 EKOWISA Community ICT Project

E-Knowledge for Women in Southern Africa (EKOWISA) is a non-profit organisation operating in Zimbabwe. EKOWISA facilitates gender sensitive access to and effective use of ICTs by communities. The community ICT project is operates at centres that already have networked computers and IT teachers. The project allows women and men, boys and girls from the community to access and use appropriate ICTs to address specific issues for their livelihood development as well as creating a social and learning space that promotes community interaction. Sharing of activity outputs among participating communities enables cross culture interaction enriches the learning experience. Community ICT Project objectives are:

- Advocating for gender responsive ICT policies, laws and regulations;
- ICT skills building and capacity building for communities and women's NGOs;
- Promoting local content generation and dissemination using ICTs by communities for communities in local languages;
- Knowledge generation through research and awareness creation;
- Information and knowledge sharing through networking platforms and targeted dissemination; and
- Promote the use of ICTs for economic development for women entrepreneurship groups

Knowledge areas that EKOWISA focuses on include gender based and domestic violence, HIV/AIDS, disabilities, ICT policy issues and ICTs for economic development. www.ekowisa.org.zw

## 2.4.5 Tonga.Online project

Since its launch in 2001, **t**he Tonga.Online Project has focused attention on promoting a Tonga voice over the Internet. The aim is to provide people in the Tonga area of Zimbabwe and the Tonga across the Zambezi River in Zambia with access to the world's most advanced communication tools, so that they may represent themselves to the outside world and reflect upon the social, political and economic environment of both the global and local village in which the Tonga live. On another level, the constant flow of the Zambezi River is a symbol of continuity which, today, represents the needs of the Tonga people both to communicate amongst themselves and with others, and to preserve and develop their rich cultural heritage. The Tonga.Online Project seeks to establish and expand communication infrastructure with and amongst the Tonga by joining them with modern information and communication technology (ICT). Most recently the project launched a community radio station called **Tonga.OnAir** project. Access to information has become a crucial question of political rights; hence the importance of this project as a tool to spearhead consciousness, continuity, empowerment and development amongst the Tonga people. The educational potential of the Tonga.Online Project is limitless especially for those in this remote part of the country where no institutions of higher academic learning exist. In a world where access to information has become a universal human right, the Tonga.Online Project lends support to higher levels of human development. The project was initiated by Kunzwana Trust and the Austria Zimbabwe Friendship Association / AZFA - with support from: HORIZONT3000, HIVOS, WorLD Links, AlphaSmart UK, Upper Austrian Provincial Government, Ars Electronica, Austrian Development Cooperation/ADA. www.mulonga.net

## 2.5 Conclusion

It is important for a developing country like Zimbabwe to align its ICT$D with the socio-economic development. There is need to focus on people, not technologies, and on what people can do with technology. This means starting all thinking and decision making with the people who will use the technologies and hence the need to understand the socio-economic and cultural context in which they will be used. The next chapter looks at the legislative, regulatory frameworks of ICT4D in Zimbabwe.

# 3. ICT4D ENABLING POLICY, LEGAL, & REGULATORY FRAMEWORK

## 3.1 Introduction

The Media Institute of Southern Africa[23] (MISA Zimbabwe) describes the legal and regulatory framework as "*one of the few in the region with virtual government monopolies in broadcasting and fixed telephone service provision"*. There is hope on the horizon for Zimbabwe; the new inclusive government's blue print document, the STERP (already discussed in ***Chapter2***) has called for a reform of media and media laws in Zimbabwe. ICT4D issues fall under media and media laws and since this area is on the government agenda, there should be rapid movement towards changing legislation and regulation. The proposed SANGONeT Thetha workshop could take advantage of the multi-stakeholder engagement atmosphere currently pervading Zimbabwe. To date the ICT ministry has held two meetings with stakeholders to plot the way forward which Chamisa said "*will inform our policy matrix as a government*". Thus the following discussion on the policy framework may change very quickly and drastically which increases the relevancy of urgently holding SANGONeT Thetha discussions for Zimbabwe ICT stakeholders.

> The Association of African Communication Lawyers published in their News Alert of Jan 2009 that "*According to a Public Notice issued on the 4th of December 2008, existing licenses would have to apply for amendment of their currently service based licenses to enable them to take advantage of the new regulatory dispensation. The amendments will entail the following;*
>
> - *That mobile operators will be allowed to offer 3G services.*
> - *The Fixed Operator will be allowed full mobility using available technologies such as CDMA.*
> - *Public Data Networks (PDN) services and Internet Access Provider (IAP) Class B licensees will be allowed to upgrade their licensees to Internet Access Provider (IAP) Class A and will be allowed to offer both data and Internet services. They will also be allowed to offer Voice over Internet Protocol (VoIP) services*".

During the latter part of 2008, the Postal and Telecommunications Regulatory Authority (POTRAZ) took a major step towards unifying existing licenses to allow licensed operators to offer all types of services that can be supported by their existing networks. The Association of African Communication Lawyers (AACL) (2009)[24] reported that this development recognised the ensuing phenomenon of technological convergence in the ICT sector. The four legal and regulatory frameworks that operate in the ICT for Development space for Zimbabwe (as at 31 March 2009) are described in the following sections.

[23] MISA Zimbabwe Position on the Need for an Independent Broadcasting and Telecommunications Regulatory Body, 2008
[24] The Association of African Communication Lawyers published in their News Alert of Jan 2009 circulated by email

## 3.2 Broadcasting Services Act [Chapter 12:06], (Act No. 3 of 2001)

This Act is under the jurisdiction of the Ministry of Information and Publicity which has now been renamed the Ministry of Media, Information and Publicity after the establishment of the GNU. This Act outlines the functions of the Broadcasting Authority of Zimbabwe (BAZ) as follows:

- Preparation of frequency allotment and license area plans;
- Ensuring economic and efficient use of the broadcasting frequency spectrum;
- Issuance of broadcasting and signal carrier licenses;
- Monitoring of the conduct, quality and programme standards of broadcasters;
- Licensing, promotion and monitoring of marginalised community-based radio including promotion of local languages and local content;
- Creation of a Broadcasting Fund to help finance local broadcasting and for related purposes; and to provide for matters incidental to or connected with the foregoing. While on paper BAZ appears to be an independent regulator, MISA (2008) argues "*there are too many provisions within the Act that expose it to direct political interference"*.

***Broadcasting Fund***

BAZ is mandated to establish and manage the Broadcasting Fund (BF) whose main purpose is to enable disadvantaged communities' access to television and radio services and provide funds for the development of Zimbabwe's film and music industries. Women, youth and people living with disabilities constitute the disadvantaged groups of society that one would expect to benefit from the BF. The airwaves abound with gender insensitive content that continues to denigrate the status of women in society. Unfortunately, there are no stipulations within the BSA that insist on the BF's accounts to be available and open to public scrutiny. Media coverage still reflects the domination of male voices over those of females. Ever since the BF was established the status and utilization of the Fund remains a mystery.

## 3.3 Postal and Telecommunications Act [Chapter 12:05], (Act No. 4 of 2000)

This Act falls under the Ministry of Transport and Communications and provides for the establishment of the Postal and Telecommunications Authority (POTRAZ) and the de-merger of the former Posts and Telecommunications Corporation (PTC) into three commercial units; the fixed telephone provider TelOne, the mobile cellular company (NetOne) and the public postal operator (Zimpost). In the GNU, this Act now falls under the administration of the Ministry of Information Communication and Technologies (ICT). POTRAZ's functions are as follows:

- To exercise the licensing and regulatory functions of postal and telecommunications service in Zimbabwe;
- To exercise the licensing and regulatory functions of the allocation and use of satellite orbits and the radio frequency spectrum in Zimbabwe, including the establishment of standards and codes relating to the same;

- To secure that reasonable demands for postal and telecommunications services are satisfied;
- To promote the interests of consumers, purchasers and other users, in respect of the quality and variety of postal telecommunications services are provided and telecommunications apparatus supplied;
- To maintain and promote effective competition between persons engaged in the provision of postal and telecommunications services; and
- To monitor tariffs charged by cellular telecommunications, postal and telecommunications licenses with a view to eliminating unfair business practices among such licenses (Part II Section 4).

MISA insists that POTRAZ, like BAZ discussed above, is not guaranteed freedom from political inference in the execution of its duties for the same reasons.

### 3.3.1 Universal Service Fund

According to Sandu (2009)[25], in 2001 the government announced a number of sector policies including policy on Universal Services modelled along SADC Universal Service Guidelines. This created a Universal Service Fund whereby operators contribute 5% of their gross revenue to fund projects in underdeveloped areas. According to the policy, the regulator POTRAZ should have achieved the following community access targets by set deadlines:

- Increased teledensity in urban areas to 10% in 2006 from 6.27% in 2003;
- Increased rural teledensity to 3% in 2006 from 0.43% in 2003; and
- Double internet access to 500 000 in 2006 from 206 078 in 2003.

However, such "*noble intentions were not achieved as the money collected in the period 2001-2008 was eroded by inflation before the implementation of any universal services projects*" as reported by Sandu (2009). The USF was designed to ensure gender dimensions in ICT policy are addressed and access, availability and affordability are made available to all Zimbabweans regardless of their geographical, local and physical condition or literacy levels. Traditionally, Zimbabwean women have a subordinate position to men; on the macro level, men dominate most governing bodies i.e. political, legislative, judicial and technological. Thus many policies often lack a gendered perspective. The USF policy included gender components but lacked a clear implementation framework.

According to MISA (2008), the USF policy had no provisions that allowed public scrutiny of how USF was administered and used. There are calls for the current ICT Bill to include provisions that mandate the regulator to ensure that USF funds are disbursed to fund universal services projects on a quarterly basis. Audits of how the funds were used should be made available to stakeholders. There are also calls to unify the BF and USF in recognition of convergence of technologies.

[25] Sandu N (2009) Zim Lagging Far Behind in ICT: Report An article in The Standard Newspaper

## 3.4 Access to Information and Protection of Privacy Act [Chapter 10:27), (Act No. 5 of 2002)

This Act (AIPPA), under the control of the Ministry of Media, Information and Publicity, provides members of the public with a right of access to records and information held by public bodies; to make public bodies accountable by giving the public a right to request correction of misrepresented personal information; to prevent the unauthorized collection, use or disclosure of personal information by public bodies; to protect personal privacy; to provide for the regulation of the mass media; and to establish a Media and Information Commission whose purpose includes the following:

- To foster freedom of expression in Zimbabwe;
- To make information readily available to any body that requires it;
- To foster a Zimbabwean national identity and integrity;
- To be responsible for enforcing and monitoring the enforcement of provisions of the Act;
- To develop mass media and uphold professional and ethical codes of conduct; and
- To ensure unbiased and balanced reporting by the mass media in Zimbabwe.

Like the other regulatory bodies discussed under AIPPA and BAZ, the Media Information Commission (MIC) is under the control of the Minister of Media, Information and Publicity with the Minister responsible for appointing all MIC Board members and setting their terms of office. These attributes as discussed before make MIC open to political interference. Media registration and accreditation of journalists have been contentious functions of MIC in the past with loud voices of dissent from the media fraternity accusing the government of controlling the media from both the local and international media.

## 3.5 The Interception of Communications Act [Chapter 11:20] (Act No. 6 of 2007)

This provides for the lawful interception and monitoring of certain communications in the course of their transmission through a telecommunication, postal or any other related service or system in Zimbabwe; and the establishment of a monitoring centre. This Act now falls under the jurisdiction of the Ministry of ICTs. The purpose of this Act was to establish a Communications Monitoring Center which would intercept communications in the course of their transmission through postal emails, telecommunications and any other related services. According to the media watchdog body MISA (2007), the Act does not contain basic safeguards against the invasion and unwarranted intrusion into privacy as found in countries with similar Acts.

## 3.6 Challenges and Gaps in the Current Legal and Regulatory Framework on ICT4D

The following gaps/challenges have been identified in the legal and regulatory framework. As discussed earlier, the new Minister for ICTs has made remarks about the need to reform these laws and their regulatory bodies. These gaps provide discussion and advocacy entry points:

- The current ICT Bill does not spell out how the various ICT Acts would relate to each other or even indicate which ones would be repealed. This issue might still be clarified in future versions of the draft since Zimbabwe now has an ICT ministry.

- There are *no laws that govern cyber transactions* in the following areas: digital signatures; contracts made over the internet; a framework covering issues of convergence of telecommunications, broadcasting and computing. The Minister of ICTs has promised to enact laws that control and manage online transactions.

- There is overlap and duplication of functions between POTRAZ and BAZ.

    - Both manage radio frequencies and require resources from government to perform most of their functions. They both also require human resources of similar qualifications; this is a true picture of fragmentation and wastage of both financial and human resources. This duplicity is one of the reasons why stakeholders are advocating for convergence in the regulation of the ICT sector.

    - POTRAZ and BAZ both regulate electronic transmission of information and data.

    - The duplicity of functions between PORTRAZ and BAZ also spills over into relationships with international and regional bodies such as the International Telecommunications Union ITU and COMESA. International trends recommend one national body to coordinate ICT related issues at national level, a situation that is in line with convergence of technologies.

- According to Mukaratirwa J (2008)[26] one of the glaring shortcomings of the Post and Telecommunications Act and the Broadcasting Services Act is the dysfunctional nature of the Universal Service Fund (USF) and the Broadcasting Fund (BF) that lack transparency in the way the funds are used. To date there are no records available to the public of how these funds have been applied in the past.

- From descriptions of the role of USF and BF, there are overlaps which should be addressed to ensure efficient utilisation of public funds. One remedy could be to establish one universal service fund in line with the convergence of technologies and set up an independent body to monitor and evaluate its use.

[26] Mukaratirwa J (2008) Review Report on Findings on Existing Legal and Regulatory Frameworks on ICT in Zimbabwe, distributed by email.

- In the same report, some stakeholders argue that the Interception of Communications Act is necessary if its intention is to curb terrorism. However, others were of the view that the Act interferes with the right to individual privacy.

- *Relevance of the legal and regulatory framework to ICT4D.* Increasing the impact of scarce resources requires the productivity-enhancing capabilities that only technology can offer. In short, technology helps the people get more done as ICTs are used as enabling tools for development. The focus should be on using ICTs in everyday lives. Since these legal and regulatory frameworks dictate how people access and use ICTs, they create an environment in which people intersect with ICTs. Where that environment is limiting, the full potential of ICT4D is not realised and this problem manifests itself in various ways through an inefficient telecommunications sector, poor services offered to consumers, and stifled growth of the ICT sector, among others. The use of ICTs may actually promote existing imbalances in society if the frameworks are not responsive to such imbalances. Certain sectors of society, namely the poor, aged, women and those living in disadvantaged communities (no infrastructure to access ICTs) remain untouched by ICT.

- *Challenges of a converged regulator.* The ICT Policy Framework recommended a restructuring of the ICT sector through the enactment of an ICT Act and the establishment of a national ICT converged regulator. The policy also recognises the importance of conceiving a legislative framework that deals with aspects of individual privacy, security, cyber crimes, ethical and moral conduct, encryption, digital signatures, intellectual property rights and fair trade practices (Mukaratirwa, 2008[27]). These issues used to be addressed and administered under several acts of parliament, but now there is need for one regulator. There appears to be disagreement on how these issues should be addressed in the ICT Bill.

- According to the Association of African Communications Lawyers (AACL) (2008[28]) in a liberalised environment *the concept of regulatory independence* is paramount for a country that desires to realise key socio-economic objectives. AALC define an independent regulator as one that is;
    - Independent from those it regulates;
    - protected from political pressure;
    - given full ability to regulate the market by making policy and enforcement decisions; and
    - adequately funded from reliable and predictable sources.

  These characteristics are absent in the current set up. The draft ICT Bill formulation process attracted heated debates on the issue of independence and how the governing body would be elected and its relationship to the implementers. Currently, the government controls both the regulatory Agency (POTRAZ, BAZ, and MIC) and the dominant players in the market (TelOne, NetOne, Zimbabwe Broadcasting Corporation). There are calls for the new ICT Bill to be very clear about this issue. Separation of power and authority will help decrease instances of regulatory confusion in cases where one institution oversteps its legal mandate.

[27] Ibid
[28] AACL NEWS ARLET distributed by email aaclcoordinator@gmail.com

- *Community radio* is radio that is available to a specific community. It is normally broadcast using the Frequency Modulation (FM) band at a limited radius. It is non-profit radio that focuses mainly on developmental issues that affect the community. It is radio that is run by a community and serves the interest of the community. Although the legal and regulatory frameworks on media in Zimbabwe allow and encourage the development of community radio, in practice very few licenses have been awarded to groups wishing to run these programmes at community level. Those that have been awarded licenses work in a government controlled environment or even in defiance and are termed 'pirate radio stations' that experience frequent police raids. With the advent of the inclusive government, there is hope that this situation should change for the better and that communities will be allowed to run their own local radio stations and freely exchange information and knowledge.

- *Public access points.* Most internet cafes in Zimbabwe are privately run. As discussed earlier, World Links has established 45 networked computer centres in primary and secondary schools. Community members can also access these ICTs in the afternoons after the school children have gone home. The President donated several computers to various schools. No figures are available. During the policy formulation process, there were calls by women's groups for government to set up public access points in places that women patronise frequently such as clinics and shopping centres.

## 3.7 Institutional Mechanisms

Government's commitment to ICTs is evidenced through the institution of a Cabinet Committee on Scientific Research and Technology Development led by the Minister of Science and Technology Development (MSTD) in the Office of the President. MSTD hosted the National Information Communication Technologies Project that coordinated the eReadiness survey, the ICT Policy formulation and drafted the current ICT Bill that acknowledges the convergence of technologies. This role is now taken over by the Ministry of ICTs.

The Ministry of Media, Information and Publicity also has a key role to play in the development of ICTs as it oversees such institutions as BAZ, MIC, Transmedia, Zimbabwe Broadcasting Holdings, Ziana and Zimbabwe Newspapers. The Ministry of ICTs oversees the activities of POTRAZ through the Postal and Communications Act and also the Interception to Communications Act.

## 3.8 Conclusion

The policy, legislation and regulatory frameworks on ICT4D are currently work in progress in Zimbabwe. A final validation workshop on the ICT Bill is scheduled in early July 2009. The draft ICT Bill that will emerge from this process will be tabled before parliament before the end of the month. Stakeholders will still get another opportunity to input into the process through interactions with the parliamentary portfolio working on the Bill. The next chapter discusses the methods used to gather information from respondents on the field research which supports the need for change.

*Comment on the drafting of the ICT Bill*

*Although attempts were made to make this process as inclusive as possible, participation from civil society was minimal. The major players in the process were private sector and government departments. The process took place at the height of Zimbabwe's political and economic problems, with participation in such processes taking second place to the more pressing issues of food security. Calls were made from participants for the involvement of experts from the various sectors to interrogate ICT4D issues in greater detail. This call has since been answered through the conference of ministers and their permanent secretaries to map out a consolidated work plan in the next ten months to achieve the goals of STERP from a multi-sectoral and holistic perspective*.

# 4. RESEARCH METHODOLOGY

Desk literature research informed the preceding sections. However it became necessary to use a research tool that would interrogate further the ICT4D aspects as provided for in the proposed ICT Bill. As discussed earlier, the ICT policy formulation process has been an ongoing process since 2002, actively followed by private, public, civil society groups and the academia and community groups. The slow growth of ICTs has been variously blamed on laws that have been variously described as draconian, repressive to civil liberties and stifling to the growth of media in Zimbabwe.[29]

With the advent of a new political dispensation of power sharing through the GNU, establishment of a new Ministry for ICTs whose initial mandate was to review the ICT Policy and table the ICT Bill before parliament, it became apparent that there was a need to sample stakeholders' views on the proposed ICT Bill. The research sample was randomly selected from the stakeholders that had been following the ICT policy, legislative and regulatory processes since 2002. Names and contact addresses were obtained from previous workshop participants lists.

**Design of Research Survey Form**

The following is a summary of the research methodology used:

- Desktop research to assess the current status of ICT4D issues in Zimbabwe. The literature research discussed in the preceding chapters covered both published and unpublished sources to ensure a deeper understanding of the issues;

- Open-ended research questions were formulated and pretested and then applied during the field research which covered private, public and civil society sector players in ICT;

- Face to face discussions using the open research questions with individual and groups of ICT4D players; and

- Conduct telephone interviews where the researchers are unable to set up face to face discussions. The survey tool used is sample participants views as attached as Annex

[29] MISA Zimbabwe (2007). Access to Information: A comparative Analysis of Zimbabwe's Media Laws with other Jurisdictions.

# 5. RESEARCH FINDINGS, ANALYSIS, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Analysis of Respondents

The questionnaire was designed to allow participation from a wide range of multi-stakeholders that included government, policy makers, students, academia, civil society, parliamentarians and consultants.

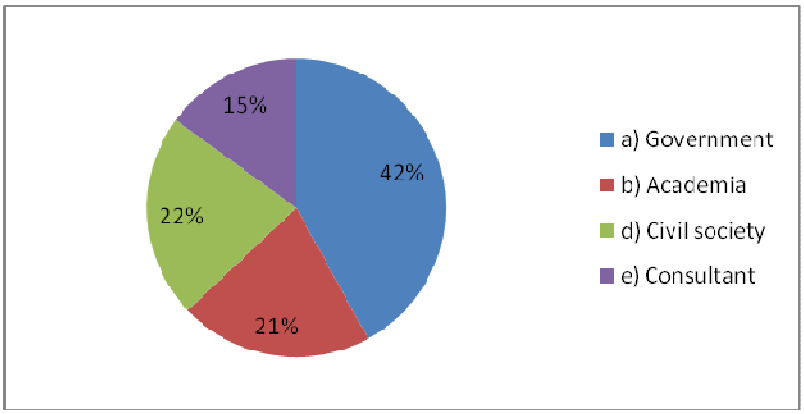



***Figure 3: % Category of Respondents***

Civil society may be defined in many different ways, this research segmented both national and international organizations as civil society, thus making civil society the largest group of respondents to the survey (42%). Interestingly, respondents from the private sector chose to classify themselves as consultants despite the fact that they represented both small and large corporations. Maybe their alignment with consultants shows that many employed Zimbabweans engage in moonlighting activities as a way of making extra money. The breakdown of participants by Internet interest was a way to give more flexibility at self-classification; in terms of why they used the internet.

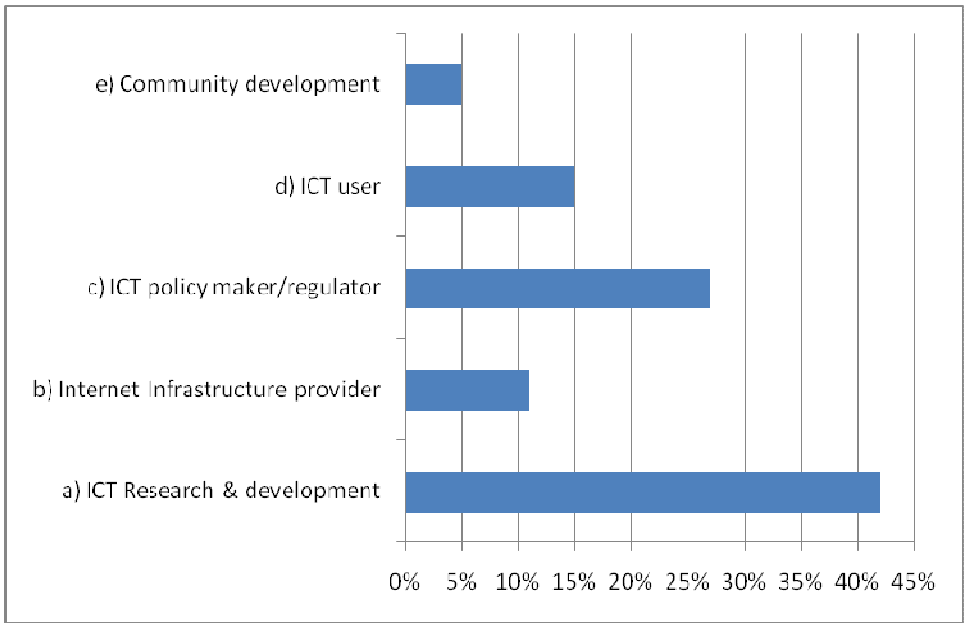



***Figure 4: Breakdown by Participant - Internet interest***

The majority of respondents regarded themselves as having an interest in ICT research and development, with the second largest being ICT policy makers/regulators. One would assume that those that had an interest in research and development (42%) could be from civil society organizations which then confirms the assumption that the larger group of respondents were actually from the broadly defined civil society.

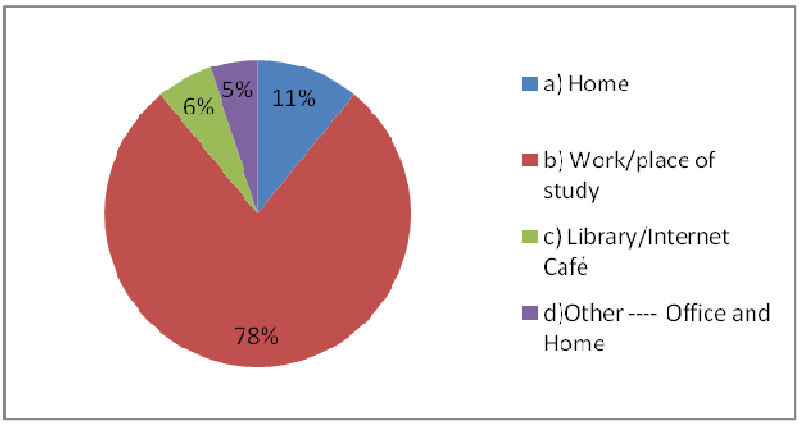



***Figure 5:Respondents' Principal Places for Internet Access***

Seventy nine percent (79%) of the respondents accessed the Internet from work; 11% accessed from home and 5% accessed from both home and office; and the other 6% from a library/Internet café. The respondents pointed out that connectivity is always slow and inefficient. Internet Service Providers (ISPs) cannot adequately serve them due to clogged network systems as a consequence of

an unmaintained and inefficient infrastructure. From the user side, the limiting factors are basically cost (affordability) and unavailability of service.

## 5.2 Structure of the Survey Form

***Question 1*** was introductory and sought to measure consensus among respondents. ***Question 2*** required the respondents to have read the ICT draft Bill; this question was answered by 58% of the respondents because of this special requirement. The other 42% could not respond on this issue. ***Questions 2-5*** sought to measure satisfaction levels of a particular issue on ICT4D.

## 5.3 Findings and Analysis

**1. What do you think about the following statements?**

**Table 7: Survey Responses**

| Statement | Response |
|---|---|
| a) At present the Internet does not provide any significant benefits for the majority of Zimbabweans | 63% agree |
| b) Wide use of ICTs could help to combat poverty | 95% agree |
| c) SMEs could find ICTs invaluable tools for growth and development | 95% agree |
| d) The Internet is an essential tool for development and should be made available and affordable for all | 100% agree |
| e) Over the next few years (3-5) the benefits provided by ICTs to Zimbabweans will grow significantly | 100% agree |
| f) Universal Service Fund should be used to make ICTs affordable & available for rural communities | 95% agree |
| g) Universal Service Fund should be used to enable people living with disabilities access and use ICTs | 100% agree |
| h) Wireless technology should be more widely used in Zimbabwe to provide affordable internet access to the majority of Zimbabweans | 100% agree |
| i) Within the southern African region, it is more expensive to own and use a mobile phone in Zimbabwe than in any other country | 95% agree |
| j) The growth of the financial sector depends on effective and secure online transactions. | 95% agree |

This introductory question sought to measure the general consensus on the role and importance of ICTs for development by responding to a set of opinionated statements. Since the survey form was completed and discussed in a face-to-face mode, respondents were asked to give reasons on those perceptions that differed greatly from the average responses. Question 1 (a) had the least consensus and the reasons given for this include:

- Respondents from the civil society disagreed largely with the statement. Although they agreed that few Zimbabweans actually access ICTs, those that do have found ICTs to be significant in

either improving information access or improving the way they do business. Civil society respondents that disseminate development related information e.g. on HIV/AIDs and anti-retroviral vaccines (ARVs) said that ICTs have significantly contributed to the raised awareness of HIV/AIDs and contributed significantly to reduced prevalence rates.

- For those that agreed with the statement the reason given was "*just because Internet is not currently accessible to the majority of Zimbabweans, one cannot really measure its importance*". Several other respondents said "*since infrastructure is so poor and access expensive, not many Zimbabweans have actually used the Internet; thus we agree with the statement that the Internet does not provide any significant benefits for the majority of Zimbabweans*". Thus it would appear that where the Internet was used strategically, e.g. by civil society organisations, it had significant benefit for the lives of ordinary Zimbabweans. There was consensus on the other statements of ***Question 1*** as shown in ***Table 6***.

**2. The draft ICT Bill responses were as follows:**

**Table 8: Responses about the Draft ICT Bill**

| Statement | Satisfied % | Dissatisfied % |
|---|---|---|
| a) Online access to government information/services | 42 | 58 |
| b) Protection of online personal information and privacy | 37 | 63 |
| c) Availability of e-commerce and payment systems | 42 | 58 |
| d) Availability of software that facilitate use of local languages (promotion of software development) | 21 | 79 |
| e) Wireless Internet, spectrum and access | 37 | 63 |
| f) IP address allocation and management | 37 | 63 |
| g) Secure server administration, digital signatures, encryption | 42 | 58 |
| h) Access to technical standards and their adaptability | 37 | 63 |
| i) Negotiate access to marine undersea cables | 37 | 63 |
| j) Fair access to protection of intellectual property | 32 | 68 |
| k) ISP market conditions | 42 | 58 |
| l) Internet telephony (VoIP) | 37 | 63 |
| m) Sharing of wireless infrastructure like towers, tall buildings by ICT operators to cut costs | 47 | 53 |
| n) Other issue (please specify) Broadcasting regulation | | |

Responses to ***Question 2*** show that there is general dissatisfaction with the provisions in the draft ICT Bill on various aspects of ICT4D. This section was completed only by those who had participated

in meetings designed to draft and validate the draft ICT Bill during the months of September to November 2008.

a) *On online access to government information/services*, 58% expressed their dissatisfaction. Many said that there is no e-government service to talk about and assert that the draft ICT Bill should have showed how this goal would be achieved. Those that expressed some satisfaction with the provisions of the Bill said such details would be expressed in the still-to-be-formulated e-Strategies and Implementation Framework.

b) *On protection of online personal information and privacy*, 63% expressed their dissatisfaction. Several respondents explained that the draft ICT Bill does not illustrate how it would relate to existing legal and regulatory frameworks notably the Interception to Communications Act. MISA (2007)[30] states that the said Act violates the "*right to respect for one's privacy, family life, home and one's correspondence as provided for under Article 8 of the 1950 Convention for the Protection of Human Rights and Fundamental Freedoms"*. Those that agree that sufficient provisions are in place argue that Zimbabwe has the right to defend itself form terrorism and other unwarranted acts of sabotage and that the government should protect the territorial integrity of the nation.

c) *On availability of e-commerce and payment systems*, 58% expressed dissatisfaction. At the time of research, the Zimbabwean economy had been dollarized rendering the local currency basically useless. Prior to this, all online transactions had been barred following rent-seeking activities of the banking sector and the supposed fuelling of the parallel market as people could move money easily. With the onset of the dollarized economy and the fact that ordinary Zimbabweans have been encouraged to open foreign accounts, we expect to see more online commerce and payment systems getting established. However respondents said that the provisions as they stand had been designed for limited e-commerce and online payments; they would like to see these provisions strengthened.

d) *On availability of software that facilitates use of local languages*; again 58% respondents said that there is a need for government to actively fund and encourage software developers so that they focus more on open source tools in developing packages that can be used to develop content in local languages and those packages that facilitate people living with disabilities or even the illiterate to use technology. The private sector was also encouraged to partner with research institutions at universities in developing accessible software packages. Apparently there is a lot of untapped potential in Zimbabwe's' institutions of higher learning that should be exploited. One academician highlighted benefits that could accrue to the country if ICT companies could support research by lecturers and research students. He said, *"An important aspect of human development that is usually forgotten is the lecturer or trainer of the ICT experts that are churned out to work in the various ICT companies and organisations. The scenario is that the lecturer works hard to develop these human resources who after a few years earn a lot more than the lecturer who continues to struggle ahead with very few resources and incentives. The issue is to encourage companies*

[30] Access to Information: A comparative Analysis of Zimbabwe's Media Laws with other Jurisdictions. MISA Zimbabwe (October 2007).

*and organisations to involve the lecturer in research and development activities so that these developers of human resource remain cutting edge and relevant and can in turn churn out more appropriate graduates. There is need to provide resources to learning institutions or even sponsor research and development so that Zimbabwe may graduate from being a consumer of ICT to becoming producers and innovators and developers of ICT. The more involved in research and innovative activities the lecturer is the more developed and appropriate one expects the students to be".* Other respondents from the private sector focused on the brain drain as the major culprit for why Zimbabwe was lagging behind in ICT development. One private sector practitioner emphasized that "*we are constantly training ICT experts who leave Zimbabwe for greener pastures in the region. We simply have to improve our remuneration packages to retain skilled staff."*

e) *On wireless Internet, spectrum and access*; 63% were dissatisfied with the Bill's provisions. This assertion dispels the assumption that a wireless technology is a high-end technical issue of little relevance to developing countries. The research results show that wireless connectivity has assumed a revolutionary status in providing access to the underserved and those with very little infrastructure. Although Zimbabwean policy makers have taken a technology neutral route, it may be worthwhile to focus on important technologies, run with these and be in a position to change focus more frequently to remain on the cutting edge, and relevant and responsive to peoples' needs. The mobile revolution and construction of masts criss-crossing the country makes it possible for wireless internet connectivity at very little extra cost.

f) *On IP address allocation and management*, 63% expressed dissatisfaction with current provisions. There were also several 'no view' responses indicating that the question was not clear or that respondents did not know the relevance of IP address allocation and management to ICT4D. This finding opens up opportunities to raise awareness and share information on this internet governance issue.

g) *On secure server administration, digital signatures, encryption*; 58% of the respondents expressed dissatisfaction with provisions on this issue. Several respondents highlighted the fact that Zimbabwe is still in its infancy in using online transactions such that the need to have secure server administration, digital signatures and encryption might not yet be apparent. They added that once connectivity and broadband issues improve, these issues might then become more real and need urgent attention. The Bill does not really cover those issues that will ensure users are protected from cyber crime and related ills arising from users of more mature economies that are aware of shortcomings of electronic transaction systems and take advantage of Zimbabwe's neophyte conditions. Thus separate statutory instruments may need to be developed to cover online security issues.

h) *On negotiating access to marine undersea cables*; respondents were not really aware of the existence of these interregional initiatives to bring broadband to the region and the continent as a whole. There were several 'no view' responses here. Thus awareness raising campaigns might be necessary to bring this issue into the public realm.

i) *On fair access to protection of intellectual property*; 63% of respondents are dissatisfied with current provisions in the Bill. There have not been any meaningful public discussions on this issue yet Zimbabwe is awash with artists that need protection of their intellectual rights.

j) *On ISP market conditions*; 58% respondents are not happy with provisions on ISP market conditions. Some voiced their concern about the fact that TelOne has the sole responsibility to provide the international gateway to the whole country; they would like to see this field opening up to more players and raise competition with the corresponding drop in consumer costs as the market forces of supply and demand come into play.

k) *On Internet telephony (VoIP);* 53% expressed their dissatisfaction; the government position on this issue was not very clear and hence there were several 'no view' responses. This response shows that stakeholders are not clear of the government's position on VOIP. Earlier in 2009, POTRAZ announced that it was amending existing licenses to allow the country's telecommunications operators to offer new services based on 3G and VoIP technology.

l) *Sharing of wireless infrastructure e.g. towers and tall buildings by ICT operators to cut costs*; this issue was raised during the validation workshop on the draft ICT Bill; participants wanted the Bill to spell out that incumbents must share infrastructure and cut down on their service costs for the benefits of the customers. Some respondents said that those companies that would have invested their funds in developing the infrastructure have to be adequately compensated. This was seen as an area of possible conflict in future.

**3. How important do you consider the development of solutions to the following problems?**

**Table 9: Responses Relating to the Development of Solutions**

| Statement | Response |
|---|---|
| a) Online fraud, cyber crime | 100% agreed |
| b) Illegal content | 89% agreed |
| c) Spam, unsolicited commercial email | 95% agreed |
| d) Virus attacks | 89% agreed |
| e) Software piracy | 95% agreed |
| f) Other issue (please specify) Expense of internet access | |
| g) Other issue (please specify) Local language and ICT illiteracy | |
| h) Other Critical ICT equipment and facilities, Security of databases | |

There is universal agreement on the importance of online fraud/cyber crime, illegal content, spam, virus attacks and software piracy. More that 89% of respondents agreed on each of these issues.

Other issues specified are: expense; use of local language; ICT illiteracy; uncensored educational material; critical ICT equipment and facilities; and security of databases.

**4. How important do you consider the development of solutions to the following issues?**

**Table 10: Responses Regarding the Importance of Developing Solutions**

| Statement | Response |
|---|---|
| a) Government should encourage Public Private Partnerships (PPPs) in infrastructure development in the ICT sector | 95% agreed |
| b) Spectrum licensing should embrace unlicensed spectrum[31] | 53% agreed |
| c) Spectrum licensing should not embrace unlicensed spectrum | 47% agreed. There were several no view responses here. |
| d) Tariff harmonization | 89% agreed. Respondents said this was in line with the convergence of technologies; so tariffs should be harmonized |
| e) Unified license | 84% agreed. The reasons given here were the same as on (d) above. |
| f) VoIP be legalized in Zimbabwe as a way of improving last mile access | 95% agreed |
| g) Prioritise Human Resource development | 95% agreed |
| h) Prioritise e-government strategy development | 95% agreed |
| i)Prioritize development of e-strategies & implementation framework | 89% agreed |
| j)Develop and formulate ICT literacy plan for civil servants and general public | 89% agreed |
| k)Harmonize government institutions performing similar functions e.g. Powertel, NetOne, TelOne which all provide data services | 79% agreed |
| l)Develop strategies to retain ICT staff & curb brain drain | 74% agreed |
| m) Other issue (please specify) Education and awareness raising on transformative nature of ICTs, | 27% agreed |
| n) Other issue (please specify) Standardization of equipment and software | 5% agreed |

[31] License exempt or "*unlicensed bands include 2.4 GHz and 5 GHz in USA and Europe. Unlicensed spectrum and low cost wireless technologies that operate in these bands are of particular value in developing countries where they can impact accessibility and availability of information and telecommunication services. License exempt regulation provides a friendly environment for entrepreneurship, reducing barriers to entry and the risk of regulatory capture*". These bands are barred in Zimbabwe. The Acacia Atlas, 2005, pp 24

There is general consensus on all points except on spectrum licensing i.e. points b) and c). This indicates general ignorance on the issue. Points m) and n) seem to have low consensus because these are new issues written under the 'other' category; respondents thus saw education and raising awareness on the transformative nature of ICTs and the introduction of standardisation in equipment and software as important enough issues to be included.

**5. The following challenges have been highlighted as key in the provision of ICTs for development.**

**Table 11: Responses Regarding Key Aspects in the Provision of ICT4D**

| Statement | Response |
|---|---|
| a) High tariffs and licensing | 95% very critical |
| b) The legal framework that is not investor friendly | 89% very critical |
| c) Political interference on the regulator | 74% very critical |
| d) High inflationary environment | 95% very critical |
| e) Shortage of ICT skilled personnel | 95% very critical |
| f) Inefficient use of resources due to duplication of functions | 95% very critical |
| g) Unreliable power supply | 84% very critical |
| h) Other issue (please specify) Establishment of innovation incubators | |
| i) Other issue (please specify) Bridging the technology gap created by generation difference | |
| k) Other issue Infrastructure vandalism | |

The listed challenges all received overwhelming support and near universal agreement (more than 84%) as very critical in the provisions of ICT4D. Political interference on the regulator received less scoring. Most of the government workers did not agree that there was political interference of the regulator while 100% of civil society believed that there was political interference of the regulator and that this was a very critical issue to be addressed in the pursuit of good governance and democracy.

**6. What are the three most significant initiatives that will make a difference in the next 5 – 10 years?**

Responses in this section were as varied as the respondents themselves; however the major issues can be grouped into the following ICT4D issues;

- *Infrastructure development and deployment* i.e. availability, affordability and accessibility. Statements used to discuss this included;
  - The need to make ICTs accessible and affordable to everyone in Zimbabwe, especially rural and marginalised people.
  - Ride on the President's Computers to Schools programme and expand the programme so that it reaches out to communities as a whole.
  - Ubiquitous, affordable access to broadband connectivity and the Internet based on a just and affordable, cost-plus-margin pricing method that is fair to providers and fair to consumers, and in the process addressing the market efficiency gap by letting the market deliver universal access/service.

- *Human resource development and capacity building*
  - The focus on skills to use and maximise the potential of ICT4D. Respondents used these phrases to describe the focus - 'e-skills' and 'e-knowledge'. This ICT-skills building needs to be broad, embracing marginalised communities in rural areas as well as users of ICTs but also as creators and disseminators of local content.
  - Encourage ICT adoption at learning institutions by skilling teachers to use ICT in pedagogy and in creating e-content. Students should be skilled in using ICTs in learning (e-learning).

- *Financing/Resource mobilisation drive in support of ICT4D activities*. This was another major initiative that could make a difference in the next five to ten years.
  - Finances are needed to build and improve ICT equipment and infrastructure deployment throughout Zimbabwe.
  - The financing should also embrace investment in state-of-the-art technologies, facilitate research in relevant software applications and encourage local content development.
  - Opening up the telecommunications industry to more players was seen as a good strategy by some respondents to improve the flow of FDI (foreign direct investment).

- *Develop a converged licensing framework* that will set the parameters for ICT investment in the country.
  - Advocacy and awareness raising campaigns should be done so that the entire Zimbabwean population is made aware of ICTs and its benefits, and ICT regulations (this also includes parliamentarians). In addition ICTs must be used to solve macro-economic problems.
  - Develop and implement a sound regulatory framework, and remove barriers to ICT4D through enactments of an appropriate legal framework. Passing legislation should be enforced and appreciated by all. The more technical respondents advocated for the following:
    - Introduce (broadband) Digital Subscriber Link (DSL)
    - Promote wireless internet connection(WI/R)
    - Encourage the government to stimulate all its sectors to mainstream ICTs into their policy as a priority
    - Develop a common e-business regulatory framework.

**7. What opportunities do Zimbabweans have in exploiting ICTs for development?**

As mentioned earlier, responses here were as varied as the number respondents themselves. The opportunities Zimbabweans have are grouped into three categories:

- infrastructure development;
- an enabling ICT policy, legal and regulatory framework that cover issues such as community broadcasting and e-commerce; and
- human resources and ICT literacy training. Respondents' comments are grouped and discussed below:

- *A wide choice of technologies can be used to achieve universal access.*
  Overall the respondents called for greater investment in infrastructure and improvement of access by the employment of the following:
  - Explore low-cost, broadband bandwidth through the multiple undersea cable access possibilities. The Zimbabwean government needs to attract investors to ensure that Zimbabweans benefit from undersea cables that have revolutionized broadband access to other connected countries.
  - Enhance and upgrade existing ICT infrastructure. Respondents called for the repair and maintenance of the existing infrastructure.
  - Develop effective tripartite partnerships between the private sector, educational institutions and government. These partnerships could encourage high infrastructure development at universities and create an effective skills base of ICT personnel and researchers for the ICT4D industry and public sector.
  - Improve countrywide connectivity via the underutilised Powertel fibre optics.
  - Roll out Next Generation Infrastructure and Networks to allow for the provision of IP-based services offering e.g. in the Call Centre and Business Process Outsourcing space.
  - Optimise universal access funds to improve rural telephony (access by rural people to ICTs) and thus bridge the digital divide both within Zimbabwe and with developed nations.
  - Ensure that equal access to ICTs is available for males and females.
  - Create more local content. A small but significant percentage of the respondents highlighted the fact that people would only access the internet if this was available. Thus there is a great opportunity for software developers to develop applications that allow content developers to do in local languages or even with online translations across the various Zimbabwean languages. Zimbabwean users would be more interested to patronise an internet that is full of information that is relevant to their daily needs. This opens another door that needs an interrogation of 'what is local content?'

- *More intensive training in the use of ICT at institutions of learning where learners and educators adopt and integrate ICTs within pedagogy*
  - Opportunity lies within the more highly educated portion of the population; Zimbabwe can become a hub for software development and the development of other ICT technologies due to its highly literate population.
  - Distance learning can be used to undertake large-scale ICT literacy of the masses; opportunity should be taken to increase the capacity of training institutions to offer ICT

literacy training to ordinary Zimbabweans, not only those with specific grades. The call is to also to popularise ICT literacy so that the general public has increased capacity to generate, create, modify and disseminate content in local languages for local consumption.

- Recruit and retain human resources to promote ICT4D. Respondents from institutions of higher learning pushed for more private sector, public and academic partnerships to allow highly qualified staff to engage in R&D activities in ICT4D.

- *Implement an effective ICT policy, legal and regulatory environment.*
  - Respondents were optimistic that there are going to be real changes in the media laws of Zimbabwe, especially those that promote community broadcasting and the establishment of an ICT Ministry to coordinate the promotion of ICT4D in Zimbabwe.
  - Acquisition of e-skills by small to medium enterprise (SMEs) and the general public will allow greater involvement in e-business solutions
  - There is now real opportunity to develop mobile-banking, as practiced elsewhere in Africa, for the great masses that do not operate formal bank accounts.
  - An effective ICT policy, legal and regulatory environment should also ensure tariff reductions and improve synergies with established first world ICT development companies that may be willing to invest and do business in Zimbabwe thus increasing access to online information for the benefit of all.

**8. Actions to promote universal access to ICT**

Universal access can be promoted through:

- awareness raising campaigns on the role and importance of ICT4D;
- research and innovative approaches that maximise the role ICTs play in development;
- human resource development;
- ICT literacy for all stakeholders, including marginalised communities;
- Implementation of gender sensitive policies and programmes with the capacity to draw in financing and mobilise resources from the international community. This could encourage skills transfer and toll manufacturing creating jobs in Zimbabwe[32].

The survey respondents provided the following comments on proposed actions.

- Put in place a converged licensing framework that is technology and service neutral. This should open up the market to wider competition using low-cost solutions.

  The following are consequences of an enabling policy, legislative and regulatory environment:
  - Universal services that allow ICTs to have a direct effect on enhancing livelihood options such as access to online government services and business services;
  - Reduction of tariffs and import duties;
  - Improved infrastructure and access issues;
  - Increase availability of affordable broadband;

[32] Toll manufacturing is where a foreign company works in a host country using manufacturing equipment and staff for a fee and a share in the profits. Toll manufacturing also involves skills transfer from the guest to the host country.

- An open ICT sector likely to attracted investors, with the removal of existing barriers to entry;
- More available financing for ICT4D to build investments in ICT infrastructure and ongoing maintenance and upgrading; and the
- Introduction of incentives to stimulate the local ICT industry and sector development.

- Develop human resources and raise ICT literacy levels by undertaking the following:
  - Promoting ICT education and training in all sectors of Zimbabwe such as schools, business, prisons, etc.;
  - Conducting awareness raising campaigns on the role, benefits and importance of ICT4D;
  - Put in place sustainable human capital and social capital networks for ICTs;
  - Provide opportunities for people in education and community settings to share experiences and enhance global understanding;
  - Promote research and development; and
  - Provide incubation of emerging innovative business approaches on ICT4D.

**9. What are the greatest barriers that should be tackled in exploiting ICT4D in Zimbabwe?**

Barriers can be categorised into three groups - financing, infrastructure development, and an enabling policy and regulatory environment.

- The first challenge is that of financing ICT4D. Respondents highlighted the following:
  - The need to allocate financial resources for ICTs and ICT policy enforcement;
  - The need to source funds for R&D on ICT policies as well as ICTs themselves;
  - The need for public-private partnerships that can mobilise financial and human resources to maximize the opportunities offered by ICT4D;
  - The need for financial investments in infrastructure to increase broadband. This is important as all ICT applications for business and community will depend on the provision of reliable and affordable bandwidth.

- The second challenge identified the need for policies to reflect the requirements of a wide range of stakeholder communities e.g. SMEs, citizens, the research community. .
  - Government must work towards creating a competitive business environment where access becomes affordable for the average citizen;
  - The policy environment must enable entrepreneurship development in Zimbabwe and even attract SMEs from other parts of the world to set up businesses in Zimbabwe;
  - Ongoing ICT policy research and the allocation of funds to support such work;
  - Ongoing adaptation of the legislation is needed, based on multistakeholder inputs;
  - More productive government participation in driving forward the ICT4D agenda; and
  - The reduction of tariffs and import duties on ICT goods, so as to bring down the costs for purchasing equipment.

- The third challenge is that of Infrastructural development and access, which will require the following:
  - Agreement on the way forward for the Universal Services Fund management and allocation;

- The empowerment of women in business and other civil groups to allow for equal access to ICT opportunities;
- English language literacy, particularly among the rural population, which will enable access to a broader range of content;
- The creation of a more favourable economic climate, which will allowing considerable investment in infrastructure development.
- Heightened awareness of the importance and benefits of ICT4D to all people in Zimbabwe in all sectors and walks of life; and
- A move away from traditional and cultural beliefs so as to allow the adoption of ICT4D.

## 5.4 Recommendations

1. There is general optimism on the role and importance of ICTs for development and poverty alleviation. Most governments, including the Zimbabwean government view ICTs as a facilitator to reach the Millennium Development Goals. The government's enthusiasm on ICT policy issues has been clearly demonstrated through the establishment of a Ministry of ICT and a converged regulator. This provides a sound basis on which to build constructive multistakeholder dialogues in the country and the region at large. The aim of these dialogues would be to capitalise on technical innovations that have the capacity to work for human progress and development.

2. The research done for this study has revealed several ICT4D issues that have not been fully addressed in the current ICT Bill. This opens the doors for further discussion and the remodelling of the legal and regulatory framework to respond to peoples' felt needs and lived realities. In-depth discussions and awareness raising of the issues will allow stakeholders across various sectors of the development landscape of Zimbabwe to move forward by exchanging old mind sets for more progressive ones.

3. ICT4D dialogues need to be linked to the achievement of socio-economic plans for the country (e.g. STERP) if ICT4D is to be relevant and appropriate. As Zimbabwe develops its e-strategies, they must continue to be rooted in the specific priorities and demands of Zimbabwe.

4. A competitive regulatory environment needs to be combined with targeted pro-poor policies; clear and enforced legal frameworks; licenses for operator and service providers, including service obligations in disadvantaged areas.

5. Zimbabwe should focus on a combination of market driven processes, development co-operation and public-private partnerships geared towards supporting the development and the implementation of nationally owned e-development strategies that seek to harness ICT to promote development and the achievement of the MDGs.

# APPENDIX I: USEFUL RESOURCE MATERIALS


Adams, L. (2003). *Information and Communications Technology in Higher Education in Africa: Initiatives and Challenges*. Journal of Higher Education. Vol 1. No 1, pp. 195-221.

Association of African Communication Lawyers published in their News Alert of Jan 2009 (circulated by email)

Chitanana, L., Makaza, D., & Madzima, K. (2008). *The current state of e-learning at universities in Zimbabwe: Opportunities and challenges*. International Journal of Education and Development using ICT [Online], 4(2).

Consumer Council of Zimbabwe: Lower *Income Urban Earner Monthly Budget for family of Six* Monthly Reports January and February 2009.

Gairola, B.; Chandra, M.; Mall P.; Chacko, J.G.; Sayo, P. & Loh, H. (ed) (2004). *Information and Communication Technology for Development: A Sourcebook for Parliamentarians.* United Nations Development Programme – Asia Pacific Development Information programme (UNDP-APDIP), Reed Elsevier India Private Limited.

Gender Issues in ICT Policy in Developing Countries: An Overview. Accessed at http://www.un.org/womenwatch/egm/ict2002/reports/paper-NHafkin.pdf

Gono, G. (2009). Reserve Bank of Zimbabwe *Supplement to January 2009 Monetary Policy Statement: Practical Advice and Policy Interventions to Support the Youth, Women Groups and Other Vulnerable members of Society.*

Government of Zimbabwe (2005). *Gender Policy*.

Government of Zimbabwe (2005). *National Information and Communication Technology (ICT) Policy Framework 2005.* www.ict.org.zw

Government of Zimbabwe (March 2009). *Short Term Emergency Recovery Programme.*

Hafkin and Taggart (2001). *Gender, Information Technology, and Developing Countries: An Analytic Study.*

Hafkin, N. (2002). *Gender Issues in ICT Policy in Developing Countries: An Overview* www.un.org/womenwatch/daw/egm/ict2002/reports/Paper-NHafkin.pdf

International Development Research Centre (IDRC). (2005). *The Acacia Atlas*.

Labelle, R. (2005). *Information and communication technologies for development in national human development reports.* UNDP New York.

Longwe, S. (2005). *Spectacles for Seeing Gender in Project Evaluation. In: Gender Evaluation Methodology for Internet and ICTs*. www.apcwnsp.org

Mukaratirwa, J. (2008) *Review Report on Findings on Existing Legal and Regulatory Frameworks on ICT in Zimbabwe*, Circulated by email.

MISA (Media Institute of Southern Africa) Zimbabwe (October 2007*). Access to Information: A comparative Analysis of Zimbabwe's Media Laws with other Jurisdictions.* www.misazim.co.zw

MISA Zimbabwe (2008). *Position on the need for an Independent Broadcasting and Telecommunications Regulatory Body.* www.misazim.co.zw

Ndlovu, R. (2009). *ICT Guide Zimbabwe*; article on www.kubatana.net website (Accessed 3 April 2009).

Sandu, N. (2009). *Zim Lagging Far Behind in ICT*: Report An article in The Standard Newspaper (4 April 2009).

Siyachitema, R. (2009). *Remuneration Policy for Economic Recovery:* Paper presented by Consumer Council of Zimbabwe at the Employers' Confederation of Zimbabwe Discussion Breakfast meeting on 13 February 2009.

United Nations Economic Commission for Africa (UNECA) (no date). *Briefing Paper: Government with an e. The Potential of Information and Communication Technologies (ICTs) in the African Public Sector.* http://www.uneca.org/aisi/docs/aisibriefingpaperno2egov.pdf

World Bank (1998) quoted by Duncombe, R. and Heeks, R. (2001). *Information and Communication Technologies and Small Enterprise in Africa* accessed at http://idpm.man.ac.uk/idpm/ictsmesfs1.html

Zimbabwe e-Readiness Report (2004) Accessible at www.ict.org.zw

Zunguze M (2008), Investigations into the extent SMEs have embraced the use of ICTs in their business operations: A case for import and export SMEs. www.ekowisa.org.zw

Various News Websites:

BBC www.bbc.com

CNN www.cnn.com

ITNews www.itnews.com

# APPENDIX II: ABOUT THE AUTHOR

**Margaret Zunguze** is the Founder and Executive Director for E-Knowledge for Women in Southern Africa (EKOWISA) a regional nongovernmental organisation whose mission is to promote communities' access to and use of information and communication technologies (ICTs) at local, national, regional and international levels for social action and sustainable development. Margaret worked as a Publisher for a Scholarly Publishing house for eight years before working as the Information and Communications Specialist for the Farming Systems Program for the Food and Agriculture Organisation of the United Nations for another eight years. She worked extensively in the rural areas of Kenya, Uganda, Tanzania, Malawi, Zambia and Zimbabwe setting up and promoting rural information nodes for the sharing and exchange of information by small scale farmers. Margaret also worked with a local feminist organisation called Zimbabwe Women Resource Centre and Network as the Information Services Director before founding EKOWISA. She has presented several papers at international and regional forums on Gender and ICTs.

Margaret is a holder of a B.Sc. Honors in Biochemistry and M.Sc. in Strategic Management and several diplomas in Gender and Development, Programme Management and Multimedia Publishing.