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TRADE CAPACITY BUILDING PROGRAMME FOR ZAMBIA Phase II

PROMOTING GENDER EQUALITY IN TRADE CAPACITY BUILDING: THE CASE OF ZAMBIA

November 2016
During implementation of all projects, programmes and processes, the Department of Trade Investment and Innovation (TII) aims to promote a sustainable economic environment where access to economic resources and market entry are free of any form of discrimination, especially based on sex, and where the benefits of economic growth are equitably distributed. Each project integrates a gender dimension at the design phase and often carries a gender-related component throughout implementation. TII makes a significant contribution to Sustainable Development Goal (SDG) 5 on achieving gender equality and empowering all women and girls, in parallel to its work towards SDG 9 on building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation.

This brochure highlights contributions to gender equality and equity that have taken place in the context of the NORAD-funded project Republic of Zambia: Trade Capacity Building Programme – Phase II. The below does not detail a comprehensive account of the project, but aims to capture and highlight some gender dimensions and achievements that have taken place throughout implementation. The brochure later contains some individual profiles of female quality professionals who have benefitted from the project. The project was carried out between 2014 and 2016, funded by the Norwegian Agency for Development Cooperation (NORAD).

The direct beneficiaries were institutions and facilities that received assistance to upgrade their capabilities and organizational procedures to the level of internationally accepted practice, for example, the Zambian Bureau of Standards (ZABS) and the Zambia Weights and Measures Agency (ZWMA), among others. On another level, beneficiaries of this project were the manufacturers and exporters active in the strategic export sectors. As a result of the project they were able to expand their production, have access to and comply with export country regulations, standards and buyers requirements, by virtue of enhanced and accredited testing and certification facilities in Zambia.
INTRODUCTION

The main objective of the project was to enhance the export performance of the Republic of Zambia by supporting the re-engineering of Zambia National Quality Infrastructure based on the National Quality Policy (NQP) implementation plan and to increase private sector participation in service delivery. Consumers have also benefited indirectly from enhancement of standards awareness and the development of a ‘quality culture’ in the country, which is very timely as Zambia needs to significantly bolster its market surveillance capacities within the Common Market for Eastern and Southern Africa (COMESA) and the South African Development Community (SADC) trade zones.

The focus of this publication is to highlight where the project significantly contributed to Zambia’s greater efforts of gender mainstreaming. Firstly, in a policy context, by adding to the impetus of the Zambia Weights and Measures Agency (ZWMA) gender policy, as well as on the individual female beneficiary level, supporting their professional trajectories, and ultimately impacting gender parity positively in Zambia’s quality institutions across the board. This in turn has a knock-on positive effect at the level of households and communities. Not only this, but also seeing female quality professionals empowered in positions such as those later described, spurs a strong ‘role-model’ effect for younger females and girls — small steps toward breaking the glass ceiling.

Gender mainstreaming in TII projects begins with a thorough gender analysis at the design stage and takes into account practical and strategic needs of the different sexes. A preliminary baseline analysis was made during the inception phase of this project with a focus on the main National Quality Institutions, namely, Zambia Weights and Measures Agency (ZWMA) and Zambia Bureau of Standards (ZABS).

Since its inception in 2003, ZWMA had no female employees in the management and operations department, however in 2011; two (2) female technical employees were engaged as well as one (1) management staff. The ratios were roughly 30% female and 70% male. For Zambia Bureau of Standards, no sex-disaggregated data was possible to collect, despite this; the Bureau was a main collaborator throughout the project duration.

The project monitored training statistics and encouraged organizations to include female candidates especially in the application procedure for technical trainings. Furthermore, to assist the overall gender mainstreaming effort, a workshop was organized at the beginning of Phase II in cooperation with Ministry of Gender to raise awareness of stakeholders and facilitate the development of gender mainstreaming guidelines for National Quality Institutions (NQIs). The workshop included all counterpart agencies as well as the main government counterpart – the Ministry of Commerce, Trade and Industry (MCTI).

Furthermore, a gender assessment was conducted for MCTI and other selected bodies including the Citizen’s Economic Empowerment Commission (CEEC), ZABS, the Zambia Development Agency (ZDA) and ZWMAA. The gender assessment captured specific expectations at an early stage of the Phase II project as well as concerns for gender mainstreaming since it identified areas of gender inequality present in each of the aforementioned bodies. The assessment proposed sustainable and impactful solutions to the areas of concern found, providing a good basis for development of best practice in gender mainstreaming throughout the project cycle and beyond. The work conducted offers long-term recommendations to ensure gender sensitivity across Zambian quality institutions.
CAREER SNAPSHOTs IN METROLOGY
AT ZABS AND ZWMA

Himba C. Cheelo
Chief Executive Officer, ZWMA

"As the CEO of ZWMA, some of my responsibilities include but are not limited to the provision of strategic leadership, provision of day-to-day management decision and overseeing the provision of quality legal metrology services to all stakeholders including the general public so as to ensure fair trade and consumer protection.

I completed my Grade 12 (then form five) at Roma Girls Secondary School in Lusaka in 1981. As part of my secondary education, I carried out a JETS Science Project in soap-making. This project gave birth to my desire to undertake further studies in Chemical Engineering.

After my Form Five, I proceeded to the United Kingdom to pursue my studies in Chemical Engineering. This decision was informed by the fact that there was no Chemical Engineering degree being offered in Zambia at that time. I began by undertaking "A" Levels in Pure Mathematics, Chemistry and Physics at a college in Oxford. I then proceeded to Exeter University where I completed a BSc in Applied Science/Chemical Engineering in 1987. In 1988, my studies were temporarily 'interrupted' by my getting married and having my first daughter. However, this did not set me back for long as I then embarked on a Masters Programme in 1991. In 1992, I graduated with a Masters of Science (MSc) Degree in Combustion Science and Pollution Control (broadly speaking Energy Technology) from the University of Sheffield.

I returned to Zambia in 1996 and was offered a job at the then Caltex Oil Zambia Limited as Marketing Operations Engineering. This earned me a place in the history of the Company because it so transpired that at the time I was "the first FEMALE Marketing Operations Engineer south of the Equator". This was featured in the Company's magazines worldwide. At Caltex, I was involved in overseeing on behalf of the Company, construction of a number of service stations around the country, asset management of all petroleum related instruments amongst other engineering duties.

I left Caltex to join Energy Regulation Board (ERB) early 2000 as an Inspector under the Petroleum Directorate. During my stay at ERB I was involved in a number of varied petroleum regulatory functions, including but not limited to spearheading the development of appropriate technical standards to govern the petroleum industry in Zambia. My proudest moments at ERB included the successful management of the national programme to phase out leaded petrol and also playing a major advisory role in policy formulation in the petroleum sector.

"I would not hesitate to recommend engineering to other young women."
PROMOTING GENDER EQUALITY IN TRADE CAPACITY BUILDING | THE CASE OF ZAMBIA

I was given the role of portfolio leader to formulate the Biofuels Regulatory Framework for the country, with a team of other institutional and stakeholder experts. During my stay at ERB, I rose through the ranks with added and progressive responsibility, rising to the position of Senior Manager, Technical Regulation - Fossil Fuels. I left ERB in December 2014 after a very successful and fulfilling 15 years with the regulatory authority.

I joined the Zambia Weights and Measures Agency (ZWMA) as Chief Executive Officer on the 17th December 2014.

I have personally had an extremely fulfilling career in what has been traditionally referred to as a man’s world. I would not hesitate to recommend engineering to other young women. The ‘icing on the cake for me’ is my very recent (June 2016) admission to the class of Fellow of the Engineering Institution of Zambia. Unconfirmed reports would indicate that I am amongst a handful of Zambian women to be made Fellow of EIZ.

What do you like about your job and what motivates you?

"I have always derived a lot of inspiration and satisfaction through being a part of programmes that make a real difference to my country. This is evidenced by some of the works that I have been involved in in the past e.g. national focal person and coordinator of the phase out of leaded petrol in Zambia, etc. I am truly motivated by ‘making that difference’!

I have one overarching ambition for the future. This is to transform the Agency into the institution that it is meant to be. I am committed to raising the profile of the institution and demonstrating the relevance of the works that we undertake. I also plan to equip the employees of the Agency with the necessary resources be it equipment, skills etc.

This may sound like a cliché, but my plans hinge on having a more efficient and effective legal metrology authority in Zambia. It is a daunting task taking cognizance of the wide mandate of the Agency, but I am convinced that with the right support and team, it is attainable!"
PROMOTING GENDER EQUALITY IN TRADE CAPACITY BUILDING

THE CASE OF ZAMBIA

Mwewa Kapotwe Bwalya
Senior Metrologist, ZWMA

“I love working for Zambia Weights and Measures Agency because it is a small but growing institution and this makes my efforts to make a difference can actually be recognized and appreciated therefore this gives me a sense of satisfaction.”

At the personal level, I have greatly benefited from three (3) international trainings, two (2) of which were fully sponsored by UNIDO.

I am currently pursuing a master’s degree program offered by the Copperbelt University. My goal therefore is to see to it that I successfully complete this master’s degree program in Business Administration General (MBA). After completion of my master’s degree program, I plan on pursuing a PHD in the field of study I am yet to choose.

My ultimate goal therefore is to be at a senior management level so as to provide direction for the Agency and support to junior officers.”

“I come from a small family of three of which I am the first born child and the only female. I was born in Kitwe where I did most of my primary school education at Matete Primary School. Due to my determination and hard work, I did very well in my lower primary school education and was therefore awarded a two year Scholarship by Leopards Hill Secondary School. I continued working hard and qualified to one of the best girl’s boarding schools in Zambia- Kasisi Girls Secondary School. It was at this secondary school that my ability to be a leader was first recognized and I was chosen to be the head girl of the school. It was also at this school that I realised that I wanted my career to be in an engineering field as I was part of the senior quiz panel in one of the most competitive clubs in secondary schools which was the Junior Engineers, Technicians and Scientists (JETS) club.

My grade 12 results were impressive as I did very well in almost all my subjects but I loved sciences more and my dream was to pursue a degree in an engineering field. It was for this reason that I applied to the school of natural sciences at the University of Zambia with the hope of making it into the school of engineering to study Electrical/ Electronic Engineering. I did manage to get into the school of engineering where I studied and graduated with a bachelor of engineering degree in Electrical/ Electronics. While at the University of Zambia, I was involved in a number of leadership roles as I was elected committee member for the University of Zambia Engineering Society (UZES) and later on, Publicity Secretary.

It was at the same University where I met my husband and I got married to him a few months after my graduation. We are blessed with a three year old son.

I love working for Zambia Weights and Measures Agency because it is a small but growing institution and this makes my efforts to make a difference can actually be recognized and appreciated therefore this gives me a sense of satisfaction.

I also like the fact that the organization puts value on employees being trained in various fields related to metrology. This enables employees to become better at doing their jobs. The other reason I really like about working for the Agency is the fact that I am able to work independently without the interference from the office whenever I am given a task to undertake.
Mwila Kapembwa
Senior Metrologist, ZWMA

“I am the first born in a family of four. I did to primary school at Nsansa School and then went to Dominican Convent Secondary School in 1997, graduated in 2001 with a GCE certificate. In 2004 I enrolled at the Copperbelt University in Kitwe, Zambia. After five years I graduated with a bachelor of engineering degree in Chemical engineering. Finding a job was not easy, but I never lost hope. I started my first job in 2010 with Gourock Industries Limited in Ndola and worked as a Quality Assurance Officer. In 2011 I was given the opportunity to be trained on ISO 9001 Quality Management Systems, ISO 14001 Environmental Management Systems, OHSAS 18001 Occupational Health and Safety System and ISO 22000 Food Safety Management Systems and contributed effectively to the implementation of the ISO standards, ensuring a quality final product. Then three years later I joined Zambia Weights and Measures Agency as an Assistant Metrologist in July 2013.

I attended training in Legal Metrology at the National Measurement Office in the United Kingdom in October 2013, which was funded by UNIDO. The training was important so as to obtain greater knowledge in legal metrology as a new Assistant Metrologist, so as to ensure fair trade in our country and the world at large. From the training I obtained more knowledge on verification of non-automatic weighing instruments, verification of fuel dispensers, pre-packed goods, length metrology, concepts of measurement uncertainties and quality standards of all laboratories visited. As an Assistant Metrologist, the knowledge gained from the training in Legal Metrology sponsored by UNIDO, assisted me in carrying out my duties efficiently and confidently.

The part of my job that I like is the verification of trade instruments such as scales and fuel dispensers, as the verification process is intended to protect both the suppliers and consumers, thereby ensuring fairness in trade.

My job also gives me the opportunity to have access to a variety of industries and most important is the opportunity to grow. For my future I wish to continuously contribute to the growth of ZWMA as a Senior Metrologist and keep developing myself by studying for a masters and obtain great opportunities.”
Promoting Gender Equality in Trade Capacity Building

The Case of Zambia

Mwenya Makasa Miti
Metrologist, ZWMA

"I was born and bred in Luanshya, Copperbelt Province where I also did my primary school. I continued with my secondary education at a catholic boarding school in Mpika, Northern Province called Lwitikila Girls Secondary School from grade 8 to grade 12 were I graduated with a Junior and Senior Secondary School Certificate in 2003. There after I obtained a Bachelor of Engineering Degree in Chemical Engineering from the Copperbelt University in Kitwe, Copperbelt Province in 2009. In 2013 I finished my studies with the Institute of Commercial Management (ICM - UK) and was awarded a Certificate in Health and Safety Management. I decided to continue on with the same program and obtained a Diploma in in Health and Safety Management from the same institute.

I worked for Zambia Environmental Management Agency while I was still on campus as an intern Student Inspector from January 2009 to April 2009. After graduating, I started working for CNMC Luanshya Copper Mines in September of 2011 as a Senior Assistant Metallurgical Engineer for the Concentrator. I worked at the mine for 1 year 9 months. I left Luanshya and joined Total Zambia Limited at headquarters in Lusaka as a Stock Controller on 1st May 2013. I worked for Total Zambia Limited for 2 years 4 months and later joined ZWMA on 1st October 2015.

I have had several personal experiences in my adult life being in boarding school, university and work. I was the only female to continue from first year on campus into the second year and eventually the only female to graduate that year with a Bachelor's degree in Chemical Engineering. Being the only female student in class made me proud and I would give the male students a run for their money. I have also had very interesting adventures in the field of engineering. As a metallurgist, the mining industry was diverse with different processes, equipment, plant designs, techniques and so on. As a Stock Controller in the Oil Marketing Company (OMC) Industry, I was able to learn more about procurement procedures, new software, analyze statistical data, oversee all stock volumes country wide and understand more on fuel, lubricants and special oils.

Working as a Metrologist at ZWMA is very interesting and fulfilling. I have been able to interact with people at different forums organized by the agency to sensitize people about legal metrology and our mandate. It is surprising how a company manager whose instruments are not verified responds when you explain to him/her about how he/she is also consumer in his own right and can also be affected in the same way his affecting his clients. In my everyday work, I see how legal metrology affects everyone from young to old, CEO to customer. Educating people and giving them knowledge on how to comply with legal requirements is what motivates me to work harder and make a difference in people's lives a day at a time.

I would like to be able to contribute more in the field of legal and scientific metrology in our country by way of initiating projects that are of significance to everyone at large including people in rural areas with little knowledge on metrology. I would also like to contribute in the Environmental Health and Safety industry by introducing ways of making our industries safer and more environmental friendly. I would also like open a recycling plant for recycling plastics so I can make a difference in the environment and our children can grow up in healthier environment.

"Being the only female student in class made me proud and I would give the male students a run for their money."
Natasha M. Sichone
Assistant Metrologist, ZABS

“Driven by the desire to be the best and to prove those boys wrong, I worked hard at everything I did, academically and physically. I had to be first, be it sports or academic work. This was even more fun if boys were involved.

I attended Kabulonga girls high school from 1998 to 2002, yes no boys but still worth the challenge. My love for science and mathematics intensified because of the level of thinking and creativity that was required in tackling problems. I graduated high school to attend the University of Zambia from 2004 to 2008. I was ecstatic when I was accepted into the school of natural sciences. A world of science awaited me. I was ready to be an engineer, to invent things like the great Thomas Edison. I must say when I ended up in the physics program I was skeptical. However, after much research and motivation from my Dad, my journey into the world of physics began. It was deeper and much more interesting than high school. Upon research, I found that with physics I had a deeper understanding of engineering properties and this intrigued me enough to go on.

One of my physics lecturers once said in a lecturer, with physics you can do anything and fit in anywhere. True to his statement I have since worked for one of Zambia’s biggest smelter at the Konkola copper mines from 2008 to 2012. I worked as a process associate under the refractory department, my science background made working with and researching on heat resistant materials an interesting time.

Whilst there I also worked as an assistant planner and metallurgical accountant. It was a new field but learning physics equipped me with level of thinking and analysis I required to carry out the work. However, I still wanted something closer to my educational background. I must say that metrology has helped to fill this gap.

The importance and my appreciation of metrology is beyond measure. I currently work as a measurement scientist (Metrologist) in the fields of length and mass metrology at the ZABS. I work hard to maintain the national standards and optimize measurement processes for quality assurance and safety. This is done through the calibration and maintenance of national standards, development and review of calibration methods and processes and calibration of various instruments for industry.

It was an honour to know that I was amongst the first female metrologists employed at the Zambia Bureau of Standards.”
instrument will perform under different conditions and how much trust to put in it (uncertainty). The instruments capabilities can be characterized in various ways. I have also come across many different instruments and literature, such as can’t be found in schools.

As a physicist, it was also an honor during one of the trainings at the Korean research institute of standards and science (KRISS) to come across the Isaac Newton apple tree. Since metrology isn't taught in our schools it was a new field for me. However, things unknown are just challenges waiting to be overcome and so I was looking forward to yet another journey. In order to be competent in the field of metrology, I had to undergo a series of training. These included uncertainty of measurements, mass metrology, dimensional metrology and ISO 17025. I'm grateful to the organizations that sponsored these learning opportunities. These include ZABS, UNIDO and KRISS to mention a few.

In this world where technology is fast advancing it is important to keep abreast with the changes. And for me to continue to keep contributing to ZABS development, to ensure that our country has the best and up to date equipment and measurement methods to satisfy our clients, I need to upgrade myself. I believe that we need our metrologists to advance in education. This will provide tools that will aid in research to improve our measurement methods and capabilities. Thus putting Zambia on the international market. Who knows we might someday provide international traceability to a new field of research.

I also hope to see more laboratories set up, get accredited and provide employment to upcoming scientists.

UNIDO’s project goals in Zambia were to improve on metrology and standards. As such under this project I was able to undergo training in the field of metrology as part of my career development. In a department populated by men, it was a great opportunity. The trainings were not gender biased. They allowed for equal opportunity. Because of these trainings I qualify not just from on-the job training as a Metrologist and I have certificates that attest to that.

Our laboratories also received assistance in procuring the standards and equipment necessary for improvement. Now I work in a laboratory with well trained personnel and equipment. Further trainings with visits from consultants helped our metrology laboratory attain accreditation. Because of this, our laboratories have seen an increase in the number of requests for calibration services. This has given me a sense of accomplishment and pride. We are now more.

Meeting various people in this field from auditors to consultants has given me a sense of direction. There is more to metrology. I look forward to being qualified enough someday as to help disseminate this knowledge, to help setup up and developing metrology institutes. I am as yet to encounter female assessors and that’s another thing to aspire towards.
Gift Sidono
Senior Metrologist, ZWMA

“...I started my career in knowledge transfer as a tutor at a trade school in 2009, then taught physics at a government Secondary school in 2010. I joined Zambia Weights and Measures Agency in 2011 to date. As a Metrologist I have been in so many industries and control systems, I have met diverse clientele and this has given me a better understanding of the needs and expectation of stakeholders. I have had exciting moments and challenging ones and this is what has built me.

Metrology is a very diverse field and with the ever advancing technology, there is always something new i.e. new areas of regulating, this makes the job interesting and am always learning and enriching my career, I also enjoy talking to people, and my job provides me that opportunity to meet and talk to a lot of different people. My company Values training, they believe it is an integral part of high performance and thus opportunities for training are always created within and outside the country So, I can enhance my skills and be satisfied as I perform my job. What motivates me the most is the impact my contribution as a Metrologist has economically on Consumers, companies and the Government, this is what drives me to always do my best, as one simple measurement error affects a whole lot of things one can’t even imagine. So my motto is to always do my best and do it right as I strive to provide that Confidence in measurements.

I wish to continue my professional career by applying and developing my skills and knowledge within this dynamic and fast growing field of Quality Infrastructure (SQAM). My areas of interest in research include technical regulations, Mass and Dimensional Physics, Electronics and Instrumentation. In future I hope to explore the other areas of this field too.”
"I am a Volume and Mass Metrologist at ZABS. My job entails maintenance and calibration of national standards, dissemination of traceability to Zambian industry and conducting research on new measurement technologies.

I completed my Bachelor of Science degree with education (BSc.Ed - Physics) at the University of Zambia in 2010. I joined Zambia Bureau of standards (ZABS) in 2012 as an Assistant Metrologist.

My job is interesting because it involves constant learning and keeping up to date with new measuring techniques. I love travelling and my first time in Europe was on a work trip to London under the sponsorship of UNIDO. This job has given me an opportunity to travel and deepen my understanding of metrology by seeing how other metrology institutes tackle the various measurement issues. My training in uncertainty of measurement at NLA was sponsored by UNIDO.

The confidence and trust placed in me to house national standards and determinate traceability to the Zambian industry. The fact that my role as a Metrologist plays a vital part in ensuring that measurements being carried out in Zambia are traceable to international standards (IS) gives me sense of purpose. My interest in applied science makes this job enjoyable because I apply science in my daily work activities.

In future I intend to study environmental management and renewable energy. Due to the diversity of physics, my undergraduate degree in physics has given me the solid background needed to pursue a career in this field."

"The fact that my role as a Metrologist plays a vital part in ensuring that measurements being carried out in Zambia are traceable to international standards (IS) gives me sense of purpose."
It is important that both females and males participate in, and benefit from, capacity-building and technical activities on an equal basis and that both are given the same opportunities to contribute to the decision-making processes and to take on leadership roles in promoting quality and standards. As countries expand and strengthen their National Quality Infrastructure (NQI), it is encouraging to note the increasingly strong presence of females at all levels, even in technical and managerial positions in quality-related institutions, as can be seen in this instance.

By breaking down traditional barriers to technical professions experienced by females, such as those to quality institutions, gender inequality is tackled head on. The project Republic of Zambia: Trade Capacity Building Programme – Phase II implemented by UNIDO TII provides a prime example of this positive structural change. The women interviewed for this publication were empowered by the supportive environment offered as a result of the project and beneficiary institutions, by the awareness events offered, training and leadership opportunities, the role model effect, among many others. Gender mainstreaming actions taken under this project alongside upgrading and assisting the beneficiary institutions will be felt into the long-term.

Overall, females have a right to equality in all areas of life, including in the professional domain. Equality must be embedded across and within systems, upheld, including through proactive measures such as positive discrimination in the application process. Since all areas of life relate to gender equality, efforts must be made to cut the roots of discrimination wherever they appear. The fact that females have previously been absent in the professions touched on in this publication must change during the era of Agenda 2030. The actions described here spur this positive change in quality and standards institutions.