

Tsumkwe Energy Skills Assessment

Sponsor: DRFN Energy Desk

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Abstract

Tsumkwe, the largest off-grid settlement in Namibia, currently operates on a medium voltage, diesel-powered mini-grid, which is costly and inefficient. The Desert Research Foundation of Namibia is implementing a solar diesel hybrid to bring more stable electricity to the people of Tsumkwe. The goal of the Tsumkwe Energy Skills Assessment was to determine what skills people in Tsumkwe have and what businesses are wanted in order to facilitate local economic growth once better electricity is available.

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Authorship

Bryant Eisenbach – Bryant wrote the initial drafts of the Executive Summary and Appendix B: General Information about Namibia. He also came up with the first draft of our questionnaire, found in Appendix D: Skills Assessment Questionnaire, and conducted a majority of the interviews in Tsumkwe. Finally, he contributed to writing Appendix A: Sponsor Description and the Conclusions and Recommendations Chapter and designed our final presentation.

Charles Hanlon – Charles wrote the initial drafts of the Introduction, Background, Results and Analysis, and Conclusions and Recommendations Chapters. He also took notes for most of the interviews in Tsumkwe and compiled them to make Appendix F: Interview Transcripts. Finally, he also contributed to writing Appendix A: Sponsor Description.

Erin Ingalls – Erin write the initial drafts of the Abstract, Methodology Chapter, and Appendix C: The San People. She came up with Appendix E: Business Owner Interview Protocol, conducted some interviews, and took notes for most of the interviews. She also created the Excel spreadsheet for data analysis, found in Appendix G: Excel Spreadsheet and Appendix H: Data Analysis, formatted the final paper, and designed most of the presentations. Finally, she contributed to writing Appendix A: Sponsor Description.

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Abbreviations

DRFN	Desert Research Foundation of Namibia
LED	Local Economic Development
INSABA	Integrated Southern Africa Business Advisory
NGO	Non-governmental Organization
SME	Small and Medium Enterprise
IPP	Independent Power Producer
MFI	Micro financing Institution
SOE	State-owned Enterprise
FDI	Foreign Direct Investment
MLHRD	Ministry of Labor and Human Resource Development
MOL	Ministry of Labor
CSO	Central Statistical Office
NNRCCI	Namibian Northern Region Chamber of Commerce and Industry
SBCGT	Small Business Credit Guarantee Trust
SACCO	Savings and Credit Cooperatives
MCPM	Multipurpose Cooperatives Providing Microfinance
SCA	Savings and Credit Associative
NBC	Namibia Broadcasting Corporation
WPI	Worcester Polytechnic Institute

Executive Summary

Background

Throughout the developing world, sustainable development has become a priority for raising standards of living. Sustainable development involves an emphasis on interrelated environmental, economic, and social factors. The Tsumkwe Energy Project, sponsored by the Desert Research Foundation of Namibia (DRFN), seeks to promote sustainable development in Tsumkwe, the largest off-grid settlement in Namibia, by installing a solar diesel hybrid generating station to replace the diesel system currently in place. The current system is costly and ineffective and has contributed significantly to the underdevelopment Tsumkwe.

Goal and Objectives

The Tsumkwe Energy Skills Assessment concentrated on the economic component of sustainable development. The goals of the Tsumkwe Energy Skills Assessment project were to determine existing skills and appropriate economic opportunities for the residents of the Tsumkwe area and to determine topics of training that would allow them to take advantage of such opportunities. The DRFN asked for an assessment of the skills of the residents of Tsumkwe in order to encourage economic development in the area so as to take full advantage of the energy to be provided from the Tsumkwe Energy Project. To meet the goal specific to the Skills Assessment, several objectives needed to be met. First, the skills that the residents of Tsumkwe already possess were identified. Next, possible economic opportunities were identified and matched with existing resources in order to provide careful recommendations for ways to boost Tsumkwe's economy. Finally, additional skills required for successful economic development were determined. By meeting our project's objectives, we will aid the DRFN's goal to bring an ample and sustainable energy source to Tsumkwe by suggesting possible improvements for Tsumkwe's economy.

Methodology

In order to gain a better understanding of how we may be able to facilitate development in Tsumkwe, we have explored the concepts of Local Economic Development (LED), micro and small

enterprise, and participatory methods, and considered them with respect to their accomplishments and shortcomings in order to find the best approach to facilitate sustainable economic growth in Tsumkwe. Using our background research and with the help of DRFN staff, we developed a methodology that helped us meet our project's goal. We created a General Questionnaire and a Business Owner Interview Protocol in order to interview the residents and business owners of Tsumkwe over a period of two weeks. Using the questionnaire, we were able to identify what kinds of skills the residents have as well as discover economic opportunities that the people of Tsumkwe most wanted. From the interviews with business owners, we learned what businesses are already in Tsumkwe, how they were started, and how they would like to expand. We also used observational techniques to supplement our interview data, and used these observations to make our own recommendations of how Tsumkwe can best be sustainably developed.

Results and Analysis

During our two-week stay in Tsumkwe, we completed over 87 interviews with business owners and people who live in the town. We interviewed 73 people using our General Questionnaire and 23 using the Business Owner Interview Protocol. Nine of the business owners interviewed were also interviewed using the General Questionnaire. From this, we discovered that although there is a fair amount of informal entrepreneurial activity in Tsumkwe, the availability of certain technical and service skills such as automotive and appliance repair, plumbing, gardening, and electrical work is limited. Only eight people in Tsumkwe were found to have any relevant technical skills.

We also identified some of the problems with starting a business in Tsumkwe. First of all, lack of an adequate energy source prevents many businesses from starting or expanding. Also, there is often a lack of adequate demand for many kinds of services in Tsumkwe because of its small population. Businesses sometimes suffer from problems relating to the scarcity of government-allotted space in town for businesses. Lastly, we found that there is a general lack of access to resources such as capital and transportation. We used all of this information to make a list of recommendations for the DRFN on how they might productively continue their project and about the kinds of businesses that could be successful in Tsumkwe. Along with these recommendations, we also made a series of observations about the Tsumkwe community.

Conclusions and Recommendations

There are several businesses that we found, as a result of our survey, to have a high enough interest among the population to warrant further investigation. When asked what businesses the residents would like to see in Tsumkwe, the most common response was for the establishment of a supermarket in Tsumkwe. The second most mentioned business was a clothing shop. Tsumkwe residents also mentioned they would like other businesses but these were mentioned by fewer people. Such businesses might also be feasible in Tsumkwe. One suggestion was the establishment of an Open Market in Tsumkwe. Another option would be the establishment of a butcher shop. Lastly, a business that could also be successful is a small bank, with an ATM.

We also had some observations about life in Tsumkwe. Firstly, alcoholism is a problem, which seems to stem from the lack of entertainment during the evening hours and weekends. Second, the majority of the San make money from selling their craftwork, but they are taken advantage of by the non-San in the area, who will buy the crafts in bulk and then sell them in other parts of the county, as well as other countries, for substantial profit.

Also, the San have several more traditional skills that could be used to their benefit. They have significant knowledge of the environment in which they live, including the use of traditional herbal medicines and knowledge of animal habits that has not found a use in the modern economy of the area. If the San made use of these skills in an economically productive way, then these skills would not only be saved for future generations, but the San would have other ways of generating income while retaining some of their cultural heritage.

Transport is another problem in Tsumkwe. Currently, many people travel at least monthly to Grootfontein to buy certain goods and use certain services that are not available in Tsumkwe, some paying as much as N\$50-N\$100 per person per trip. We asked a few of our interviewees what they thought if a business were started that did weekly or monthly transport to and from Grootfontein, but the responses were mixed. A few felt that if such a business were to start, it would not do well enough to be a sustainable venture. Others felt that such a business might do well because it guarantees transport back to Tsumkwe from Grootfontein, something that is currently a problem. More research should be done into the viability of this business before it is started.

Our last recommendation to the DRFN concerns their Independent Power Producer's (IPP's) business plan. Since the demand for technical services such as automotive repair and electrical work is relatively small, we suggest that combining these services in some sort of cooperative that could share tools, part and transport costs, and working facilities would help the sustainability of these services. The IPP comes into consideration because it wants to draw its employees from the local population, but the people who were interested in becoming the maintainers of the solar grid happen to be the people who have the technical skills that wanted to start these services. We suggest that the IPP might join this cooperative and employ these people in order to help the cooperation and diversify its income base.

1.0 Introduction

Throughout the developing world, sustainable development has become a priority for raising standards of living. Sustainable development involves an emphasis on interrelated environmental, economic, and social factors. Scarce resources and isolated locations often limit possible economic opportunities everywhere, but especially in the developing world. Another hindrance to sustainable development is often a lack of access to modern technology. For example, a lack of access to a stable source of electricity can prohibit the economic growth that is necessary for sustainable development. Sustainable development is an attempt to use scarce resources in ways that allow for continued future use and socially equitable outcomes.

Microenterprises and SMEs have the potential to help the residents of Tsumkwe, the largest off-grid community in Namibia, build up their local economy. Currently in Tsumkwe, whose location

is shown in Figure 1: Map of Namibia/Tsumkwe, there is a medium voltage mini-grid that supplies electricity from three diesel generators (DRFN, 2006). However, this mini-grid is costly and inefficient, with frequent power fluctuations resulting in damages to appliances.



Figure 1: Map of Namibia/Tsumkwe (Interactive Map of Namibia, 2009)

This lack of a reliable power supply is a major

contributor to the underdevelopment of the economy in Tsumkwe. Residents of Tsumkwe frequently travel at least 300km in search of basic goods and services such as check cashing and clothing stores.

In order to aid the Tsumkwe area, the Desert Research Foundation of Namibia (DRFN) is

implementing the Tsumkwe Energy Project, which will produce electricity through a solar-diesel

hybrid generating station. This new, more reliable and efficient power supply will allow for further

development of the local economy in Tsumkwe. However, before installing in new power station,

research is being done on the environmental, economic, and social aspects of the project. Much of

this research being done by the DRFN is through interviews with the residents of Tsumkwe in order to

allow the residents to take ownership of the project and make it as participatory as possible.

While we were in Namibia, two members of the DRFN, Robert Schultz and Abraham Hangula, traveled to South Africa to study similar energy ventures. What they found was that these systems failed because of a lack of community ownership of the project as well as a lack of education in energy efficiency. In order to better understand what needs to be done in Tsumkwe, especially in regards to community ownership and economic development, we researched Microenterprises and SME's, participatory research, and skills development. We found that participatory approaches to development are necessary for sustainability, but past development approaches have often been top-down and industry-based (Simon, 2005, p. 20). Microenterprises and Small and Medium Enterprises (SMEs) have the potential to aid sustainability because they allow for people to participate in their own development. Unfortunately, microenterprises and SMEs are often introduced as part of top-down policies, hurting their participatory potential. From this we learned that greater sustainability in development can be aided through the use of microenterprises and SMEs, but only if the development is based on a framework of true participation.

Some research has been done as to what businesses are wanted in Tsumkwe, however the research is incomplete. Also, there are no data on what kinds of skills the people of Tsumkwe have. The local conditions of Tsumkwe have not been well understood, including knowing what the existing resources in the area are. Some small businesses have emerged in Tsumkwe, but not enough development has occurred to significantly improve the local economy. Before this project, little was known about how the skills of the residents of Tsumkwe area could be applied to their economic development. Even in the few instances where skills were known, there were not enough resources for those skills to be utilized fully. Ways in which the skills of the residents could be improved and existing skills could be better utilized were unknown, making the assessment of their skills and potential economic opportunities necessary. In order to help develop the local economy, more must also be known about the businesses already in Tsumkwe as well as what types of businesses are wanted in Tsumkwe once there is a more reliable power source.

The goals of the Tsumkwe Energy Skills Assessment project were to determine existing skills and appropriate economic opportunities for the residents of the Tsumkwe area and to determine what

training would allow them to take advantage of such opportunities. The DRFN, this project's sponsor, wanted the skills of the residents of Tsumkwe to be assessed so that economic development of the area can be facilitated. To meet the goals specific to Skills Assessment, several objectives were met. The skills that the people of Tsumkwe possess were identified. Possible economic opportunities were identified that would be suited to using existing skills. We determined the additional skills that the people will need in order to engage in the economic opportunities we identified. Finally, we identified training that the residents would need in order to improve existing skills to prepare for new economic opportunities. In order to meet these objectives, we used methods that directly involved the residents of Tsumkwe in research. We utilized questionnaires and interviews to obtain information concerning the skills of the residents of Tsumkwe and possible economic opportunities. By meeting our project's objectives, we have aided the DRFN to achieve its goal of building up the local economy of Tsumkwe, which will be possible once there is a more reliable source of energy.

2.0 Background

During the past 60 years, economic development has been approached in several different ways. Early approaches were based on the development of technology using top-down methods. In recent years, development has shifted toward decentralized methods based around local community development. Microenterprises and small and medium enterprises (SMEs) have been recognized as vital aspects of economic development that can effectively improve livelihoods in developing countries (Palmer, 2007, p. 26). The development of skills through microenterprises and SMEs often focuses on improving local skills and finding new, appropriate economic opportunities. In Tsumkwe, Namibia, assessing the skills that exist or could potentially exist could make local economic development more effective, sustainable, and culturally appropriate. In this chapter, we will discuss past approaches to economic development, achievements and failures of these past approaches, and the town of Tsumkwe.

2.1 Economic Development

Approaches to economic development have changed drastically since the beginning of major development programs during the 1950s. Development was first focused on a top-down approach that attempted to modernize technology in the developing world. This was followed by approaches that were more focused on the development of private enterprise. Currently, the focus has shifted to the use of microenterprise in order to develop local, rural and urban economies and help stimulate growth in the developing world. Development programs have begun to concentrate on how local skills can be improved in order to provide a basis for sustainable economic development.

2.1.1 Definitions of Enterprise Size

The definitions of terms such as microenterprise, small enterprise, medium enterprise, and large enterprise tend to vary throughout the world. Because of this, the European Commission has made attempts to standardize these terms (European Commission Directorate-General for Enterprise and Industry, 2005, p 6). According to current standards, a microenterprise is a business that employs less than ten people (p. 14). A small enterprise is a business that employs between ten to 50 people,

and a medium enterprise employs 50 to 250 people. Finally, a large enterprise employs over 250 people. These definitions are not the standards that every country uses. For example, Namibia's official definition of small enterprises differs slightly. For the purposes of the following discussion, these definitions will apply unless otherwise stated.

2.1.2 Top-Down Approaches to Development

In the decades immediately after World War II, the major approach to economic development in developing countries was a top-down approach based on modernization (Simon, 2005, p. 20). Funding provided by developed countries was aimed at modernizing technology in developing countries. The assumption of this approach was that if technology in the developing world were made to match technology in the developed world, economic growth would be spurred and the developing country would become more "modern". It was supposed that the path to industrialization that occurred in Europe and the United States could occur anywhere. These modernization programs were often under the control of the leaders of developing countries, and there was little input from the majority of people within these countries. This approach to development often failed to significantly improve the conditions of major segments of populations in the developing world, although it resulted in some parts of the developing world becoming industrialized.

2.1.3 Medium and Large Enterprise Development in Africa

Only two percent of businesses in Africa are large or medium enterprises (McDade & Spring, 2005, p. 19). Systemic features of many African countries are often responsible for the small number of large enterprises. After gaining independence from colonial powers, newly independent African countries would sometimes restrict the development of a large, domestic private sector. Large enterprises were often conducted from the 1960s to the 1980s through state-owned enterprises, or SOEs (p. 20). Government economic activity was aimed at building domestic infrastructure in order to increase economic activity. The SOEs were often inefficient and had low levels of productivity, resulting in the failure of many by the 1980s. The SOEs were usually sold to businessmen who then continued to depend on government subsidies in order to enable the enterprises to survive (p. 21). Currently, less than a third of large firms in Africa are owned by black Africans. The promotion of

large enterprises in programs of economic development has often failed, leading to current approaches based around promoting smaller enterprises.

2.1.4 Local Economic Development

The local economic development (LED) approach has become the main approach to economic development in urban and rural settings. The approach combines local development with integration into the world economy. Local governments and community groups control local resources and enter into agreements with businesses in order to help with job creation and economic growth (Nel & Rogerson, 2005, p. 4). The approach has been endorsed by the Organization for Economic Cooperation and Development and the World Bank (p. 1). LED can involve either direct interventions that help the poor or attempts to help local markets participate in the global market. In South Africa, LED has been the main strategy for increasing economic growth utilized since the end of apartheid. Entrepreneurship is an approach to development that has been greatly encouraged both by local governments and the national South African government (p. 3). Other southern African countries have adopted decentralized strategies like LED, giving local authorities more of a role in the direction of economic development.

LED exhibits a few basic trends, which include increased decentralization of power, the possibility of both economic marginalization and opportunity, and unique local economic initiatives (Nel & Rogerson, 2005, p. 3). The LED approach has at times led to the economic marginalization of some groups within southern African countries, but its effectiveness with respect to catalyzing economic growth has made it a favored approach with respect to economic development in southern Africa.

2.1.5 Microenterprise

Promoting microenterprise is an important method of achieving economic development throughout the developing world. An estimated 85 percent of employment in sub-Saharan Africa is the result of microenterprises (Palmer, 2007, p. 26). Microenterprises include small-scale manufacturing, transport, small-scale agriculture, trade, construction, and repair services. The past 20

years have seen a large amount of growth in microenterprises throughout the developing world. Economic growth in Africa has been greatly aided through local, small-scale enterprises. Currently, many institutions and organizations that are involved in economic development, such as governments and non-governmental organizations (NGOs), view microenterprises as the basis for economic development. Microenterprises have a great potential to develop economies in rural areas. Foreign direct investment (FDI), which often served as a basis for economic development in the past, has been reduced in recent years. Microenterprises have taken the place of FDI by creating employment and increasing economic growth (Chiwere & Dick, 2008, p. 24).

2.2 Participatory Approaches to Development

Microenterprise development can be used as a participatory approach to economic development, but it is not necessarily participatory in nature. Microenterprise development has, at times, been implemented through top-down, government-based approaches (Bhatt, 1997, p.377). In top-down approaches, policy-makers formulate what they believe are the needs of local communities and decide what microenterprises will be developed. Providing the small loans that are part of microenterprise development often comes with higher administrative costs and higher risks than with large loans. This has resulted in hesitancy by banks to lend to microenterprises. Impediments to participation such as lengthy application processes prevent the people who want to form microenterprises from being able to do so. Government quotas often encourage lenders to make larger loans to people involved with larger businesses, which turns microenterprise programs into programs for large and medium enterprises (p. 378). Top-down approaches often allow only the existing wealthy segment of the population to benefit from development programs, while the poor are denied access to capital.

Microenterprise development programs can create some level of participation for the less wealthy, developing communities, but they may also have some top-down aspects (Bhatt, 1997, p.378). Programs that are somewhat participatory often involve administrators telling communities how the program is going to be implemented, but not allowing community members to effectively shape the programs. Some consultation with community leaders may be involved, but final say over

implementation is still top-down in nature and lacks true participation from those who are subject to the programs (p. 379). Group borrowing and group collateral as a means of gaining credit is usually used based on the Grameen Bank model of microloans, which gives participants more control over the programs, but the majority of the power is still held by program administrators. This approach to participation may give certain individuals a sense of participation in development, but it can fail to allow for full community participation.

When microenterprise development programs have been truly participatory, they have involved direct control by the participating community members (Bhatt, 1997, p.379). Community members manage resources and make most of the decisions with respect to the financing of microenterprises. The government may provide assistance in education and health services in order to enhance the development of microenterprises (p. 380). Associations of microenterprises have been developed within communities in order to increase full community participation. Microenterprise development also becomes more participatory when there is a focus on aiding enterprises that already exist within communities. There has also been a focus on social and political aspects of development in order to enhance the participatory nature of the program. Programs are shaped by local conditions and the feelings of community members. Most microenterprise programs have stated that their goal is to maximize participation, but this goal may not always be met.

In sub-Saharan African countries, microenterprise development has been aided by the development of participatory financial institutions (Basu, Blavy, & Yulek, 2004, p. 6). Cooperative banking has allowed participants in microenterprise development to have control over the financing of community development. Specific examples of this include the network of microfinancing institutions (MFIs) that exists in Benin and Rural and Community Banks that are owned by communities in Ghana. As MFIs develop, they can expand their services to other members of local communities and make microenterprise development more participatory. The pooling of financial resources in groups allows for more effective development of microenterprises and increases community involvement. Groups are able to exert pressure in order to ensure that financial ventures

are completed and loans are repaid and that aid from nongovernmental organizations and other development institutions is made more effective.

2.3 Small and Medium Enterprises (SMEs)

Throughout both the developing world and developed world, small and medium enterprises (SMEs) play an important role in economic growth and development. In the European Community, 95 percent of businesses are SMEs (April, 2005, p. 59). In South Africa, 97.5 percent of businesses are SMEs, and they contribute 34.8 percent of the total gross domestic product (p. 55). Informal SMEs, which are SMEs that do not possess formal business registration, employ 2.2 million people out of a total employed population of 11 million people in South Africa. The importance of SMEs comes from their ability to increase employment, make economic innovations, supplement large businesses, and allow for new entrants into economies (p. 59). Developing economies have shifted from focusing on large enterprises to focusing on SMEs in order to improve economic development. SMEs are larger and usually more formal than microenterprises. SMEs also have a greater amount of capital than microenterprises. Employment in SMEs is also currently increasing at a higher rate than in large enterprises. SMEs have a vital role with respect to economic growth.

2.3.1 Advantages and Disadvantages of SMEs

There are several significant advantages to the use of SMEs over large enterprises for the growth of developing economies. SMEs tend to be less bureaucratic, which allows for faster and more efficient decision-making (April, 2005, p.61). They are also able to innovate more quickly, which allows them to be a basis for economic change. SMEs are able to effectively meet the needs of their customers because of their flexibility with respect to products and services. They can easily fill small niches in markets that larger enterprises cannot (p. 62). They also are usually subject to fewer government regulations than larger businesses, making innovation easier to accomplish.

Several disadvantages also come with the use of SMEs for economic growth and development. Lack of management skills can lead to the failure of SMEs (April, 2005, p. 63). SMEs are often part of the informal sector, which can correlate with a lack of formal business skills, such as

financial management skills, that are necessary for effectively running a business. SMEs also often lack connections to networks of other enterprises, making it difficult take advantage of many economic opportunities. SMEs usually do not have the resources or connections that large enterprises have in order to improve their position within the larger economy. The disadvantages that accompany informal enterprises hinder their effectiveness in increasing economic growth.

2.3.2 Skills Needed for Successful Establishment of SMEs

In order for SMEs to succeed economically, several basic business skills are necessary. Entrepreneurs need to know as much as possible about running small businesses in order to be successful (April, 2005, p. 42). Somebody involved in the enterprise should have a good general knowledge of management and be able to effectively handle employees. Without effective management, SMEs will usually fail. Record keeping is also important for SMEs. All daily details of running SMEs should be recorded in order to make managing daily affairs more effective. Effective record keeping can allow SMEs to better assess the value of their business and plan for future growth. It is also important for SMEs to effectively monitor their cash flow and make sure that accounting is accurate (p. 43). Without proper accounting, businesses lose financial control and can fail to maintain their financial capital. Owners of SMEs need to focus on activities that are profitable in order to build capital and expand. For success, SMEs also need an effective marketing strategy that allows for greater access to customers (p. 44). Without effective marketing, enterprises can fail to maintain sufficient sales of their goods and services. Planning also needs to be done effectively in order to set appropriate objectives and to outline the use of resources. SMEs need sufficient credit from banking institutions in order to expand and survive in markets. For small businesses to succeed, they need to set guidelines concerning their economic operations.

2.4 SME Sector in Namibia

Namibian SMEs make up an important part of both the formal and informal sectors of the economy. Namibia's Ministry of Trade and Industry defines what businesses are small enterprises according to sectors (April, 2005, p. 67). With respect to the manufacturing sector, a small enterprise is an enterprise that employs fewer than ten people, has a turnover of N\$1,000,000 or less, and

employs capital of N\$500,000. In the service sector, a small enterprise is an enterprise that employs fewer than five people, has a turnover of N\$250,000 or less, and employs capital of N\$100,000. For the following discussion, the European Commission's definition of the sizes of small and medium enterprises will apply, not the Ministry of Trade and Industry's definition.

The estimated contribution to the GDP of Namibia from manufacturing sector SMEs is N\$350 million (April, 2005, p. 67). SMEs in the service sector contribute an estimated N\$2 billion to the GDP of Namibia each year (p. 68). In 2003, the SME sector contributed eleven percent of Namibia's GDP (p. 73).

2.4.1 Defining Informal SMEs

In Namibia, there are several different definitions of what informal SMEs are. The Ministry of Labour and Human Resources Development (MLHRD) defines informal SMEs as enterprises with fewer than five persons, lack of legal business registration, low income and productivity, and varying work hours (Dahl & Mohamed, 2002, p. 7). The Ministry of Labour (MOL) considers any enterprise that is not officially registered with an official authority to be informal. The Central Statistical Office (CSO) defines informal enterprises as businesses that are not registered under Namibia's company law. The Indicative Industrial Plan of Namibia considers informal SMEs to be those that are unregistered because of possible illegal status or because of low turnover that makes registration for taxes unnecessary. Finally, the Namibia Northern Region Chamber of Commerce and Industry (NNRCCI) defines enterprises employing one to three people and having an annual turnover of less than N\$15,000 as being informal. Informal SMEs in Namibia can also be defined as enterprises that keep few records, conduct mostly cash transactions, keep low stock levels, lack substantial capital, have low profits, have high variability in earnings, and are labor intensive. Forty-five percent of SMEs in Namibia are registered with the government of Namibia (p. 20). In general, informal SMEs in Namibia lack official business registry and employ small numbers of people. This general definition is the one that will apply to later discussion.

2.4.2 Distribution of SMEs by Sector

Informal and formal SMEs make up varying percentages of the various business sectors in Namibia (Dahl & Mohamed, 2002, p. 8). Out of formal SMEs, 35 percent are involved in mining, 35 percent are involved in retailing, 20 percent are involved in trade and services, five percent are involved in catering, and five percent are involved in manufacturing. Out of informal SMEs, 50 percent are involved in retail, 15 percent are involved in trade and services, 30 percent are involved in catering, and five percent are involved in manufacturing (p. 8). Informal SMEs tend to be more involved in service sectors that require less knowledge of formal business regulations. Informal sector SMEs also tend to be based around work that occurs at irregular intervals and does not involve formal contracts. They also tend to be involved in activities in which they can avoid paying taxes. Formal SMEs are usually involved in more heavily regulated business sectors. The differing sectors in which formal and informal SMEs are involved demonstrate the nature of formal and informal businesses.

2.4.3 SMEs and Employment

In Namibia, SMEs have a significant potential to increase employment and reduce poverty (April, 2005, p. 66). SMEs can alleviate unemployment in Namibia and increase standards of living. They also serve as a method of providing informal job training. In Namibia, economic competition can be increased by increasing the number SMEs, which would benefit many people in Namibia (p. 70). Economic innovation, efficiency, and productivity increase with increased competition. The value of outputs can be increased with the increased growth and efficiency that come with increased competition. Current government policies, such as National Development Plan 2 and Vision 2030, indicate that the government's view that the development of SMEs can decrease inequality and poverty.

Most people in Namibia who are active in the SME sector were unemployed before entering the sector (Dahl & Mohamed, 2002, p. 8). At least 30 percent of the work force of Namibia is employed through the SME sector (p. 13). Through a survey of 183 informal SMEs, fifty-five percent of people who had established the businesses were found to have been unemployed before

establishing their businesses. In the Kavango region of Namibia, seventy-three percent of SME owners stated that the main reason for joining the SME sector was due to their previous unemployment. SMEs give many in Namibia an opportunity to create their own employment outside of formal business enterprises. Expansion of SMEs in Namibia could potentially increase employment and help alleviate poverty.

2.4.4 Education and SMEs

Within the SME sector of Namibia, almost all business operators have had at least some education (Dahl & Mohamed, 2002, p. 16). Less than ten percent of SME operators in Namibia have had no formal education. Most have not finished secondary education, but at least ten percent have had some tertiary education. Education levels in the formal sector tend to be higher than in the informal sector. In the informal sector, about 63 percent of SME operators have reached at least secondary education. Almost 10 percent of informal sector SME operators have reached tertiary education. Though education levels in the informal sector are lower than in the formal sector, they are still relatively high. These education levels have increased significantly since the early 1990s. Men are more likely to have either no education or tertiary education than women within the SME sector.

2.4.5 Impediments to SMEs in Namibia

Currently, several factors hinder the growth of SMEs in Namibia and decrease their potential to aid the growth of the Namibian economy. Much of the labor force lacks adequate training in both job and management skills (April, 2005, p. 70). Lack of proper education also restricts the expansion of SMEs in Namibia. Labor costs for SMEs tend to be high, which restricts growth and the amount of capital available for investment. There are also few vocational training institutions in Namibia, resulting in difficulty in improving technical skills. SMEs are greatly restrained by the lack of credit needed to expand and maintain new enterprises. SMEs also often lack access to the latest technology, which decreases potential growth. In order to develop the SME sector in Namibia, problems concerning skill levels and availability of credit need to be solved.

2.4.6 Skill Levels in Namibia's SME Sector

Only a small percentage of owners of SMEs in Namibia have had formal training in management skills (Dahl & Mohamed, 2002, p. 17). Twenty-eight percent of SME entrepreneurs acquired management skills while employed in other businesses. Baseline surveys showed that 80 percent of SME owners had never received any formal training in management. Eleven percent of owners had attended one management course, and three percent had attended more than four management courses. Despite the lack of formal management training, at least half of SME owners surveyed in Namibia consider their existing management skills to be proficient (p. 18). SME owners that have the most formal management training tend to be in the manufacturing sector. The most common areas of formal management training in Namibia are bookkeeping and marketing. The lack of formal management training demonstrates how training could help improve the SME sector in Namibia.

For SMEs in Namibia, there is also a low level of formal technical training. Less than 15 percent of owners of Namibian SMEs have received formal technical training (International Labour Organization, 2008). To increase the level of technical training in Namibia, the government passed the National Vocational Training Act of 1994. Training standards are set and tests are conducted to assess levels of training. Through these means, there can be an assurance that people who work in technical trades have adequate training levels. The National Foundation for Community Skills Development, which is an NGO in Namibia, provides communities with the means necessary for gaining training assistance from the government, donors, and other sources. The focus of this training assistance is hands-on vocational training that can lead to future self-employment. Training needs are found through community trusts. Other NGOs have also attempted to provide training programs for technical skills. Despite efforts at improving levels of technical skills in Namibia, small businesses still lack adequate levels of the technical skills needed to improve enterprise growth.

2.4.7 Characteristics of People Involved in the SME Sector

The groups that are most likely to establish SMEs in Namibia have several characteristics that could make them successful (Adongo & Stork, 2005, p. 31). The owners of SMEs in Namibia are

often part of large informal networks that allow for communication concerning business opportunities. They also have extensive knowledge of local communities and can modify their business practices to effectively adapt to local conditions. They understand how local markets work and how to gain entry into the local economy. Local communities can also support the establishment of new SMEs and help entrepreneurs gain necessary financial resources. People who want to establish SMEs are usually very willing to work as hard as possible in order to make the business succeed. Skills concerning survival in local communities are also prevalent with respect to those who want to establish small businesses. Characteristics that are helpful in business in the informal sector have the potential to serve as a basis for success in the formal economic sector.

2.5 Namibian Government Policies toward SMEs

Current government policies toward SMEs in Namibia are based around promoting their growth and making SMEs a stronger part of the Namibian economy (Ministry of Trade and Industry, 2009). The government wants to promote self-employment throughout Namibia and help the expansion of new SMEs. The Namibian government also wants to promote the spirit of entrepreneurship throughout Namibia in order to strengthen the economy. Programs also have the goal of promoting innovation in order to aid future economic growth. Promotion of buying Namibian-made goods is also a major part of Namibia's SME programs. The government of Namibia also wants to give SMEs greater access to technology in order to promote economic growth. The main aim of current government policies is to decrease the limits to the growth of SMEs in Namibia.

2.5.1 Promotion of SMEs

Currently, Namibia's Ministry of Trade and Industry is attempting to promote the development of SMEs in order to promote economic growth. The Namibian government established the Small Business Credit Guarantee Trust (SBCGT) in order to provide SMEs with adequate funding (Ministry of Trade and Industry, 2009). The program provides SMEs that lack adequate collateral for commercial bank loans a guarantee of up to 80 percent on loans of up to N\$250,000. Between 1999 and 2004, the SBCGT granted guarantees worth a total of N\$50 million to over 600 SMEs. The SBCGT will eventually become a microfinance institution that will grant more banking services to

small businesses, including group-based loans, group savings, and individual business loans. Another program to promote SMEs involves the establishment of SME Modules and Industrial Parks. SME Modules are sites that have been established for the development of SMEs in Namibia. The Ministry of Trade and Industry has established industrial parks in Windhoek and Ondangwa. The government of Namibia has also established SME Modules in Eehana, Gobabis, Karibib, Omuthiya, Katima Mulilo, Keetmanshoop, Otjinene, Khorixas, Mariental, Ohangwena, Rundu, Okahao, Opuwo, Otjiwarongo, Outappi, and Usakos. No SME modules are located near Tsumkwe in towns such as Grootfontein or Tsumeb.

2.5.2 Technology Transfer

The Ministry of Trade and Industry has also implemented programs to allow for technology transfer to SMEs in Namibia (Ministry of Trade and Industry, 2009). The Ministry has constructed Technology Demonstration Centers and Common Facility Centers in order to make access to and transfer of technology easier. The technology that is transferred through these facilities is more affordable than other means of gaining technology. Currently, the Automotive Common Facility Center is located in Ondangwa in northern central Namibia. It gives technological support to SMEs involved in rebuilding and refurbishing automobiles and gives training in general automotive engineering. The India-Namibia Plastic Technology Center in Ondangwa provides access to plastic and industrial engineering technology for SMEs, including machinery for repairing molds and manufacturing fixtures. The Woodwork Common Facility Center in Rundu, a major town situated on Namibia's northern border with Angola, provides woodworking equipment for use by SMEs. The Usakos Miners Equipment Hiring Center, located in west-central Namibia, leases mining equipment to SMEs. The Ovitoto Garment Center, located in central Namibia, provides SMEs access to industrial sewing machines.

2.6 Microfinance

One of the main factors that inhibit the growth of many SMEs is lack of access to capital financial services (Adongo & Stork, 2005, p. 2). Microfinance, which is savings, credit, and other banking services provided to low-income enterprises, is important to the development of SMEs

throughout the world. Many developing countries are currently trying to fill the gap in microfinance. The principles that justify the use of microfinance in economic development include the need for financial services by the poor, the ability of microfinance to pay for itself, the need for the existence of local financial institutions, and the ability of microfinance to effectively alleviate poverty (p. 3). The use of microfinance is criticized for being focused on giving people who do not know how to properly handle financial resources credit and for the need for government to subsidize microfinance programs. In general, microfinance is an effective tool in the development of SMEs and in the alleviation of poverty.

The main challenge faced by microfinance institutions is sustainability of providing credit and other financial services to SMEs and microenterprises. A microfinance institution is considered to be sustainable if it is able to lend credit at interest rates that allow the institution to cover all costs without subsidies and still be profitable (Adongo & Stork, 2005, p. 5). Microfinance institutions usually achieve sustainability by raising interest rates until the expenditures are equal to income. By reaching sustainability, microfinance institutions are able to give larger loans to expanding SMEs, which can then further increase the sustainability of the lending institution. Formal microfinance lenders often have to compete with informal moneylenders who are often more willing to give loans to developing microenterprises. Unfortunately, informal money lenders charge higher interest rates, which make it more difficult for borrowers to repay loans. For the development of SMEs, microfinance institutions need to be sustainable and need to give sufficient credit to developing SMEs.

2.7 Financing of SMEs in Namibia

In order to provide credit to SMEs in Namibia, microfinance institutions need to be expanded. Currently, the main sources of microfinance in Namibia are savings and credit cooperatives (SACCOs), multipurpose cooperatives providing microfinance (MCPM), savings and credit associations (SCAs), which are supported by the Ministry of Trade and Industry Steering Committee, micro-lending branches of commercial banks, such as Bank Windhoek, First National Bank of Namibia, NedBank Namibia, and Standard Bank Namibia, and NGOs (Adongo & Stork, 2005, p. 4).

In Namibia, these institutions have very high break-even interest rates, which is a situation that contributes to the gap in the availability of credit for SMEs. Banks are often criticized for having high interest rates because the poor are less able to access microfinance to start new enterprises. Despite the high interest rates, microfinance institutions think that providing credit at high interest rates creates benefits that are greater than the costs of excluding some poor people (p. 6). In Namibia, repayment plans for loans range from weekly repayment to three-year repayment plans. Transaction costs for micro-lending tend to be higher than for large loans because the processing of a small loan costs the same as for a large loan, but results in a smaller return (p. 11).

Namibian SMEs require relatively little start-up capital, which means that increases in microfinance has the potential to allow many new SMEs to be established. About 45 percent of SMEs in a sample of 333 SMEs needed start-up capital of less than N\$5,000 (Adongo & Stork, 2005, p. 11). The benefits of the establishment of SMEs in Namibia would greatly offset the higher costs of making small loans.

Problems concerning the formal process of establishing SMEs in Namibia exist and make it difficult for SMEs to gain adequate funding (Adongo & Stork, 2005, p. 31). Complicated procedures for applying for loans make it difficult for people with little formal business training to receive loans. To get loans from commercial banks, SMEs need to submit formal business plans, which is difficult for those who would most likely establish SMEs. Microfinance institutions often consider business plans from informal enterprises to lack proper clarity and other characteristics of formal businesses. SMEs also often lack a history of being successful in business, which hurts their ability to secure necessary credit. Underestimating the amount of capital needed for starting a new SME also hurts the ability of SMEs to acquire necessary resources. The legal status of informal SMEs also hurts their ability to be helped by investors and microfinance institutions. They are often unregistered and operate business activities in unauthorized locations (p. 32). Lack of legal status results a decreased ability to collect debts or enforce contracts. It also results in a lack of access to government aid programs. The lack of collateral of SMEs also hurts their ability to secure credit.

In order to solve the problems concerning the formal aspects of establishing businesses, microfinance institutions have tried to make the process less complicated and more helpful for loan applicants. There have been attempts to simplify procedures for applying for microfinance, but these have often failed to solve the problem (Adongo & Stork, 2005, p. 31). There have been attempts to encourage the formal incorporation of informal SMEs in order to make legal issues easier to handle (p. 33). Training for the management of taxes for businesses would also be helpful in solving legal problems associated with SMEs. To solve problems concerning collateral, there can be “forced saving” of a percentage of the loan in order make up for the lack of collateral. The Grameen Bank model of group borrowing and group collateral could also reduce this problem (p. 34). Membership in microfinance institutions in Namibia is often limited to groups of people with close affiliations. Using a borrower’s community reputation can serve as collateral for micro-lending. The problems that exist concerning lending to SMEs in Namibia can potentially be solved.

2.8 Skills Development

In sub-Saharan Africa, the potential for economic development is often constrained by lack of human capital. Training for jobs is inadequate, and literacy levels are low. Moreover, there is often a shortage of available jobs (Johanson & Adams, 2004, p. 4). Governments in Africa are often involved with training programs, but these programs are frequently inefficient and ineffective. The training programs usually lack responsiveness to market demands for labor and fail to help significantly increase skill levels. Inadequate funding tends to result in training programs that use unqualified or under-qualified instructors, since qualified ones are not willing to work for low pay. Recent reforms throughout southern Africa have made training institutions more accountable and autonomous, which has helped them become more effective. Greater autonomy has led to training programs that are more suitable with respect to local labor needs.

Governments regularly cannot fulfill the training needs of local populations, which is a situation that has led to an increasing role for private institutions in skills development. Institutions for training include “nongovernmental organizations, religious-based providers, and for-profit trainers” (Johanson & Adams, 2004, p. 6). Private organizations are able to provide more appropriate

training than government institutions, to provide training that is more cost-effective, and to be more aware of the needs of the market place (p. 7). Increasing education and increasing skill levels help increase economic growth and develop local economies.

Small enterprise and microenterprise owners and workers usually develop skills through traditional apprenticeships, which can be accompanied by mixed results (Johanson & Adams, 2004, p.8). Though apprenticeships are effective in training, they often train people for traditional skills, such as agriculture. This can result in a lack of development in the informal sector and a failure to maximize possible economic growth. The effectiveness of microenterprise skills development can be increased through targeted intervention aimed at demonstrating the need for a new set of skills. This method is most effective when training combines knowledge in technical skills and management skills. Through this method, the economic development associated with microenterprises can be improved and can become more beneficial to the target population.

2.9 Tsumkwe

Currently, the Tsumkwe Energy Project is attempting to bring a stable energy source to the isolated town of Tsumkwe in northeastern Namibia, shown in Figure 2: Satellite Image of Tsumkwe. The solar panel system will be constructed by the Tsumkwe Energy Project in 2010.

The town has a population of about 700 people from various ethnic groups in Namibia (Schultz, 2005, p. 3). Currently, several small businesses, including a tourist lodge, a bakery,



Figure 2: Satellite Image of Tsumkwe

two small general dealers, several shebeens, and a craft center exist in Tsumkwe. Business owners cite a stable energy source as necessary for the future success of their businesses. In the town, there is also a school, a police station, a Namibia Broadcasting Corporation (NBC) studio, a NamPost Branch, a Community Development Centre, and administrative offices for the Government of Namibia and NGOs. In order to meet the energy needs of residents, businesses, and organizations within Tsumkwe, a stable energy production facility is currently being planned.

2.9.1 The San of Tsumkwe

There are approximately 2,000 to 3,000 San people living in the area surrounding Tsumkwe (Schultz, 2005). Largely because of this population of San, Tsumkwe is seen as having a great deal of potential in ecotourism. Compared to other indigenous groups, relatively little is known about the San of Namibia, their history and traditions. This is mainly due to the fact that, until about 50 years ago, they were a self-contained group of hunter-gatherers who rarely interacted with people who were not of San descent. While there are not many San that actually live in Tsumkwe itself, many travel in and out of Tsumkwe to buy food and sell crafts. More information on the San and their traditional way of life can be found in Appendix B: The San People.

2.9.2 The Tsumkwe Diesel Mini-Grid

Currently, diesel generators provide electricity to the town of Tsumkwe. The original mini-grid was put in place when Tsumkwe was first established as a military outpost before Namibian independence (DRFN, 2006, p. 4). Tsumkwe did not exist prior to the establishment of the outpost. The Otjozondjupa Regional Council runs the 11-kV diesel mini-grid, but the sale of electricity does not cover the costs of energy production (p.5). The generators are only able to produce electricity for 18 hours a day, making the supply of electricity unstable and preventing any economic activity that requires a constant supply of electricity. Electricity production by the mini-grid has a monthly operating deficit of N\$60,000, which does not include the costs of maintaining the grid. The use of inefficient appliances by Tsumkwe residents makes the current mini-grid even more inadequate. Current electricity production and consumption in Tsumkwe is not sustainable.

2.9.3 The Tsumkwe Energy Project Solar-Diesel Hybrid Mini-grid

The aim of the Tsumkwe Energy Project is to establish a solar-diesel mini-grid in Tsumkwe that can provide adequate electricity for Tsumkwe residents. The cost of connecting Tsumkwe to the National Grid of Namibia would be about N\$60 million, while the cost of a solar-diesel mini-grid would be about N\$15 million (DRFN Energy Desk, 2008, p.11). The new mini-grid will be based on the use of a photo-voltaic array and will be supplemented by the use of existing diesel generators. The array will have a 100 to 150 kW peak and will have battery storage of 1,500 to 2,000 kWh.

2.9.4 Objectives of the Tsumkwe Energy Project

The objectives of the Tsumkwe Energy Project are based around the goal of reducing poverty in the Otjozondjupa region of Namibia by providing infrastructure needed to increase economic activities among the San and others in the Tsumkwe area (DRFN, 2006, p. 6). First, the project seeks to establish an entity in Tsumkwe to manage the new energy grid. It also seeks to gather technical data concerning how the project can be implemented. The new energy source will be promoted in Tsumkwe so that the residents will be aware of it. The DRFN will then finalize plans for implementation and arrangements for planning and construction. The partners in the project will prepare and construct the solar array and repair the existing electrical infrastructure. The project will install a photovoltaic generator, give control of it to the Tsumkwe Energy Supply Company, and increase access to electricity. The project will also stimulate the reduction of poverty in Tsumkwe by stimulating economic growth.

2.9.5 Survey of Small Business Owners

A survey of SME owners and operators conducted in Tsumkwe identified the energy needs and constraints to expansion of a range of SMEs (Schultz, 2005, p. 5). The owners of a hair salon stated that instability of their supply of electricity interrupted their water supply and caused delays for customers. A take away food business was hurt in its ability to provide new services because of a lack of stable electricity. At the grocery shop in Tsumkwe, food becomes spoiled when instability in electrification prevents refrigerators from working continuously. The owner of an agro-forestry garden project in Tsumkwe would like to expand, but has no electricity. An automobile mechanic who used to live in Tsumkwe lacked access to electricity, which limited his ability to expand his business and train others in vehicle repair. Along with the subsidization of bread from Otjiwarongo for the school and other institutions, the lack of stable electricity restrains the expansion of the local bakery.

2.9.6 Businesses thought to be Possible in Tsumkwe

When asked what businesses could be established in Tsumkwe with a stable energy supply, residents were able to give several suggestions (Schultz, 2005, p. 6). The most frequent response was

shops and grocery stores, followed by an open market, a butchery, vehicle and appliance repairs, hairdressing and sewing services, craft and donkey cart manufacturing, tourism, and vegetable production. The lack of stable electricity in Tsumkwe prevents the expansion of such businesses. Because of the lack of businesses providing basic services, residents of Tsumkwe need to travel long distances, such as the 300 km to Grootfontein, to do things such as cash checks. The fact that Tsumkwe residents spend a significant portion of their incomes outside of Tsumkwe means that economic development does not occur in Tsumkwe itself. Residents in Tsumkwe want new economic activity, but lack necessary skills and other resources, such as electricity.

2.10 Summary

Past approaches to economic development have often been top-down and have failed to allow for the participation of marginalized segments of developing societies. In recent years, more participatory approaches to economic development have been implemented. Microenterprise and SME development approaches that allow for community control are seen as the most effective way to create local economic development. In practice, development approaches are often not as participatory as is desired. In order to aid the economic development of Tsumkwe and make local development in Tsumkwe more participatory, the skills that people in the Tsumkwe area possess need to be known. Using existing skills in development would allow the residents of Tsumkwe to have the greatest possible level of participation in that development. Using knowledge of economic development and of the town of Tsumkwe has allowed for a methodology to be developed that will allow for greater participation from the people of Tsumkwe in assessing their skills and giving suggestions for training and possible economic opportunities. These will be discussed in the next chapter.

3.0 Methodology

The goal of the Tsumkwe Energy Skills Assessment was to find out what skills the people of the Tsumkwe area of Namibia have and how these skills may be used in order to build up the local economy. In addition, we identified gaps in their skills as well as what kinds of training should be used to fill these gaps in order to allow Tsumkwe's residents to engage in new types of economic activities. Finally, we identified what businesses are needed and wanted in Tsumkwe that would be feasible once there is a reliable energy source. Through our background research as well as research on methods of sampling and surveying we were able to develop a methodology that was used for our skills assessment, which included a survey of residents using questionnaires and selected interviews with targeted individuals administered over a time period of two weeks. We were also able to determine methods of analyzing and compiling the data that we gathered while in Tsumkwe.

3.1 Identifying and Measuring Skills

The first objective of this project was to identify the skills the people living in Tsumkwe possess. The skills that were looked at by this assessment included business skills, such as management, accounting, marketing, money handling, and record keeping; technical skills, such as plumbing, electrical repair, gardening, farming, and automotive repair; service skills, such as hospitality, tour leading, hairdressing, sewing, craftwork, and butchery; and academic skills, such as teaching, foreign language experience, and writing. In order to identify the prevalence of these skills and measure their levels, we first decided upon a proper method for gathering this type of information. We also determined the logistics of carrying out the methods outlined. The following sections will describe how we gathered information about the skills of the Tsumkwe residents.

3.1.1 Sampling Methods

The first thing we needed to decide before gathering information about the skills possessed by the people of Tsumkwe was how we were going to choose from whom we gathered the information. Ideally, for a town with a relatively small population like Tsumkwe, it would be best to take a census of all working-age residents in the town. However, because of time constraints, we were not able to

speak with everyone. In 2005 it was estimated that Tsumkwe had a population of approximately 700 residents (Schultz, 2005). The same report also estimated that there were 350 students in the local school who reside in Tsumkwe. Another source estimated that 62.7% of children in Tsumkwe are in school, meaning that there were about 150-200 working-age residents in Tsumkwe in 2005 (UNESCO, 2004). In all, we were able to speak with 87 people from all over Tsumkwe with varying degrees of skill levels, meaning we spoke with somewhat less than half of the working-age residents, assuming there is still approximately the same number of working age people in Tsumkwe.

All of our interviews were done with the aid of Jimmy Itamba, a member of the DRFN who is known as the “Mayor of Tsumkwe” because of his close relationship with local residents and his ability to handle many local situations effectively. Mr. Itamba has worked with residents in the town of Tsumkwe for several years with both the Red Cross and the DRFN. He was able to lead us around town helping us find people to interview. Because of his close relationship to the residents in town, he was able to make sure we spoke to people that he knew were highly skilled. He also helped us to make sure that we spoke to people from all areas in Tsumkwe. Although we realize that relying so heavily on Mr. Itamba may have biased our results, we believe that we spoke to enough people to make the results reliable. Also, unless we needed him as a translator, which was not very often, Mr. Itamba was not present for the interviews to insure that his presence would not influence the answers of the interviewees.

3.1.2 General Survey

One popular form of gathering personal data such as skill levels is a survey using questionnaires. There are three main means of gathering data from questionnaires: face-to-face interviews, self-administered questionnaires, and telephone interviews (Bernard, 2006). Based on what we learned about the residents of Tsumkwe from the DRFN staff members, there would be a much lower response rate if we were to distribute self-administered questionnaires. Telephone interviews would also be difficult because of the prevalent use of cell phones, as opposed to landlines, in Tsumkwe, meaning there is no phone book from which to obtain a list of names and numbers. Therefore, we decided to use face-to-face interviews to complete our survey.

The survey included questions separated into four main sections. These sections were titled “Education”, “Formal Employment”, “Informal Employment”, and “Ideas”. Each section had one main question accompanied by several follow-up questions. The “Education” section focused on all levels of formal education, including tertiary, as well as any types of training sessions that were attended and how many languages were known. The “Formal Employment” section focused on both current and past job experiences, including information on types of jobs, time of employment, and duration of employment. “Informal Employment” included information about any work that the residents may have done for themselves or their neighbors for which they were not on a payroll. Such jobs may have included fixing a roof for a friend in exchange for some food or doing repairs on private vehicles. Finally, “Ideas” included questions about what types of businesses the residents would like to see opened in Tsumkwe, which they currently must travel elsewhere to find. As time constraints were a major issue with this project, the questionnaire was kept as short as possible while still obtaining as much information as possible. These interviews were about 15 minutes long and attempted to get a broad overview of the skill levels of the people in Tsumkwe. However, if a person showed a high level of skill, follow-up questions were asked relative to that skill, and the interview lasted a little longer. The format for this questionnaire can be found in Appendix D: Skills Assessment Questionnaire.

3.2 Identifying Economic Opportunities and Training Needs

Our next step was to determine the economic opportunities that are appropriate for these skills as well as what training would be needed in order to take advantage of these opportunities. Mr. Georg Richarz, a DRFN researcher, will be able to use this information as well as the information we obtained about the skill level of the people of Tsumkwe in order to achieve his goal of identifying specific education providers that will train the residents of Tsumkwe in the specific skill areas that we identified as being needed to promote economic development..

3.2.1 General Survey

In our questionnaire for our general survey, the final question asked which businesses are needed and wanted in Tsumkwe. Through our initial skills survey, we were able to identify economic

opportunities that may be available to the residents of Tsumkwe. We asked about which businesses the Tsumkwe residents would like to have available in Tsumkwe. This was based on an earlier survey conducted in Tsumkwe by Robert Schultz of the DRFN that asked residents what they would do or like to see done as a result of a stable source of energy (Schultz, 2005, p. 6). Our survey identified the potential opportunities for which the residents of Tsumkwe had enthusiasm.

3.2.2 Interviews

In order to obtain information about businesses that are already in the Tsumkwe area, we interviewed 23 business owners in the area. These businesses ranged from formal general dealers, to informal shebeens, to people selling “fat cakes” (similar to fried dough) or cooked meat. This gave us an idea of what businesses are already in Tsumkwe as well as how the current businesses could be improved. We also asked questions about how each business was started and if the business owner had any help in starting the business. The format for these interviews can be found in Appendix E: Business Owner Interview Protocol.

3.3 Data Analysis

After we returned from Tsumkwe, our final task was to analyze the data that we had gathered. We compiled the transcripts from the initial survey into a single document for easy reference. Any quantifiable data were inputted into an Excel spreadsheet so that calculations could be made more easily. We also used all of the data to come up with a set of recommendations for the DRFN on how the local economy in Tsumkwe may be improved.

3.3.1 Data Compilation

The document that contained the transcripts of the interviews with people we surveyed in Tsumkwe included what kinds of experience and skills they have as well as what kinds of businesses they want to see in Tsumkwe. From this document, we input data into an Excel spreadsheet with such categories as Highest Grade, Currently Employed, and Businesses Wanted in Tsumkwe. The format for the spreadsheet can be found in Appendix G: Excel Spreadsheet. From this spreadsheet, we were able to create charts depicting which businesses were most wanted and needed in Tsumkwe. These

charts can be found in Appendix H: Data Analysis. We separated the data into many categories, such as employed and unemployed, male and female, business owners, and government workers, and analyzed the data from as many angles as possible, creating charts for each of the categories. From these charts and spreadsheets, we were able to make some conclusions about the data we collected.

3.3.2 Development of Recommendations

One important deliverable of this project was a set of recommendations given to the DRFN to aid them in the implementation of the Tsumkwe Energy Project. Our part in the project was determining what skills the people of Tsumkwe have in relation to what types of businesses can be opened there. We used the list of businesses obtained in the General Survey as well as our own observations as to what businesses are needed in Tsumkwe, especially those related to the Tsumkwe Energy Project, to compare with the skills people had. This comparison also allowed us to determine in which areas more training is needed. We also developed some recommendations based on some general observations that we made while in Tsumkwe.

3.4 Summary

In order to identify the skills possessed by the people of the Tsumkwe area and the businesses wanted in an effort to help build up the local economy, several objectives needed to be met. First, we identified the skills and needs of Tsumkwe residents through interviews with most business owners and short interviews with about half of the working-age Tsumkwe residents. We identified possible economic opportunities existing in Tsumkwe and what improvements in skills are needed in order to take advantage of these opportunities. The information gathered was then compiled into a document of findings from our initial survey as well as a set of recommendations for the DRFN regarding the further development of Tsumkwe's economy.

4.0 Results and Analysis

For the Tsumkwe Energy Skills Assessment, we were able to find individuals who currently possess technical skills and what businesses are desired in Tsumkwe. We found the ways in which many of the businesses that currently exist in Tsumkwe started and how the establishment of new businesses in Tsumkwe could be helped. We were also able to find what types of training Tsumkwe residents want and what training is needed. We determined what businesses residents of Tsumkwe would like to see in Tsumkwe. We also observed general conditions in Tsumkwe and how they could contribute to or hurt the economic development of Tsumkwe. Our results helped us achieve our goal of identifying skills that Tsumkwe residents possess, identifying businesses that exist in Tsumkwe, finding training that is needed, and finding possible economic opportunities in Tsumkwe.

4.1 Existing Businesses in Tsumkwe

We were able to gain knowledge of the business community of Tsumkwe by interviewing current business owners. During our time in Tsumkwe, we interviewed 23 business owners and



Figure 3: Conducting an Interview

operators in Tsumkwe. We found out how they viewed the possibilities for new businesses in Tsumkwe and how they started their own businesses. We examined two general dealers, four shebeens, an agro-forestry project, a take-away business, three informal clothing sellers, five informal food sellers, a hair salon, a tourist lodge, an informal welding business, a construction project, two crop fields, and a small food seller. An interview conducted with an informal food seller can be found in Figure 3: Conducting an Interview. These business owners and operators discussed the difficulties of starting and sustaining a business in Tsumkwe and how economic development in Tsumkwe can be improved. Some of the business owners interviewed also took part in the General Survey.

4.1.1 Starting Businesses in Tsumkwe

Businesses in Tsumkwe have often been started through very small business transactions.

Stephania Matamu Shihawa started the General Dealer & Singomba shebeen at her house by selling a chicken to buy sugar, and then selling the sugar to build up more



Figure 4: General Dealer and Singomba Shebeen

capital. Ms. Shihawa's shebeen can be seen in Figure 4: General Dealer and Singomba Shebeen.

Marta and Charles Sinvula started their informal business by selling fudge. They then went on to sell fat cakes, DVDs, and, finally, meat. Dapandula Nashipili, who has an informal clothing stand, started her business by selling small articles of clothing and expanded using the money she earned by buying and selling larger articles of clothing.

Businesses in Tsumkwe also tend to be started with little or no outside help. Rudolf Namiseb established his garden with some help from the German Development Service, from whom he acquired fence posts and nets. He received no other help. Tuhateni Nashipili, who owns the Omukuku shebeen and sells clothes, and Immanuel Hawala, who owns a hair salon, had no help starting their businesses. Businesses in Tsumkwe are often established through the entrepreneurial spirit of an individual and tend to be very small in scale.

4.1.2 Desire for Expansion

Several of the business owners we interviewed in Tsumkwe wanted to expand their businesses. Stephania Matamu Shihawa wants to add take-away to her business. She would also like to grow maize and sell her own produce at her store. Dapandula Nashipili would like to start selling jackets and shoes at her clothing stand, seen in Figure 5: Informal Clothing Stand. Sylvia Paollus would like to expand by selling new clothes instead of only used clothes. Sonia Ganibes would like to move her take-away business out of the



Figure 5: Informal Clothing Stand

Tsumkwe Craft Centre and into a separate building. Marta and Charles Sinvula would also like to

have their own space to use for selling food. Dirk Rossouw, who owns the Tsumkwe Country Lodge and the Tsumkwe General Dealer, currently wants to expand the number of bungalows at his lodge.

He also wants to expand the Tsumkwe General Dealer, seen in Figure 6:

Tsumkwe General Dealer in order to sell propane and to include a tyre repair shop. Adelheid Shilima, who currently cooks and sells food, would

like to start selling crafts and clothing. Business owners in Tsumkwe tend to have a strong entrepreneurial spirit and would like to expand their businesses.



Figure 6: Tsumkwe General Dealer

4.1.3 Problems with Sustaining and Expanding Businesses

Interviews with business owners in Tsumkwe also allowed us to determine the problems small-scale entrepreneurs face with respect to sustaining business

activities in Tsumkwe. Josef Gerhardus Jacobus Steyn, who manages the Tsumkwe Store General Dealer, shown in Figure 8: Tsumkwe Store

General Dealer, started a welding business in Tsumkwe but could not sustain it because of the lack of customers and the difficulty of

acquiring necessary supplies. Rudolf Namiseb had to leave Tsumkwe for two years and six months, which resulted in his garden falling into

disrepair. Currently, Mr. Namiseb lacks customers and has problems with irrigation because of



Figure 8: Tsumkwe Store General Dealer



Figure 7: Irrigation System

Tsumkwe's unstable water supply, which has caused him to resort to alternative irrigation methods shown in Figure 7:

Irrigation System. According to Seppie Swartbooi, who works at the Tsumkwe General Dealer, a business such as a

car repair shop would not be able to survive in Tsumkwe

because of the lack of customers. Tsumkwe is a small,

isolated community of about 700 people, making demand for certain types of businesses too low for them to exist locally. Some businesses could survive on a part-time basis if the operator had another source of income.

We found that the expansion of businesses in Tsumkwe is limited by several factors. One is that the lack of customers prevents businesses from having reason to expand. Lack of access to supplies needed for businesses also limits business expansion. According to Eba Kanime, who owns and operates the Okano Shebeen, she cannot expand because of the high costs of transporting products to Tsumkwe. Immanuel Hawala, who owns a hair salon, found in Figure 9: Hair Salon cannot expand because he lacks the electricity needed to use electrical haircutting equipment. Lack of electricity also limits businesses that sell food and need refrigeration. Sonnia Ganibes cannot expand her take-away business because she lacks land on which to build her own building. The local government of Tsumkwe approved a plot of land for her use, but then revoked the approval in order to make space for the building of a courthouse. Charles and Marta Sinvula would like to expand their business, but, according to them, the local government office lacks the forms necessary to apply for a plot of land. According to Stephania Matamu Shihawa, the most significant impediment to starting or expanding businesses in Tsumkwe is lack of access to resources like money. People often cannot apply for loans because they lack the necessary collateral. The lack of resources in Tsumkwe makes it difficult to expand business activities in Tsumkwe.



Figure 9: Hair Salon

4.1.4 Possible Training and Other Aid

Through interviews with business owners and operators, we found the ways in which local businesses could be helped in their establishment and expansion. Some training with respect to business skills could help in the establishment of new businesses in Tsumkwe and increase local economic growth. Ms. Shihawa stated that computer training would make the bookkeeping at her shebeen easier. Most business owners in Tsumkwe perform their own accounting but have no training in accounting. Basic business training would probably help local businesses start and expand. Easier access to loans would also help the establishment of businesses in Tsumkwe. Business owners who were interviewed had little or no help starting their businesses.

Better infrastructure could help economic growth in Tsumkwe. Improved transportation would also help businesses in Tsumkwe. Greater accessibility to government resources, such as land in Tsumkwe, would also help in the establishment and expansion of businesses. Businesses, such as the small supermarket that currently exists, are limited in their expansion by lack of a stable energy supply. Food cannot be refrigerated effectively, which hurts the possibility of establishing a local supermarket that sells more than basic products like sugar and flour. By supplying Tsumkwe with a stable source of electricity, the Tsumkwe Energy Project would help alleviate one of the most significant limitations to business expansion in Tsumkwe.

4.2 Skills and Possible Economic Opportunities

Through our General Survey, we found that skill levels for technical jobs such as electrical work, plumbing, and welding are uncommon, with only a few Tsumkwe residents being highly skilled in these areas. Tsumkwe residents explained what training they would want to receive and what kinds of jobs they would like to have. We also found what businesses are desired in Tsumkwe by residents. The businesses desired would most likely expand the local economy and allow for increased economic development within Tsumkwe. The skill levels in technical areas were found to be relatively low. The sample for the General Survey was 73 Tsumkwe residents.

4.2.1 Existing Skills

Very few individuals in Tsumkwe possess skills in technical areas that would be useful for work on the Tsumkwe Energy Project, but many have an entrepreneurial spirit that would allow for the development of businesses in Tsumkwe. One of the objectives of the Tsumkwe Energy Project is to have the solar array be controlled by the Tsumkwe community, so finding Tsumkwe residents who can maintain it is important. One man, Josef Gerhardus Jacobus Steyn, is highly skilled in welding, electrical grid work, and plumbing. He has trained three other men to weld, one of whom lives in the nearby settlement of Gam. Another, Seppie Swartbooi, possesses skills with respect to the repair of electrical appliances and solar panels. He also knows how to perform some car repairs. Samuel “Longman” Uapingeme has received training in welding and is officially certified in this skill. He informally trained his brother, Alphonse Uapingeme, to weld. Both Uapingeme brothers also paint.

Joseph Colboy knows how to repair appliances and has received six months of training. He would need more training to become a certified electrician. Janet Joseph received training for plumbing. Chris Nganjona knows how to use a welding torch and repair cars, but he needs more training. Fokus Tjatindi worked as a cement brick maker on a construction project. Erastus Kambathe Kaveto had also worked for a construction project and helped build several buildings in Tsumkwe, such as the NBC studio. Rudy Kurz, the contractor and manager of a construction project in Tsumkwe, stated that he needs to bring workers from other towns to perform skilled technical tasks such as electrical work, plumbing, and welding because no officially certified skilled workers could be found in Tsumkwe. The construction project employs 44 Tsumkwe residents, but none of them, other than two carpenters, has significant technical skill levels.

Although there are few Tsumkwe residents who currently have technical skills that could be used directly for the Tsumkwe Energy Project, there is a much greater number who have other skills



Figure 11: San-made Bracelet

that could help in the economic development of the Tsumkwe community. Many residents in the Tsumkwe area, especially San women, are very skilled at making high-quality crafts, and example of which can be found in

Figure 11: San-made Bracelet. Six of the people who were interviewed stated that they had craft-making skills. While very few people who make crafts were interviewed, many who were not interviewed were observed to make and sell crafts. Also, several interviewees stated that craft making is common among the San. Hilde Tuku stated that she buys crafts from the San to sell elsewhere.

There are many residents of Tsumkwe who also know how to grow crops. Six of those interviewed in the General Survey stated that they had skills with respect to gardening. Most of these people grow crops mainly for personal consumption. Rudolf Namiseb, shown in



Figure 10: Mr. Namiseb in his garden with his crafts

Figure 10: Mr. Namiseb in his garden with his crafts the owner of the Agro-Forestry Demonstration Garden, is highly skilled at gardening, but he currently has trouble advertising his produce. Many

Tsumkwe residents are multilingual, and some have experience as translators, such as Charlie Nqeisji and Erastus Kambathe Kaveto, who can speak 14 languages. The average number of languages spoken by Tsumkwe residents was four. Most respondents could speak English and could understand and answer our questions. The linguistic abilities of Tsumkwe residents could be useful for the expansion of the local tourism industry. With training, Tsumkwe residents could most likely learn to be formal translators. Seven Tsumkwe residents also stated that they were skilled in sewing and needlework, which could potentially be used to make clothing in Tsumkwe. Other skills that were found less frequently were haircutting and cooking.

We also found that the level of education that residents in Tsumkwe achieve is often limited by conditions in Tsumkwe. Until the current school year, the highest grade offered in Tsumkwe was Grade 10. Out of respondents to the General Survey, 29 percent said that their highest grade was Grade 10. Only 34 percent of respondents stated that their highest grade was above Grade 10, with 30 percent of respondents having completed Grade 12. Out of our sample, 37 percent of respondents said that their highest grade was below Grade 10. Fifteen percent of respondents had never attended school. During our interviews with Geoffrey Gomme and Siegfredth !Aebob, they said that girls often do not complete school because they often have children or get married at a very young age. The relative percentages of highest grade completed for Tsumkwe residents are shown in Figure 12: Highest Grade Levels of Respondents. Also, most residents of Tsumkwe have had experience with employee-employer relationships, with 50 respondents, or 68.5 percent of respondents, having been employed at some point.

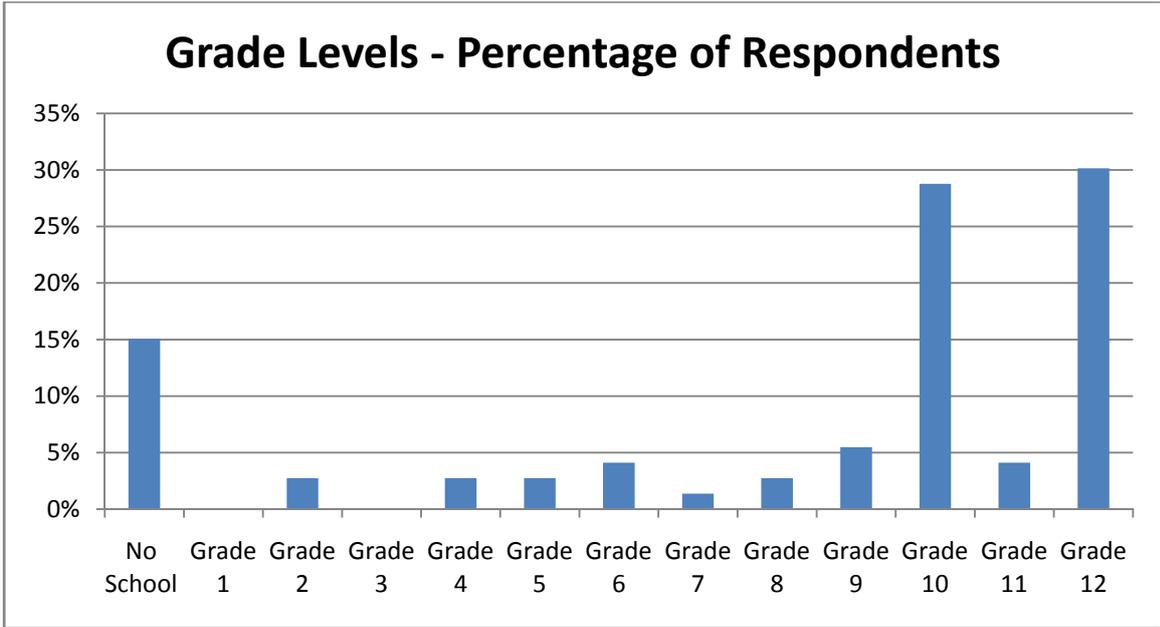


Figure 12: Highest Grade Levels of Respondents

4.2.2 Desired Training

Through the General Survey, we found several Tsumkwe residents who are interested in receiving technical training or receiving official certification for technical skills that they already possess. Mr. Steyn has plumbing and electrical skills, but he has no official certification in these areas. Mr. Swartbooi has worked with solar panels, but he thinks that he needs more training to be able to do professional electrical work. Mr. Nganjona would like to be formally trained to perform car repairs. Alphonse Uapingeme has had several years of experience in welding but has received no formal training or certification. Mr. Colboy has experience with electrical work but did not complete the necessary training courses to become certified. He still needs certification for electrical work and would like more training. Ms. Joseph could be further trained in plumbing.

We found other residents of Tsumkwe who would like training in other areas that are not directly related to maintenance of the Tsumkwe Energy Project. Mr. Namiseb would like training in cultivating fruit trees. Elisa Mandjoro stated that she would like more training in cooking. Eba Kanime received one week of computer training, but she still does not know how to use a computer. Charles Sinvula, who has some knowledge with respect to butchery, could be formally trained as a butcher and could be taught how to run a formal business. Kanbonde Laina Tunegameno would like

to receive training in gardening and in business skills needed to start a business selling clothes.

Adelheid Shilima would like to receive training in construction work. Few residents have received large amounts of formal training, but there is some interest in receiving formal training.

4.2.3 Desired Economic Opportunities

In order to assess possible economic opportunities in Tsumkwe, we asked Tsumkwe residents about what type of businesses they would like to see in Tsumkwe. We received multiple answers from most of the 73 respondents to the General Survey, and we added up the total number of times we received each response using a Microsoft Excel Spreadsheet. Through graphs, we compared differences in responses between employed and unemployed people and males and females. We also compared the responses of business owners and government workers to the responses of the entire sample. By acquiring these data, we were able to find the relative demand for different businesses and services in Tsumkwe. These businesses would most likely be successful in Tsumkwe and help the economic development of Tsumkwe.

Overall, the two businesses most wanted by residents of Tsumkwe were clothing stores and supermarkets. Out of the 73 respondents who answered the question, 68 percent said that they wanted a supermarket in Tsumkwe and 63 percent said that they wanted a clothing store. The next most frequent response was better transportation, with 29 percent of respondents mentioning it.

Respondents stated that the road that goes from Tsumkwe to Grootfontein needs to be improved and that more inexpensive methods of transportation are needed for going to and from Tsumkwe.

Twenty-two percent of respondents said that they wanted a bank in Tsumkwe. Twelve percent of respondents mentioned that they wanted a butchery. Ten percent of respondents said that they wanted a store for technical supplies, and seven said that they wanted a furniture store in Tsumkwe. Other less frequent responses were an open market, car services, a petrol station, crafts, news and other information, doctors, a larger post office, a craft materials store, a gardening supply store, accommodations for tourists, a bakery, restaurants, entertainment, and an ostrich farm for farming ostrich eggs for crafts. The percentages of respondents mentioning each business are shown in Figure

13: Percentage of Respondents Mentioning Desired Businesses.

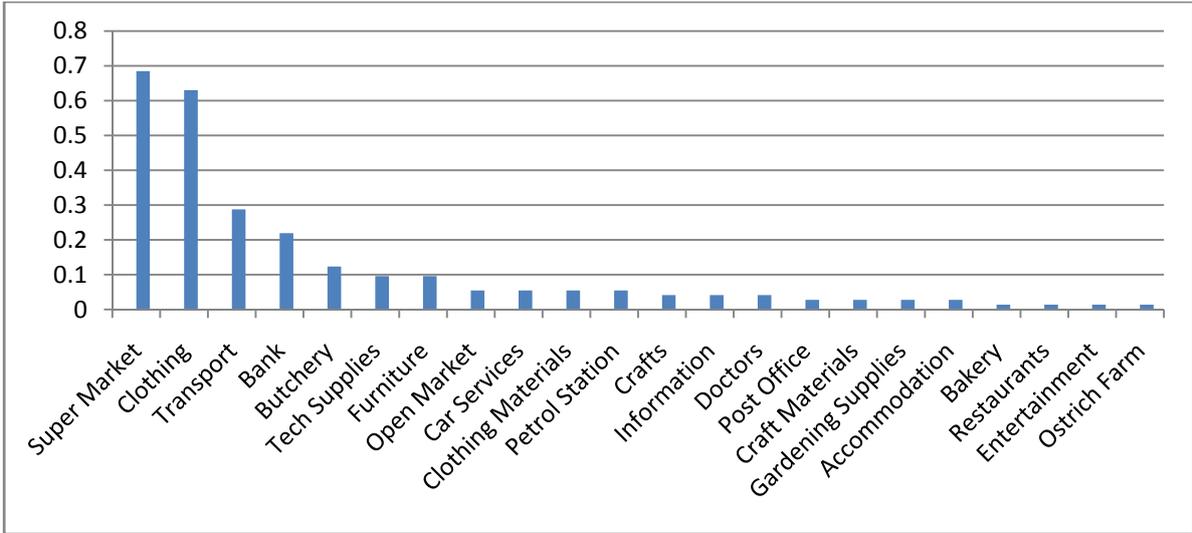


Figure 13: Percentage of Respondents Mentioning Desired Businesses

The overall frequency of respondents saying that they would like a supermarket and a clothing store in Tsumkwe demonstrates that there is a very high demand for these businesses and that, if these businesses were established in Tsumkwe, they would most likely be successful. A clothing store would be the most likely to be viable currently because clothing stores have little need for stable electricity, while supermarkets need energy for refrigeration. Respondents considered current clothing sellers to be insufficient to meet their needs. Although only two respondents mentioned a craft materials store, it would most likely be a good business to have in Tsumkwe because of the prevalence of craft making in the area. The selling of crafts will be discussed further below. A supermarket, a butchery, and a bank would most likely require the 24-hour supply of energy that would be provided by the Tsumkwe Energy Project.

There were some differences between percentages of men and percentages of women who wanted certain businesses in Tsumkwe. These percentages are probably not statistically significant because of the small size of the sample, but are somewhat interesting. In our sample, there were 28 male respondents and 45 female respondents. Supermarkets were the most frequent response for both, but 76 percent of women mentioned supermarkets, while 57 percent of men mentioned them. Clothing stores were the second most frequent response for both men and women, but 71 percent of women mentioned them, while 50 percent of men mentioned clothing stores. Only two percent of women mentioned a technical supply store, while 21 percent of men mentioned it. Most of the people

who were found to have technical skills were men, which could explain this disparity. Women more frequently mentioned a bank, doctors, and transportation, while men more frequently mentioned information services, furniture stores, a petrol station, car services, an open market, a butchery, and craft materials. Figure 14: Percentage of Respondents Mentioning Desired Businesses, Male vs. Female shows the relative percentages of males and females who gave each response. Differences in the frequency of businesses mentioned could be related to what skills they possess within the Tsumkwe community.

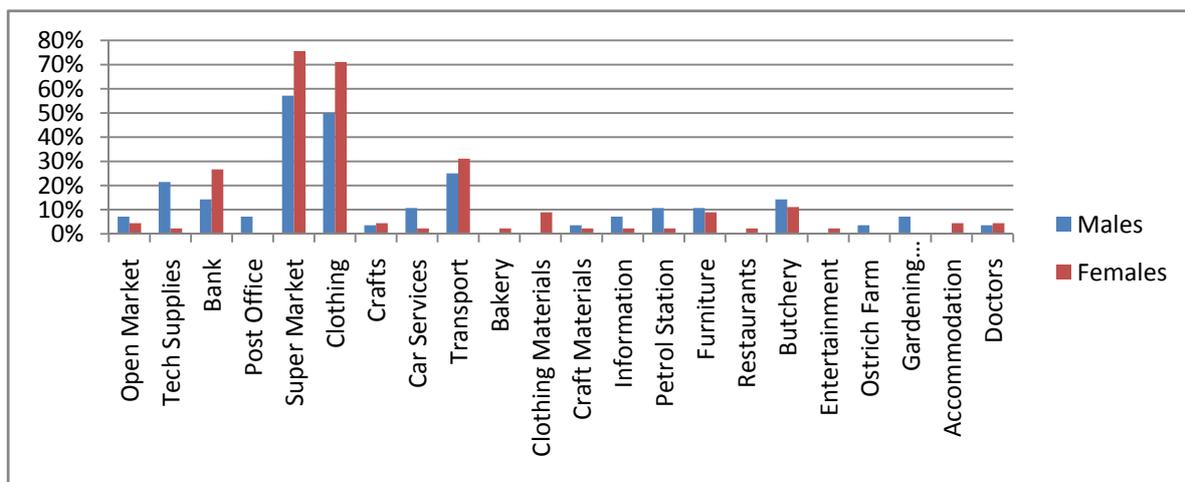


Figure 14: Percentage of Respondents Mentioning Desired Businesses, Male vs. Female

Based on the data, residents of Tsumkwe who are employed are more likely to want certain services than those who are unemployed. Out of our sample, 41 were employed and 32 were unemployed. Out of the unemployed, 75 percent mentioned a supermarket and 72 percent mentioned a clothing store. Out of the employed, 63 percent mentioned a supermarket and 56 percent mentioned a clothing store. While only 12.5 percent of the unemployed mentioned a bank as a desired business, 29 percent of the employed mentioned banks as something they would like to see in Tsumkwe. This is most likely because those who have jobs are more likely to need banking services such as savings and checking accounts. Tsumkwe residents with jobs are more likely to have money. Only employed Tsumkwe residents mentioned a bakery, news and other information services, restaurants, entertainment, an ostrich farm, gardening supplies, and doctors as things that they would like to see in Tsumkwe. The unemployed were slightly more likely to want an open market, a post office, a materials store, accommodations for tourists, and a furniture store in Tsumkwe. These higher

percentages most likely lack statistical significance. An open market would most likely help those who are unemployed gain an informal source of income. Figure 15: Percentage of Respondents Mentioning Desired Businesses, Employed vs. Unemployed shows the relative percentages of the employed and unemployed who gave each response.

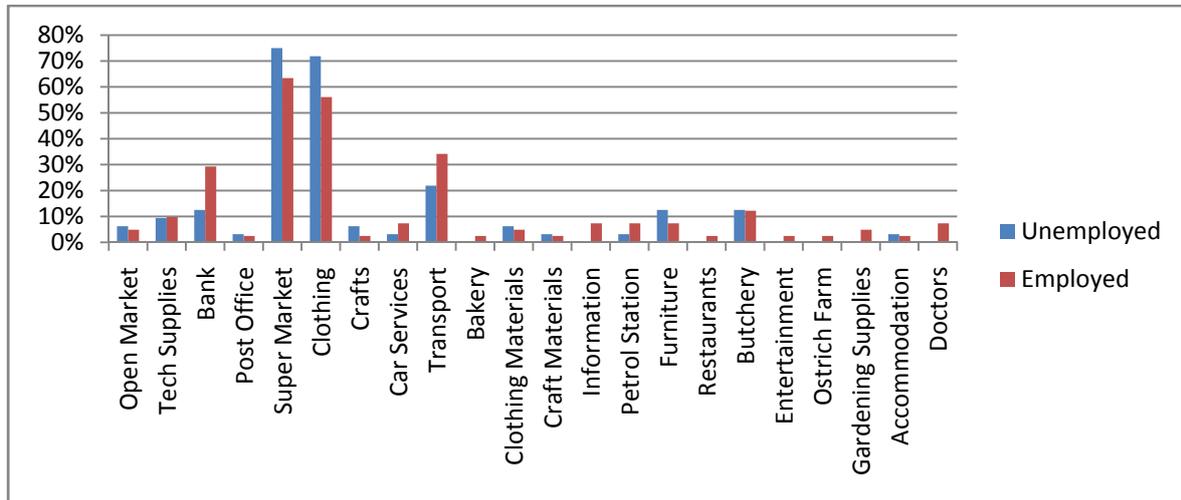


Figure 15: Percentage of Respondents Mentioning Desired Businesses, Employed vs. Unemployed

When compared to all responses to the General Survey, business owners more frequently mentioned some businesses and less frequently mentioned others. Out of our sample of 73 respondents, 13 were business owners. Out of the business owners, 54 percent wanted a supermarket and 46 percent wanted a clothing store, which are both lower percentages than the percentages of all respondents wanting those businesses. Business owners were also less likely to want a bank in Tsumkwe, with eight percent of business owners wanting banks, as compared to 22 percent of all respondents. This is a strange result that may be explained by the fact that respondents generated their own responses. Business owners may have simply not thought of mentioning banks at the time of the interview. Business owners were also more likely to want better transportation, with 46 percent of business owners wanting better transportation, as compared to 29 percent of all respondents wanting better transportation. This is most likely because business owners usually need to travel at least 300 km in order to get supplies for their businesses. Business owners never mentioned a post office, car services, a bakery, a materials store, information services, a petrol station, a furniture store, restaurants, entertainment, an ostrich farm, accommodation, or doctors. These results probably lack

statistical significance. Figure 16: Percentage of Respondents Mentioning Desired Businesses shows the percentages of business owners and non-business owners who gave each response.

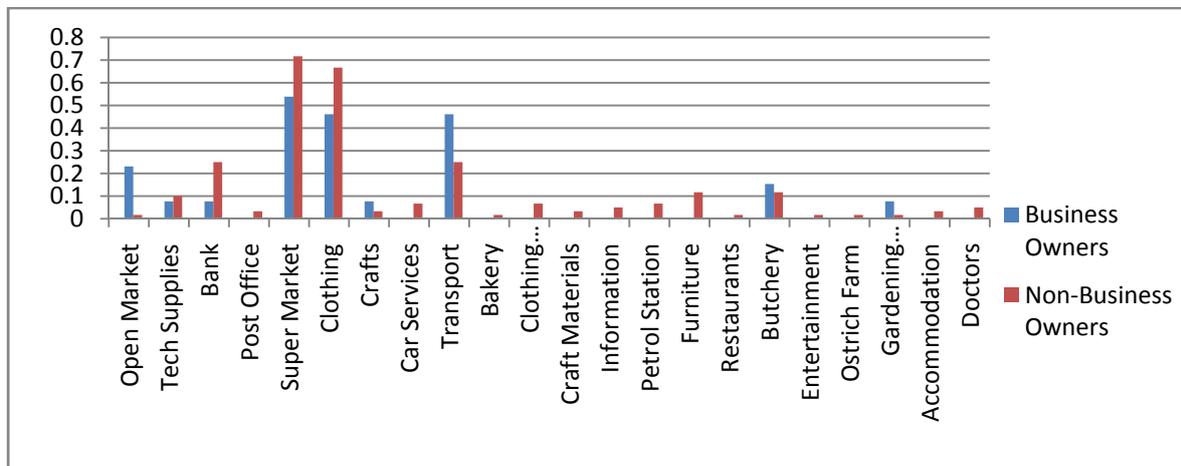


Figure 16: Percentage of Respondents Mentioning Desired Businesses, Business Owners vs. Non-Business Owners

When compared to all respondents to the General Survey, government workers demonstrated differences in desired businesses. We interviewed 22 government workers. Government workers never mentioned an open market, a technical supplies store, clothing materials, an ostrich farm, or gardening supplies. This is most likely because government workers have a steady source of income and are less likely to need resources for informal businesses. Fifty percent of government workers mentioned wanting a bank in Tsumkwe, while only 22 percent of all respondents mentioned a bank. This could be because government workers are paid by check, and therefore need a bank in order to cash checks. Out of government workers, 77 percent mentioned a supermarket and 68 percent mentioned a clothing store, which are greater percentages than percentages for the entire sample, but are not statistically significant. Government workers were more likely than the whole sample to want doctors, a furniture store, restaurants, a petrol station, accommodations for tourists, car services, and information services. The percentage of government workers who wanted a butchery and better transportation was about the same as the percentage of the entire sample. Overall, government workers were more likely to want goods and services and less likely to want businesses that would help people who are self-employed. Figure 17: shows the percentages of government workers and non-government workers wanting different businesses.

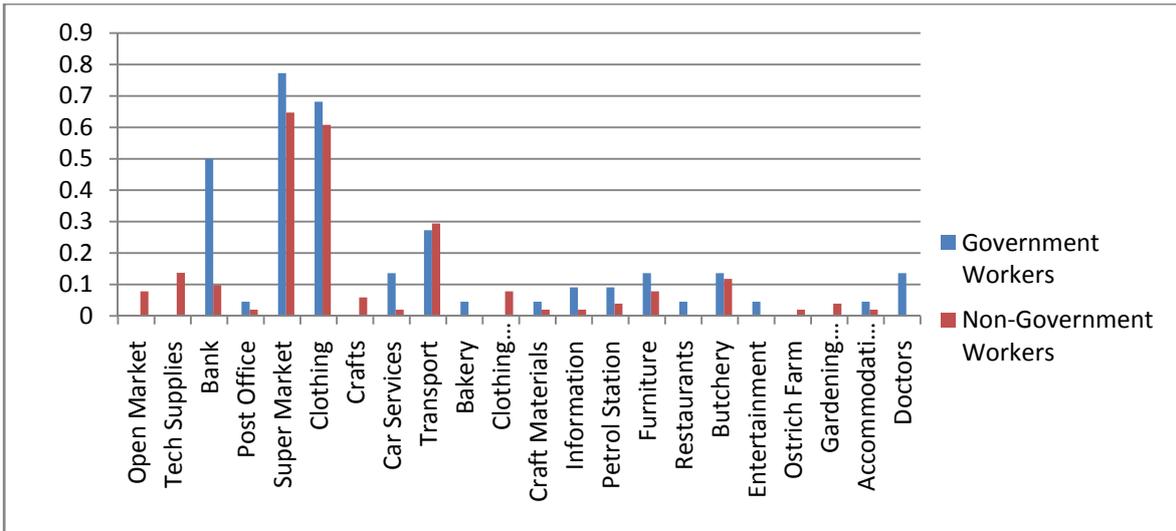


Figure 17: Percentage of Respondents Mentioning Desired Businesses, Government Workers vs. Non-Government Workers

4.4 Possible Sources of Bias in Data

There are several aspects of our interviews with residents of Tsumkwe that could have led to bias in our data. One is that we depended on our field facilitator, Jimmy Itamba, to find interviewees for us. It is possible that he brought us mainly to people that he knew personally, which could have skewed our data. He also could have brought us to people whom he knew were skilled, which could have resulted in us missing people who were skilled about whom Mr. Itamba did not know. The people to whom Mr. Itamba brought us could have been people who Mr. Itamba thought would give us the answers we wanted. Mr. Itamba would also give an introduction to interviewees in the language with which they were the most comfortable. During these introductions, he could have unintentionally led people without us being able to know. He could have suggested answers because he thought it would help us receive better responses. Tsumkwe residents could have also given answers that they thought Mr. Itamba would want them to give. The effect of Mr. Itamba’s presence may have been reduced by the fact that he usually was only present for the entire interview if he had to act as a translator. Almost every person we interviewed spoke English fluently, so Mr. Itamba’s role as a translator was very limited.

Another possible source of bias is the influence that people we were interviewing had on each other. Many of the people whom we interviewed were with friends and family members at the time of

the interview. They may have given answers that they thought others would like and may not have been as honest as they would have been if they had been interviewed alone. Also, the fact that we were new to Tsumkwe may have resulted in interviewees not being completely honest. One clear example of how influences within a group could have skewed responses was when Renathe Gomes acted as an informal translator during a series of interviews. When she was asked about what businesses she would like in Tsumkwe, she said that she wanted a bank. She then translated for us in Afrikaans, and while asking about wanted businesses, she clearly suggested a bank to interviewees after they initially gave their responses without mentioning a bank. These interviewees might not have said that they wanted a bank if Ms. Gomes had not suggested it.

Several other factors could have biased our data. We mainly interviewed Tsumkwe residents who were either walking around Tsumkwe or at their place of employment. Few inactive members of the community who do not leave their places of residence were interviewed. As a result, the sample could have contained a disproportionate number of people who are currently active within the local economy of Tsumkwe. We could have also missed people who are skilled but spend a lot of time at home. Our General Survey sample of 73 people also contained 17 more women than men. The larger number of women may have resulted in the sample being biased toward the interests of women. We have no demographic data about Tsumkwe, so we do not know if this bias actually exists. All of the sources of bias that were mentioned probably had little impact on our data because the most responses to our questions seemed to come from both males and females and every age and ethnic group.

4.5 General Observations

During our field work in Tsumkwe, we made several general observations about the Tsumkwe community that could be relevant with respect to future economic development within Tsumkwe. One is that there is very high alcohol consumption in the town. We observed that people often drink alcohol every night during the week and drink alcohol all day on weekends. Throughout Tsumkwe, we saw large stacks of empty bottles of beer and other alcohol. In Tsumkwe itself, there are about 13 shebeens, and, in the surrounding area, there are up to 24 shebeens. Several people stated that alcoholism is a significant problem in Tsumkwe. One government worker, Geoffrey

Gomme, had problems with alcohol in the past and stated that alcohol abuse does large amounts of harm to the Tsumkwe community. People in Tsumkwe spend a lot of money on alcohol that could be used for savings or business activities. Frequent intoxication limits the ability of community members to effectively take advantage of economic opportunities. Alcohol problems in Tsumkwe probably hinder economic development, but do not completely prevent it.

Another general observation made while in Tsumkwe was that many residents of the Tsumkwe community, especially the San, have little understanding of the value of money and how to handle it. The San in Tsumkwe make very high-quality handicrafts and sell them at prices that are far below what they are worth. They sell bracelets that are made using wood and ostrich egg shells for N\$25. In one shop in Windhoek that sells San crafts, the same bracelets are sold for N\$85. One man sold us hand-carved wooden tortoises for N\$10 each. Marta Sinvula bought carved wooden animals from a San man in Tsumkwe and said that she would sell them for six times the amount of money that she paid for them. Two of us bought bow and arrow sets that came with five arrows and a well-made quiver for N\$10 each. In one shop in Windhoek, a similar set is currently priced at N\$250. In another shop, similar arrows were priced at N\$55 each. We heard some people mention that people buy crafts from the San for very little money and sell them for huge profits. If the San had greater knowledge of basic money skills, they would be able to gain greater economic benefit from their skills and hard work and would be less likely to be exploited by others.

A third general observation is that people in Tsumkwe possess little to no knowledge of the Tsumkwe Energy Project. People usually only knew that the Tsumkwe Energy Project would use solar panels and that it would bring 24-hour electricity to Tsumkwe. Few people knew when the solar panel system was going to be implemented. Many people had little knowledge of energy efficiency and had questions about what appliances they need to use for the new energy system. One couple who were interviewed failed to turn off a television in their house while they were being interviewed outside the house. At a meeting about energy efficiency conducted by the Tsumkwe Energy Project at the Tsumkwe Community Hall, many people showed that they had little understanding of what the Tsumkwe Energy Project was going to do and what was expected of Tsumkwe residents. Many

Tsumkwe residents wanted the project to be implemented immediately and did not understand why preliminary social and economic work was being done. General training in how energy can be used efficiently would probably be useful in Tsumkwe.

4.6 Summary

Through the Tsumkwe Energy Skills Assessment, we found that only a few residents of Tsumkwe have relatively high technical skill levels. People in Tsumkwe usually lack job training and use informal means to gain income. Some people do things such as selling crops or selling cooked food informally in order to have an income. Business owners in Tsumkwe usually start their businesses with very small-scale transactions and receive little or no outside help. Businesses often have trouble starting because of lack of money and lack of demand from customers. Business owners often lack formal business training such as accounting training. The most desired businesses in Tsumkwe are a supermarket and a clothing store. Tsumkwe residents also want a bank and better transportation in Tsumkwe. General problems that exist in Tsumkwe are heavy alcohol consumption and lack of knowledge of handling money. There is also a general lack of knowledge about the Tsumkwe Energy Project among Tsumkwe residents. Based on our data, there are certain individuals in Tsumkwe who should be targeted for technical training and there are certain businesses that are in high demand in Tsumkwe.

5.0 Conclusions and Recommendations

By conducting our General Survey and interviewing current business owners and operators in Tsumkwe, we were able to identify several people who currently possess technical skills and possible business opportunities. Through our General Survey, we found a small number of people who have technical skills and need either further training or official certification. We also found that many residents of Tsumkwe lack basic skills and also need training. A large portion of surveyed Tsumkwe residents wanted businesses such as a supermarket, a clothing store, and a bank in Tsumkwe. We also found aspects of life in Tsumkwe that need to be researched further. Based on our field work, we formulated several recommendations that the Desert Research Foundation of Namibia could use that could aid the economic growth of Tsumkwe and help ensure the successful implementation of the Tsumkwe Energy Project.

5.1 Skills Found

Through our General Survey and through our interviews with business owners, we found that the general level of skills in Tsumkwe relatively low. There are several Tsumkwe residents who have skills in technical areas such as electrical work and welding. In Section 4.2.1, we identified which residents of Tsumkwe possess technical skills. There are many Tsumkwe residents who are informally employed and lack formal training or skills. Informal skills and experience are useful, but more training is probably needed for the full economic potential of Tsumkwe residents to be met. Many of the San people in Tsumkwe and the surrounding area lack basic skills such as handling money. Many Tsumkwe residents lack knowledge of energy efficiency and how the Tsumkwe Energy Project will affect their lives. Overall, formal skill levels in Tsumkwe are low and training in areas such as electrical work, welding, and plumbing is needed in order to aid the economic development of Tsumkwe.

5.2 Training Recommendations

For specific technical training, we identified several individuals who possess skills that could be used for the Tsumkwe Energy Project and other projects in Tsumkwe but need further training or

official certification. These individuals should receive formal training and certification. A table of these individuals and suggested training can be found in Figure 18: People Suggested for Training. The first is Josef Gerhardus Jacobus Steyn, who is skilled in plumbing and electrical work but lacks official certification for these skills. Seppie Swartbooï has received training to maintain solar panels and knows how to perform other electrical work, but he needs further training and certification. He would also like to improve his skills with respect to car repair. Alphonse Uapingeme knows how to weld but has received no formal training and needs official certification. Joseph Colboy has attended training courses for electrical work but did not finish the courses and needs certification. Janet Joseph has received some training in plumbing, but she should receive more training.

People Suggested for Training	Training Suggested
Josef Gerhardus Jacobus Steyn	Plumbing, Electrical
Seppie Swartbooï	Electrical
Alfons Uapingene	Welding
Joseph Colboy	Electrical
Rudolf Namiseb	Cultivation of Fruit Trees
Janet Joseph	Plumbing
Charles Sinvula	Butchery, Business
Stephania Shihawa Matamu	Computer, Business

Figure 18: People Suggested for Training

Other residents of Tsumkwe should be trained in other technical and nontechnical skills. Rudolf Namiseb should be given training for the cultivation of fruit trees. Charles Sinvula, who is currently an informal butcher, should be given formal butchery training. He should also be given business training and possibly be aided in buying equipment such as a scale and refrigeration with which to build his business. Stephania Shihawa Matamu should be given computer training that could help her with the bookkeeping for her business. This computer training should be offered to other business owners who currently want to improve their business and others who would like to start businesses.

Training in basic money handling should be offered to the San of the Tsumkwe area. Currently, many of the San lack a concept of the value of money and, as a result, sell the crafts that they make for very low prices. If the San had knowledge of what both their crafts and money are worth, they would be able to gain greater economic benefit from their hard work and craft making skills. They would also be more able to ensure that they receive fair treatment from both residents of Tsumkwe and tourists visiting Tsumkwe. Training for money handling would probably be most useful for the San, but it should be open to all residents of Tsumkwe.

Many residents of Tsumkwe lack knowledge of the Tsumkwe Energy Project and need training in energy efficiency. Most respondents to the General Survey knew very little about the Tsumkwe Energy Project. They also did not know which appliances they needed to use with the solar panel system. At a community meeting about the Tsumkwe Energy Project, Tsumkwe residents had trouble understanding many aspects of the project and how it would affect their lives. Offering training with respect to energy efficiency would be useful and increase the likelihood of the success of the Tsumkwe Energy Project. General training on energy efficiency would most likely make the Tsumkwe community much more knowledgeable about the Tsumkwe Energy Project and should be offered as part of the project.

5.3 Possible Business Opportunities

While conducting the General Survey, we found several businesses that many Tsumkwe residents would like to see in Tsumkwe. The two most popular responses were a supermarket, with 68 percent of respondents mentioning it, and a clothing store, with 63 percent of respondents mentioning it. Out of these two, a clothing store would probably be more viable now because it does not require a constant supply of electricity for things like refrigeration, while a supermarket does. Both of these types of businesses should be established in Tsumkwe in order to meet the basic needs of people in Tsumkwe and make prices for goods lower.

Other fairly frequent responses were a bank, better transportation, such as improved roads and frequent transport to and from Grootfontein, and a butchery. Basic banking services should be

established in Tsumkwe so that residents can more easily access credit, cash checks, and save and withdraw money. Better transportation would help Tsumkwe residents gain easier access to services and products that they currently cannot get in Tsumkwe. A butchery should be established in Tsumkwe because one Tsumkwe resident, Charles Sinvula, already acts as a butcher and could be trained to run a formal butchery.

Less frequent responses that were good ideas for Tsumkwe were entertainment, a store for craft materials, and repair services. Currently, there is little for residents of Tsumkwe to do for entertainment other than drink alcohol. The establishment of a small arcade or other small entertainment business could possibly help occupy the time of Tsumkwe residents and be a successful new business. A store that sells craft materials would be useful for the many residents of the Tsumkwe area who make and sell crafts. A craft materials store could be a successful business that also helps generate income for its customers. Although few Tsumkwe residents mentioned these businesses, we believe they are still good ideas that could benefit Tsumkwe.

A shop that repaired a variety of things, such as cars, appliances, and home electricity, would be a good business for Tsumkwe once the grid is operational. Most likely, there would not be enough demand for a shop that performed a single type of repair service. Several people in Tsumkwe stated that there would not be enough demand for a business that performed only one service, such as car repair. A business that performed multiple types of repairs would fill a definite need for Tsumkwe residents and be a fairly viable option for Tsumkwe residents who want to establish a repair business. A repair business could also work with the Tsumkwe Energy Project and the IPP that the project will hire in order to perform repairs on the new solar panel system.

The skills of the San should be used to build tourism in the Tsumkwe area. The Tsumkwe Country Lodge already works with the San in order to demonstrate San culture, such as traditional dancing, to tourists. The San have large amounts of knowledge about traditional medicinal plants. A business that sells traditional San medicine could be successful with tourists and increase interest in San culture. Demonstrations of the survival skills of the San could also expand the local tourism

industry and increase economic growth in Tsumkwe. Increasing tourism could help make other businesses in Tsumkwe more successful because of the increased amount of customers. Along with craft making, other traditional San skills could help both the San and the entire Tsumkwe community economically.

5.4 Recommendations for Future Research

Much of the field work that we conducted cannot be regarded as statistically valid because too little information is known about the population of Tsumkwe to select a random, representative sample. The best figure for the population of Tsumkwe that exists is 700 people. Little information is known about how residents of Tsumkwe gain their incomes. Also, very little is known about the demographics of Tsumkwe. Finding this information was beyond the scope of the Tsumkwe Energy Skills Assessment. To obtain this knowledge can, however, serve as the basis for future social and economic studies about Tsumkwe conducted by the Tsumkwe Energy Project.

5.4.1 Demographic Research

During our background research for the Tsumkwe Energy Skills Assessment, we could not find census figures for the town of Tsumkwe. Because of this, we do not know what percentage of the population of Tsumkwe we interviewed. We also did not know the male and female populations of Tsumkwe or the town's age distribution. The ethnic composition of Tsumkwe was also unknown, which means that the various ethnic groups that exist in Tsumkwe may have been overrepresented or underrepresented in our sample. We also did not have numbers with respect to employment and unemployment in Tsumkwe. We had no knowledge of what percentage of the Tsumkwe population is transient or permanent. Without knowing any of these statistics for Tsumkwe, it was impossible for us to stratify the sample and make sure that our sample was representative of Tsumkwe as a whole. Finding any of these statistics for Tsumkwe could serve as a useful objective for the Tsumkwe Energy Project. More information about the population of Tsumkwe should be found in order to improve the effectiveness of projects implemented in Tsumkwe.

5.4.2 Value Streams

We had no way of knowing how people in Tsumkwe spend their money or how they gain their income because these things would have taken too much time and resources for us to determine. Researchers should study the value streams of Tsumkwe in order to better understand economic growth and development in the town. This would include how economic value is created within the economy of Tsumkwe and how people in Tsumkwe gain income. This would also include finding the amounts of money that people spend on goods and services. Without this information, we do not know whether a supermarket or a clothing store would truly be viable in Tsumkwe. People may want these businesses, which is what we found, but may not be able to afford sustaining these businesses. Finding figures such as the revenue of different businesses in Tsumkwe could help in this research. More in-depth research concerning economic activity in Tsumkwe should be done in order to increase the effectiveness of economic development efforts in Tsumkwe.

5.4.3 Potential Social Problems

The possible effects of bringing a stable source of energy into Tsumkwe are unknown, and potential future problems could cause the Tsumkwe Energy Project to fail. Because of the introduction of stable electricity into Tsumkwe, many people from the area around Tsumkwe could begin to settle in the town. This could put huge amounts of strain on the solar panel system and cause it to not be able to provide sufficient electricity. Research needs to be done about the potential for things such as this to occur. In the future, researchers should look at the economic problems that could potentially cause the Tsumkwe Energy Project to fail and find ways to prevent or alleviate the economic problems. Through our survey, we were not able to find enough information about potential economic problems.

5.5 Summary

Using the findings of the Tsumkwe Energy Project, the DRFN can aid the economic development of Tsumkwe and conduct further research concerning social and economic conditions in Tsumkwe. By providing training for certain individuals in Tsumkwe, the DRFN can help the establishment of new businesses in Tsumkwe and help expand the economy of Tsumkwe. We were

able to find skilled Tsumkwe residents and gain a general understanding of how businesses have been established in Tsumkwe and what businesses are wanted most. The establishment of small businesses in Tsumkwe would be likely to help alleviate local poverty. Further research should be conducted in order to find what businesses are truly viable in Tsumkwe and how these businesses can be used in order to raise Tsumkwe's standard of living. The goal of the Tsumkwe Energy Skills Assessment was to determine the skills of Tsumkwe residents and to find possible training and economic opportunities in Tsumkwe. By interviewing residents of Tsumkwe and observing the town's current conditions, we have achieved the goal of our project.

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Appendix A: Sponsor Description

Our sponsor, the Desert Research Foundation of Namibia (DRFN), is a private, not-for-profit, environmentally-minded institution that undertakes independent research about the dry and semi-arid areas of Namibia. The DRFN originally operated as a research station and was founded by Dr. Charles Koch in 1963 (Namibweb, 2009). The mission, according to the DRFN (2008), is to “empower decision-makers at all levels through its research, training and consultancy activities, thereby fostering sustainable development in Namibia” (Our Mission). It is interested in providing ecologically sound suggestions to major decision-makers in Namibia, whether they are the local authorities of Namibian communities, well-respected and influential members of Namibia’s business sector, or the highest governing bodies and key leaders in the national government. The DRFN is funded almost exclusively by various study and research grants as well as project funding, with the day-to-day operations provided for by the support of its donors. The DRFN has a joint partnership with Namibia’s Ministry of Environment and Tourism to operate the Gobabeb Training and Research Centre (DRFN, 2007, p. 5).

The Desert Research Foundation is structured around the Water Desk, the Land Desk, the Energy Desk, and the Publications Desk. The DRFN also has an administrative staff and a Board of Trustees. According to the DRFN’s Annual Report (2007), the DRFN has “35 permanent and a host of temporary employees, including volunteers, interns and students” (p. 5). It is headed by the Executive Director. The management of the DRFN is made up of the Coordinators for the Desks, the Head of Administration and Finance, the Research and Training Coordinator, and the Junior Project Manager. For the Tsumkwe Energy Skills Assessment, the Energy Desk is the most relevant. The Energy Desk Coordinator is Robert Schultz, and other Energy Desk staff members include Project Manager Caroline Coulson, Project Manager Alex Moses, Tsumkwe Energy Project Manager Abraham Hangula, and Tsumkwe Energy Field Facilitator Jimmy Itamba (DRFN, 2008).

According to the Tsumkwe Energy fact sheet, the Energy Desk of the Desert Research Foundation of Namibia is working in conjunction with two partners on the Tsumkwe Energy Project: NamPower and the Otjozondjupa Regional Council, the regional government based in Tsumkwe.

NamPower is the national energy service of Namibia, whose objectives are, according to NamPower (2008), “To be a leading energy company in Africa, which excels in customer service, people development and technological innovation” (Vision & Mission). The project is being sponsored financially by the European Commission’s Energy Facility, an organization that delivers developmental aid to those places in the world where it is most needed. The Tsumkwe Energy Project has a total budget of N\$26,000,000. Technologies for the overall project will include “solar diesel hybrid electricity generating systems” and “alternative thermal fuels and energy efficient appliances” (DRFN, 2008, Tsumkwe Energy Fact Sheet).

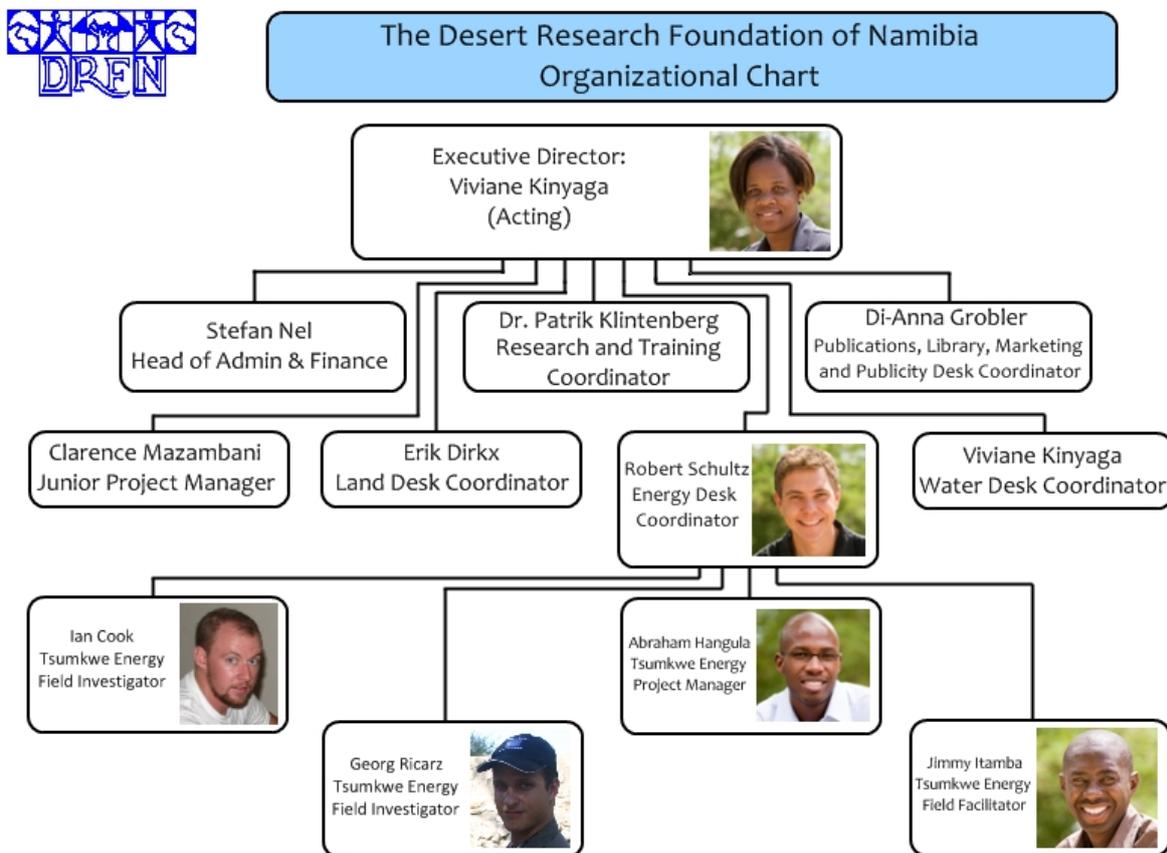


Figure 19: DRFN Organizational Chart

The Integrated Southern Africa Business Advisory (INSABA) (2008) seems to have been a catalyst for the Tsumkwe Energy Project (Namibia). INSABA understands that in order to run efficiently, most businesses need energy and, therefore, focuses on bringing renewable energy to all of South Africa. Working with SolarAge, Namibia, INSABA recognized the Tsumkwe area as a prime

pilot region for the development of a solar-hybrid mini-grid, where there was already a tentative plan in place, and, although there was an issue with funding at first, as of March 2008, INSABA stated that “the project was well on its way” (Namibia).

Appendix B: General Information about Namibia

In order to be able to truly evaluate the skill levels of the San people and gain a useful understanding of areas where they have adequate skill or need improvement, it is necessary to become more familiar with Namibia itself. This section is a summary of important features of Namibian life, and is designed to better inform a reader with no prior experience of Namibia in order to better understand our project.

1. Geography

Namibia is located in southern Africa, bordering the Atlantic Ocean to the west, South Africa to the south, Angola to the north, Botswana to the east, and touching Zambia along the narrow Caprivi Strip in the northeast (MSN Encarta, 2008). Namibia's climate is typically very desert-like: hot and dry, with sparse and very erratic rainfall, and rocky terrain that covers most of its relatively high-altitude landmass. Namibia has several notable geographical landmarks, including two deserts: the Namib, located along the western coast, and the Kalahari (where Tsumkwe is located), covering most of Namibia's eastern parts. Other noteworthy landmarks include the Great Escarpment, just outside the western coastal area, the Bushveld, located along the Caprivi Strip, and the Central Plateau, which covers most of central Namibia and accounts for the bulk of its agricultural and economic activity (MSN Encarta).

The area in which this project is most concerned with is a region of Namibia with a very harsh environment and scarce resources (MSN Encarta, 2008). The people who live in this area are particularly capable and sustainably-minded in order to maintain and guarantee their own livelihood. However, the Kalahari is not entirely a true desert. Many areas receive an adequate amount of rainfall annually and are able to maintain a large amount of flora and fauna, such as trees and grasses. These areas of the Kalahari are excellent grazing lands and supports larger species such as giraffes, cheetahs, lions, jackals, hyenas, warthogs and many types of antelope. In times without rain, inhabitants usually rely on the water provided by various indigenous roots and desert melons for sustenance. The San, who have lived in this area of the world for countless generations, survive as hunter-gathers and have

grown very well-suited for this lifestyle, rarely drinking water outside of those roots and melons that make up their diet.

2. History

Namibia has been inhabited for at least 25,000 years (MSN Encarta, 2008). Cave paintings have been discovered in the country that are 25,000 years old. The earliest known inhabitants are the San people, who are known to have settled the area at least since the first century CE. Various other tribal peoples have migrated to the area since the sixth century CE including the Nama-speaking Khoikhoi, Ovambo and Herero.

European settlers arrived in Namibia as early as 1488, when Portuguese explorer Bartolomeu Dias landed on its shores (MSN Encarta, 2008). German South-West Africa was officially created as a state in 1884, and for almost the next forty years, German rule in the area was well-known for the bloody suppression of the black African natives. One particularly bloody uprising was the Herero revolt in 1904 where over the course of four years, about 60,000 Hereros lost their lives. After the signing of the Treaty of Versailles, Germany relinquished control of the area and the League of Nations granted South Africa domain of South-West Africa in 1920. South Africa continued its control of the area despite UN calls for a change of policy in South Africa, asking for change towards trusteeship in 1946 and 1950 (both of which South Africa declined to follow).

South Africa escalated its suppression of native black Africans in South-West Africa by instituting apartheid in the late 1960's, much to the chagrin of the UN, Ethiopia, and Liberia. Despite dismissal on technical grounds in court in 1966, the UN eventually managed to have the International Court of Justice rule that South African presence was illegal in 1971 (MSN Encarta, 2008). With continued negligence of international criticisms by South Africa, the South-West Africa People's Organization (SWAPO) stepped up their guerilla campaigns against South African rulers in the area. Major western powers became involved with Namibia in the 1970's and 1980's, including the United States, Canada, communist Cuba and the United Kingdom. Violence in the area continued until 1988,

when South Africa finally relinquished control over the area of Namibia in exchange for removal of Cuban troops in Angola.

Once independent, newly democratic Namibia held open elections under the supervision of the UN for members of the Constituent Assembly in 1989 (MSN Encarta, 2008). A constitution was written and approved in 1990, when Namibia officially gained its independence, and SWAPO party leader Sam Nujoma was elected president. Throughout the 1990's, Namibia was marked with a period of peaceful economic expansion, where greater respect for human rights was one of the principal changes to benefit the country. Even today, Namibia still experiences a very stable political rule and the country has become a major player in the region in the march towards progress.

3. Social Structure

The social stratification in Namibia is still very economically unequal, even since the end of apartheid (Haugh, 2007). Although more non-whites have joined the upper societal echelon, the seven percent white population still owns the majority of large businesses and commercial farms in Namibia. Many of the white members of society still operate with segregation as a dominant force in their personal and social lives, and even though non-whites integrate into more of the civil services, complete social equality can still be said to be a long way off. Wealthier classes, regardless of race or location in Namibia, tend to be distinguished by an excellent command of the English language, attendance at private schools, and being extensively well traveled, as well as the typical notions of expensive cars and large homes in exclusive areas of their communities.

4. Political Structure

Namibia is a presidential representative democratic republic, divided into three organs (the Executive, Legislative, and Judiciary branches) headed by a democratically-elected president (CIA World Factbook, 2009). The president is elected every five years to be both the head of state and head of government. Further, Namibia is divided into 13 political regions that are in turn sub-divided into 102 constituencies. Each constituency democratically elects a councilor to the regional council that the constituency is a member of. Each regional council governs the entire region, and also sends two

representatives to the National Council. Namibia's Legislative branch includes not only the National Council, but also the National Assembly. The National Assembly is made up of 72 elected members, and six appointed ones (Republic of Namibia, 2007). Local elections in Namibia are determined by impartial parties, and voters vote for the party they want to win and in turn, the parties select the members they would like to fill those seats (Haugh, 2007). Namibia received its independence in 1990, and became a member of the United Nations (UN) and the Southern African Development Community (SADC).

5. Economic Structure

Namibia is primarily known as an exporter of fine gemstones, such as diamonds and tourmaline, and industrial materials, such as gold, copper, tungsten, uranium, and lead, as well as for its leather trade and fishing industry (Republic of Namibia, 2009). It is particularly proud of its meat production; according to the government website, "The quality of Namibian meat is globally unrivalled", stating the climate, diet, and care gone into these feed animals make them an unrivaled delicacy, especially given the stringent level of national standards they conform to. Over two-thirds of the population of Namibia is completely dependent on agriculture for subsistence, whether it is financial or simply as a means to survive, yet Namibia still imports some of its food.

Namibia is growing increasingly dependent on the tourism industry to support its economy (MSN Encarta, 2008). Tourism in Namibia is becoming beneficial not only to the income and financial support of its residents, but to the land itself through the establishment of many land conservancies and National Parks that draw many ecotourists to Namibia. Many experts predict that, in coming years, the growth of these environmental showcases of Namibia's natural beauty will continue.

Appendix C: The San People

There are approximately 2,000 to 3,000 San people living in the area surrounding Tsumkwe. Largely because of this population of San, Tsumkwe is seen as having a great deal of potential in ecotourism. Compared to other indigenous groups, relatively little is known about the San of Namibia, their history and traditions. This is mainly due to the fact that, until about 50 years ago, they were a self-contained group of hunter-gatherers who rarely interacted with people who were not of San descent. However, these next few sections will introduce some of what is currently known about the San population.

1. History

The San people are traditionally, and sometimes derogatorily, called Bushmen by other Namibians and sub-Saharan African peoples. They are one of the oldest genetic populations in the world. Their defining characteristic is that up until recently, they primarily have been nomads who rely on their knowledge of hunting and gathering in order to survive. While this is often seen as a form of poverty, according to Suzman (2002), “hunting and gathering wasn’t too shabby an option” (p. 128). Because of this primitive nature and existence, the San have become somewhat iconic of the Namibian experience, especially to those in the West, even though they are considered at the bottom of the social ladder by most Namibians. The attempts to bring them into Namibian society, often “on terms other than their own” (p. 126), have done little for their social status within Namibia.

Most of the shift in the style of living of the San began when Namibia was first colonized and land ownership became an important concept. Because the San were seen as primitive nomads, it was argued that they were not able to own land (Suzman, 2002). They were considered as part of the landscape for colonization and were often acquired along with the land that was being colonized. By 1971, about 66 percent of the San population was forced to live and work in white commercial farming areas that were established in places where they had already been living. Another 31 percent were forced into reserves controlled by other racial groups. Only two percent were allowed to remain in their traditional territory under their own authority in the area surrounding Tsumkwe in

northeastern Namibia. Under these conditions, most San were no longer able to hunt or gather and were forced to find other means of surviving of which they had very little knowledge. Because of this lack of knowledge and their historically primitive lifestyles, they have remained at the very bottom of the social ladder. According to Suzman (2002), “The last century has seen Namibia’s San population evolve into a largely landless, relatively impoverished underclass dependent on a range of opportunist economic strategies in order to survive” (p. 125).

2. The San Today

With the independence of Namibia in 1990 came promises of a more equitable place for the San within society. However, soon after independence, these promises were found to be empty (Suzman, 2002). Policies that were proposed failed to achieve any real change. In many ways, the San actually became worse off than they had been before independence. Most of the plans for development of the San were top-down approaches that the government was either reluctant or unable to implement fully. Their traditional ways of hunting and gathering are seen as barriers to integration and are therefore discouraged. This has led those San to devalue their past of hunting and gathering and often to believe that they truly are inferior to the other ethnic groups in Namibia. Because of this, they often live in extreme poverty, with low literacy levels and high occurrences of social problems, mostly alcohol related. According to Suzman (2002), there is “a sense of extreme social and political alienation from the mainstream compounded by social discrimination and prejudice” (p. 125).

3. Traditional Skills of the San

There are many areas in which the San adapted skills over the years in order to survive in the area of the world in which they live. These areas include gathering, hunting, ability to find water, and knowledge of animals and plants. According to Yellen and Lee (1998), “the people are self-sufficient, with a single exception: iron for knives, spear blades, arrowheads, and awls must be obtained through trade and exchange” (p. 37). This self-sufficiency is due almost entirely to their comprehensive knowledge of their environment.

3.1 Gathering

Vegetable food gathered by women was the primary source of sustenance for the San. This is because hunting requires a great deal of skill and labor with a relatively small return, while, on the other hand, gathering plant-based food predictably provides an adequate amount of food with comparatively small effort (Tanaka, 1998). Women generally spend anywhere from one to several hours each day collecting food, and while some of it is consumed while out gathering, the majority of the food must be carried back to camp to feed the men, children, and elderly. Hence, the ability to carry the gathered food is almost as important as the gathering itself and is as important as being able to carry home any game killed while hunting.

Dozens of species of edible plants may be available during any one season of the year, but generally only a few choice species are gathered for consumption. Some of the most sought-after plants include *Citrullus lanatus* (Tsama melon, pictured in Figure 20: Tsama Melon), *Bauhinia esculenta* (bean), *Terfezia sp.* (truffle), and *Bauhinia macrantha* (bean). The selection of food to be collected during any



Figure 20: Tsama Melon

season is decided by abundance, ease of collection and transport, nutrition, and preferred taste.

There are two categories into which gathering activities can be divided – picking and digging – depending on what part of the plant is edible. Tubers and bulbs are gathered using digging sticks. According to Tanaka (1998), collecting tubers is not always easy, “as reaching a single tuber necessitates digging in hard sand approximately 70 cm beneath the surface” (p. 107). It is because of the purely human ability to dig that the San are able to live in certain areas throughout the dry season, when water must be obtained from underground roots.

3.2 Hunting

Wild game hunted and prepared by male San accounts for about twenty percent (by weight) of the total diet of the San people (Tanaka, 1998). There is great variety in the types and sizes of

animals hunted as well as hunting techniques used. The size of the animals hunted range from large animals such as antelopes, giraffes, and lions to very small animals such as birds, snakes, and hares. There are even a few species of insects that are gathered for consumption.

A great deal of skill, time, and labor is required to hunt and prepare game, especially considering the very primitive tools being used by the San (Tanaka, 1998). The larger game animals are killed using the bow-and-arrow, sometimes with a poisoned arrow tip. This is difficult to do, and more often than not, men going out to hunt larger game come back empty handed. As an alternative, larger carnivores are often obtained by running to spots where vultures can be seen circling overhead. Medium sized animals such as the warthog can be hunted with a spear when there are dogs available to help. Rope snares are used to capture some of the smaller animals including small antelopes and birds, while some of the smaller animals are killed by clubbing. Although it is possible for the San to survive without meat, it is an important part of their diet, as it adds quality to their diet.

3.3 Finding Water

Because most of the San live in the Kalahari Desert, being able to find stable sources of water is an integral part of life. According to Tanaka (1988), there are more than three hundred days annually when the San of Central Kalahari are unable to find standing water, which forces them to find water in plants and animals.

There are two species of melon and two species of tubers as well as an aloe that are most commonly used as a water source (Tanaka, 1998). The Tsama melon is one of the best sources as it consists of about ninety percent water and remains edible for a considerable amount of time (sometimes as long as a year). While the two species of tubers do provide some relief when the Tsama melon becomes scarce, they are not as effective as a source of water. The tubers are fibrous and often bitter and do not contain as great a quantity of water as the melons.

3.4 Knowledge of Animals

The San people, especially the men, have extensive knowledge of the animals that reside in the area in which they live, knowledge that far exceeds that which is necessary to successfully hunt. Jones and Konner (1998) held a series of seminars with San men in order to determine the extent of knowledge they had pertaining to animal behavior. According to Jones and Konner, the San show a



Figure 21: Springbok

great deal of care about the differences between fact and theory, as well as the difference between what they observe on their own and hearsay. They are not afraid to admit when they do not know the answer, show no hesitation to report new data that may not coincide with what others have said, and do not get defensive when their ideas are challenged. The men

appeared to have a genuine interest in the stories of animal behavior and would often get very excited listening to one another's tales.

The details given during these seminars were cross-checked, and most showed great correlation with what is known in Western science. The men were able to accurately describe and often imitate the behavior of a wide variety of animals. However, they often had things backwards when talking about why animals behave the way they do, but this question of why was not nearly as interesting to the men as was the behavior itself. As Jones and Konner (1998) put it, "What the !Kung seem really good at is working out what happens, not in explaining or theorizing about it" (p. 337).

Appendix D: Skills Assessment Questionnaire

Hello,

My name is _____ and I am a college/university student from the United States working on the Tsumkwe Energy Project with the Desert Research Foundation of Namibia along with two of my fellow students, _____ and _____. Today I am asking if you could take about fifteen minutes to speak with me about your education, employment, and ideas for Tsumkwe's economic development. It is my hope that by the end of our time here in Tsumkwe my team will have enough information to make recommendations to the DRFN about what types of business are most wanted and needed in Tsumkwe and what additional resources are needed in order to establish such businesses. The DRFN will then use these recommendations to see what resources and training they can help provide in order to build up the local economy to help you as a resident of Tsumkwe. Would you mind answering a few questions for me?

What is your Name?

1. Do you know about the Tsumkwe Energy Project? What do you know about it?
2. Education
 - a. How many languages do you speak?
 - i. What languages do you speak?
 - ii. Can you also read and write them? How well do you speak these languages?
 - b. Have you attended school?
 - c. What was your highest grade?
 - d. Did you go to university/ college/ the polytechnic?
 - i. Where? For how many years?
 - ii. What did you study? Did you graduate? When?
 - e. Have you participated in any training courses?
 - i. In what areas or subjects?
 - ii. How long was the course? When did you attend?
3. Formal Employment
 - a. Have you ever been formally employed?
 - b. Are you currently employed
 - i. Could you please describe your job?

- ii. How long have you had this job? Have you received any training at this job? What kind?
- c. How long ago was your last job?
 - i. Please describe this job.
 - ii. How long did you work at this job?
- d. (Do you / Did you) like your job?
- e. What other jobs have you had, if any?

4. Informal Employment

- a. Do you do work for your neighbors/ friends?
 - i. What kinds of work? Do you get paid in paper money or in goods/ services?
 - ii. How frequently do you do this kind of work? Would you do these tasks if you weren't paid?

5. Ideas

- a. Do you have any technical/ practical skills?
 - i. What kinds? How many years have you done these things?
 - ii. How skilled do you feel that you are in regards to these tasks?
 - iii. Have you considered starting a business with any of these skills?
 - iv. What additional skills do you think you would need to start such a business?
- b. If you could start your own business (with access to electricity), what would it be?
 - i. What skills do you have that could be used in this business?
 - ii. What additional skills would you need to open such a business?
- c. Do you regularly travel to other towns to buy services or goods? (e.g., cashing checks, petrol, etc.)
 - i. How often do you have to leave town to get these things/services?
 - ii. If you had access to these services in Tsumkwe, how often would you use them?
- d. What businesses would you like to see in Tsumkwe? (When there is access to electricity)

Appendix E: Business Owner Interview Protocol

Interviewee(s): Current Business Owners in Tsumkwe

Brief Background:

As part of the Tsumkwe Energy Project, we are conducting a skills assessment of the residents of Tsumkwe in order to explore economic possibilities as well as what additional resources would be needed in order to implement these economic possibilities. Through these interviews, we intend to find out about your experience as a business owner in Tsumkwe. This information will then be used to give recommendations to the Desert Research Foundation of Namibia about economic possibilities in Tsumkwe as well as skills that still need improvement in order to build up the local economy.

Questions:

Do you know about the Tsumkwe Energy Project? What do you know about it?

How long have you owned this business? How was the business started?

Did you have any help starting your business? What sort of help did you have? Who gave you this help? What additional help would have made your experience opening your business easier?

What tasks do you do on a daily basis? On a weekly basis? Monthly? Yearly?

Who does the bookkeeping for the business? How long has/have you/he/she been doing the bookkeeping?

How many employees do you have? What skills do you expect your employees to have before you hire them? What sort of training do you give your employees?

What additional areas of training or other resources do you feel would improve your current business, if any? In what ways have you thought about expanding your business, if at all?

Do you know of anyone who does not currently own a business whom you believe would like to or who would be good at it? If so, what kind of business? Would you be willing to give us his/her contact information?

What additional businesses would you like to see in Tsumkwe? What businesses are needed? What businesses do you feel would be most used by the people of Tsumkwe?

Appendix F: Interview Transcripts

April 7, 2009

Stephania Matamu Shihawa (Female)

Business Interview

Ms. Shihawa owns the General Dealer & Singomba Shebeen, where she sells beer and food. She goes to Grootfontein in order to buy her stock, and then has them delivered for N\$450 each week. She has her own generator, which she fuels using diesel bought from the filling station at the Tsumkwe General Dealer. The fuel costs her N\$1800 per month. She moved from Rundu to Tsumkwe in 1987. She started her shebeen in 1996 after she sold a chicken in order to buy sugar, and then sold the sugar. She received no financial assistance or other assistance in starting her business.

Ms. Shihawa currently employs a man and woman to run the shebeen. They are paid monthly and do things such as cleaning the shop and selling goods at the shop. They have both worked for her for three years. For training, she taught her employees things such as hospitality and handling money.

She counts the stock of her shebeen at the end of each month. Currently, she is looking for somebody to help her expand. She wants to add take-away to her business. She also wants to farm maize and make her own products to sell in her store. She was the first shebeen owner in Tsumkwe and currently serves as a chairperson of all shebeens in Tsumkwe. Since 2004, she has brought shebeens together in order to settle disputes and solve other problems.

With respect to the Tsumkwe Energy Project, she wants energy now so that she can expand her business and finally have electricity for her home. She would also like to see a clothing store in Tsumkwe. She would like to see a supermarket opened in Tsumkwe, along with a bank. Products that she sells often must be bought in Grootfontein, which restricts her

business. According to her, the greatest restriction to starting and expanding a business in Tsumkwe is access to money. People lack collateral for loans, so they lack access to credit. Current businesses do not provide enough to Tsumkwe residents. There are not many tourists in Tsumkwe, which restricts local expansion. She cannot have her own farm because she cannot afford equipment such as plows. Aid to people without families in Tsumkwe currently is not enough. Many people cannot afford the N\$90 per year in order to go to school. Local business people in Tsumkwe have tried to put together money in order to aid people, but they have not been able to raise enough money. She also stated that there are not enough jobs or workers in Tsumkwe for the local economy to expand. About 200 to 300 Tsumkwe residents have jobs.

According to her, training to use computers would help her with her business. It would make keeping track of her inventory easier. She has never used a computer, but suggested having a workshop to teach people how to use a computer to improve their businesses.

According to her, the San have several problems. The government does not want to give them workshops for training to use computers or cars. They do not have experience and do not leave the Tsumkwe area in order to get training. A lot of San have tuberculosis and do not get proper treatment. After they are given medicine, they often have nothing to eat, which makes treatment ineffective.

Dapandula Nashipili (Female)

Business Interview

Ms. Nashipili sells new clothing from an informal stand across the street from the Tsumkwe General Dealer. She has been in business for four years and has lived in Tsumkwe for four years. She had no help in starting her business. She gets the clothing that she sells at her stand through the clinic in Tsumkwe. She knows nothing about the energy project, but

thinks that energy would be helpful for her business. With electricity for lighting, she would be able to sell her clothes at night. She started her business by selling small things and then expanded to clothing. According to her, the main problem for her business is lack of customers and lack of money. She thinks that lack of money is the biggest problem for starting a business in Tsumkwe. She would like to expand her business by selling jackets, stronger shoes, and other clothing.

According to her, several products need to be sold in Tsumkwe. In Tsumkwe, people cannot buy blankets, cell phones, cement, radios, other electronics, bags, backpacks, watches, or necklaces. The town also needs better transportation.

Sylvia Paollus (Female)

Business Interview

Ms. Lucia has lived in Tsumkwe for several years, and is the first of the three women to sell clothing at the stand. She sells second-hand clothing that she buys from South Africa. She leaves Tsumkwe to buy clothes for her stand at the end of each month. Currently, she wants to expand by selling new clothes.

Tiufelus Lucia (Female)

Business Interview

Ms. Lucia has lived in Tsumkwe for 3 years, and has run her part of the stand for two years. The clothes she sells are bought in Windhoek. She does not own the business; it is owned by a manager who lives in Tsumkwe.

Sonia Ganibes (Female)

Business Interview

Ms. Ganibes has run a take-away business in Tsumkwe at the Craft Center for two years. She does catering for government workshops and parties, but only does this six to seven times per year. She has lived in Tsumkwe since she was a year old. She worked as a chef in the Tsumkwe Country Lodge for eight years before she started her business. With

respect to the energy project, all she knows is that it will provide energy for the town. Her business is open from Monday until Saturday at 13:00.

She would like to have her own building for her business. She applied to the government for a plot and was approved, but the approval was then reversed. The only thing that prevents her from expanding is lack of space. She currently rents her stall at the Craft Center for N\$150 per month. She is also limited by the instability of the supply of electricity and water. She has enough money to expand.

To get the supplies for her business, she bought a pick-up truck. She buys her groceries at Grootfontein once a month. She used to buy her vegetables from Rudolf Namiseb. Currently, her two sisters work part-time at her business. Before that, she had two employees. She trained her employees to cook by showing them on Saturday afternoons what they had to cook on Monday. She keeps weekly records of the food that she sells.

According to her, the biggest impediments to starting businesses in Tsumkwe are lack of electricity, lack of people being approved to start shops, and lack of competition. Prices are high because there are not enough businesses in Tsumkwe. Last month, Ms. Ganibes had money issues resulting from having trouble filling out an official form. As a result, she almost had to close her shop.

According to Ms. Ganibes, Tsumkwe needs a large supermarket and a clothing store. There are people in Tsumkwe who want to start businesses that sell clothes, cook, and sell food.

Rudy Kurz (Male)

Business Interview

Mr. Kurz is the manager and contractor of a construction project in Tsumkwe that is building a new courthouse for the Lower Court in Tsumkwe. His company works on projects

such as roads, large developments, and shopping centers. He and his company are from Walvis Bay. For the project, 44 local workers have been trained in construction work. These people work as cement brick makers, dump truck operators, painters, and carpenters. These people were trained on-the-job. For plumbing and electrical work, workers had to be brought in from other places. The project has currently been going on for one year and three months. It is funded by the Ministry of Finance and costs N\$10 million.

According to Mr. Kurz, Tsumkwe needs a bank, a hospital, and a supermarket. Mr. Kurz had broken his leg and had to go to Grootfontein to have it treated.

Marta (Female) and Charles (Male) Sinvula Business Interview

Mr. and Ms. Sinvula buy cattle, butcher the cattle, and sell the meat in pieces. They also sell DVDs, balloons, fudge, and fat cakes. They earn most of their money by selling food and have been in business for six months. They first sold fudge, then fat cakes, then DVDs, then at the end of January, meat. Mr. Sinvula hitchhikes to Grootfontein every two weeks to buy DVDs. They want to expand by selling biscuits and buying a lot on which to sell their goods. They are limited by not having access to the forms needed to apply for a plot of land. They keep track of what they sell every day. Mr. Sinvula moved to Tsumkwe a year ago as a police officer. They would like to see electricity and an open market in Tsumkwe.

April 8, 2009

Kudomo (Male)

Mr. Kudomo works at the Community Development Center in Tsumkwe. The main service of the Community Development Center is to provide information. It provides access to the internet when the electrical generators in the town are producing electricity. The Community Development Center used to train people in the town, but it now relies on help

from NGOs and GRN Ministries. It sometimes hosts workshops. The library in the Community Development Center is currently closed because there is no librarian. The Community Development Center also makes copies for the school and provides a television for people in Tsumkwe to watch. No services are provided when there is no power.

Name not given (Male)

He knows nothing about the Tsumkwe Energy Project. He has been working at the Supermarket Savannah II for four months. The owner of the store is currently not in Tsumkwe. The food for the store comes from Gobabis. He does the bookkeeping on his own. There are currently four workers at the store who he is training to manage the store. He would like a cooler and alcohol at the store.

Dirk Rossouw (Male)

Mr. Rossouw owns and operates the Tsumkwe Country Lodge and the Tsumkwe General Dealer. Through his businesses, he wants to help uplift the community and bring employment to Tsumkwe, especially for the San. Through the General Dealer, he sells products for lower prices than he does at the Lodge. He also acts as a small-scale banker for the community by cashing checks and allowing people to get money from him using bank cards with no extra fee charged by him. He sees the preservation of the San community as very important and thinks that San children should be taught their traditional culture. He employs 30 San at the Lodge, and, when there is an open job at the Lodge, he first tries to find a San to fill it. When he employs the San, he gives them basic training, some lodging, a hot meal every day, and uniforms. He also employs other Tsumkwe residents who are not San.

To make the Tsumkwe Energy Project successful, Mr. Rossouw suggested having a maintenance contract with an existing company and training locals to help maintain the solar panels. He also suggested having community service projects as a form of payment for the electricity. He said that the local government needs to be improved. He said that a qualified doctor is needed in Tsumkwe. He is currently beginning to sell propane at the General Dealer so that people will be able to run gas stoves and geysers when the solar panels are put in place. He also stated that a mechanic is needed in Tsumkwe.

April 9, 2009

Josef Gerhardus Jacobus Steyn (Male)

Mr. Steyn worked for the GRN as a local handyman, but then quit to become the manager of the Tsumkwe Store General Dealer in November 2008. He was born in Gobabis and later moved to Tsumkwe to work for the GRN as a handyman for the water and power systems in the town. Through this job, he gained experience installing power systems. He then started a small welding business and performed tasks such as building donkey carts. He quit his job with the GRN because he was paid only N\$800 per month. He was hired as manager of the Tsumkwe Store General Dealer, for which he is paid N\$2500 per month. At the general dealer, he handles accounting and is training the other employee at the shop. He can speak Afrikaans, English, and Ju|'hoan, the local San dialect, and can read and write in Afrikaans and English.

Mr. Steyn is a highly qualified welder and has extensive experience and training. He went to school in Gobabis and Windhoek and started his technical training during Grade 5. He finished Grade N1, which is the technical equivalent of Grade 12, giving him eight years of training for welding. He did not have enough money to go further in his technical schooling. When he had his small welding business, he made 10 to 20 donkey carts per

month. Now, he makes about seven per month. For welding, he uses fire to heat up metal to weld it. He cannot afford the gas for his welding machine, which costs N\$800 and has to be purchased in Grootfontein. He has had his welding machine since 1993. When he was in business, he trained three men to weld. One of these men lives in Gam, and another lives on a farm outside of Tsumkwe. The third is teaching others about welding.

Other than welding, Mr. Steyn has experience with plumbing and electrical work. He has had five months of on-the-job training in plumbing and is confident in his ability to plumb. He also has experience with power lines and home electricity, and he is interested in doing maintenance on the solar system that is being installed by the Tsumkwe Energy Project. He also can do some car repair, but mainly with respect to electrical work.

Mr. Steyn would like training for car repair, electrical work, and appliance repair. He would like to be able to buy his welding supplies in Tsumkwe. Currently, he needs to pay N\$160 at the end of each month to go to Grootfontein. He also thinks that people in Tsumkwe need help starting new businesses. He thinks that the establishment of an open market would help residents in Tsumkwe and help local economic development.

Fokus Tjatindi (Male)

Mr. Tjatindi was born in Botswana and moved to Namibia in 1993. He can speak English, Afrikaans, and his native Botswana language. He can read and write in English and Afrikaans. He completed Grade 12. He has a diploma from a training school and has six months of training in working with leather. He knows how to process animal hides in order to make leather. He also knows how to make leather wallets, belts, shoes, and cell phone pouches. He usually uses two to three cow hides each month. He worked as a brick maker on a construction project in Tsumkwe, but quit because of low pay. He worked as a plumber for three months and says he knows plumbing well. He also worked for the First National

Bank. He would like to start a leatherworking business, but lacks the necessary equipment and money.

Seppie Swartbooi (Male)

Mr. Swartbooi works in the store room of the Tsumkwe General Dealer, where he keeps inventory. He can speak English, Afrikaans, Damara, Otjiherero, Oshiwambo, and Ju|'hoan. He can read and write in Afrikaans, English, Damara, and Ju|'hoan. His highest grade was Grade 10. On his own, he has learned how to repair car tires, engines, and electrical parts. He helps people fix their cars about twice a month and would like to start a business with his repair skills. He does not think that there would be enough customers to sustain a car repair business and thinks that he would need another job to supplement it. When working for the Nyae Nyae Conservancy, he learned how to repair solar panels for water pumps, and he would like to do similar work on the Tsumkwe Energy Project. He had two weeks of training and thinks that he would need more. He knows how to fix appliances and is confident with those skills, but he stills thinks more training would help. He thinks that a business for repairing appliances in Tsumkwe would work well. He also knows some things about building with cement from his experience with water boreholes. He would like to see a supermarket in Tsumkwe.

Charlie Nqeisji (Male)

Mr. Nqeisji has lived in Tsumkwe for his entire life. He can speak, read, and write Afrikaans, English, and Ju|'hoan. His highest grade was Grade 10. Currently, he works for Namibia's Electoral Commission and educates voters about the electoral process, their rights, and the Namibian Constitution. Previously, he worked as a translator for people who were referred to him by the Nyae Nyae Conservancy. He also worked for the Ministry of Agriculture and received office administration training. He was promised a job at the

Namibian Broadcasting Corporation (NBC), and resigned from the Ministry for that job. He goes to Okahandja three times per year to translate government documents into Ju|'hoan. He received tour guide training in Windhoek during 2006. He received Agri-Futura training in 2007 for two months. He learned how to teach people things such as business skills. He received one week of computer training in 2006. He does translating and transcribing for the local community. He currently plans on implementing a project for language development, gardening, and crafts in order to help local development. The project is currently prevented from starting because of lack of funds. According to him, Tsumkwe needs more poultry farming and irrigation for gardening.

Dina Jackson (Female)

Ms. Jackson can speak English, Afrikaans, Kavango, and Ju|'hoan and can read and write in Kavango. Her highest grade was Grade 9. She currently has a large field and a small field for growing crops such a mahangu. She grows the crops for her own use because, currently, there is no market in Tsumkwe for selling her crops. Her crops have been destroyed in the past by elephants. During 2008, she ran an informal clothing business in which she sold clothing she had gotten in Oshikango. She also made crafts, which she sold at the Tsumkwe Lodge, Swakopmund, and Windhoek. She has had no training courses. According to her, lack of profit prevents the establishment of new businesses.

Chris Nganjona (Male)

Mr. Nganjona has not gone to school. He can speak Afrikaans, English, Ju|'hoan, Oshiwambo, Otjiherero, and Kavango. He can read and write Afrikaans, English, and Otjiherero. He has not attended any training courses. He used to perform tire repairs and car repairs and worked at a car wash. He knows how to work on car engines and car electronics. He would start a car repair business if he had tools and could find space for the business. He

is interested in formal training for car repair. He helps his friends perform car repairs about once every month. He also knows how to paint houses. He knows how to use a welding torch, but says that he needs more training. He would like to be able to buy tools, shoes, steel, and other supplies in Tsumkwe. He would also like a clothing store in Tsumkwe.

Dino Mbaisa (Male)

Mr. Mbaisa can speak English, Afrikaans, Otjiherero, and Oshiwambo. He can read and write English, Afrikaans, and Otjiherero, and can read Oshiwambo. His highest grade was Grade 12. He currently works as a volunteer gardener and farmer for the Red Cross and grows spinach, cabbage, beets, carrots, and onions for tuberculosis patients. He also works with cattle. He worked as a security guard from 2003 to 2006 and worked at a research station for breeding cattle. He also did construction work for one month. He helps friends and neighbors build houses. He received six months of computer training in 2006 and three weeks of agricultural training in 2008. He would like a market for fresh food in Tsumkwe. He would also like to be able to buy supplies such as pipes, timber posts, and barbed wire for fences. He also wants the solar project to be implemented as soon as possible.

Adelheid Shilima (Female)

Ms. Shilima speaks, reads, and writes English and Swahili. Her highest grade was Grade 10. She currently sells cooked meat and drinks. She buys the head of a cow for N\$90 and makes a profit of N\$20. She uses any profit to survive. She has had no formal training. She would like to learn how to build houses and buy and sell crafts and clothing. She would also like to cook and use a sewing machine.

Name not given (Female)

Her highest grade was Grade 10. She reads, writes, and speaks English and Kwangali. She would like any job for income, and would like to sell crafts.

Samuel “Longman” Uapingeme (Male)

Mr. Uapingeme’s highest grade was Grade 8. He can speak, read, and write English, Afrikaans, and Otjiherero. To make money, he currently paints and welds. He went to school for welding and received certification. He has painted buildings for over ten years, but has no certification. He also served seven years in the South African Army. He helps neighbors paint and weld. He would like to see a large supermarket and clothing store in Tsumkwe.

Alphonse Uapingeme (Male)

Mr. Uapingeme speaks, reads, and writes Otjiherero and speaks Afrikaans. Currently, he helps his brother, Samuel, weld and paint. He has not had any official training or certification. He previously worked as a construction worker, performing tasks such as mixing cement and working as a general laborer. He would like to start a welding business, but he lacks the necessary funds. He would like to be able to buy welding materials and tools in Tsumkwe. He would also like to see a supermarket and a vocational training center.

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Elisa Mandjoro (Female)

Ms. Manjoro knows nothing about the Tsumkwe Energy Project. She can speak Afrikaans and English. Her highest Grade was Grade 5. She has never had a formal job. To make money, she makes and sells bracelets. She used to cater for government workshops.

According to her, catering jobs in Tsumkwe are assigned unfairly because people only hire caterers who they know personally. Government workshops also must be catered by San women. She no longer caters because of financial restraints. The main source of income for San women is crafts. They often lack experience for catering. She once catered for 27 people, cooking them three meals a day for a month. She had to show the women with whom she was working what to do. She would like more training with respect to cooking. She would like to see a clothing store in Tsumkwe because only cheap clothing is sold in the informal stands. She does not want a bank because people would end up spending too much money and the San would be more likely to have their money be exploited.

Maureen Colboy (Female)

Ms. Colboy knows nothing about the Tsumkwe Energy Project. She can speak English, Afrikaans, Ju|'hoan, and Kavango and can read and write English and Ju|'hoan. Her highest grade was Grade 10. He has never had a job and does not do any informal work, such as crafts. She would like to see a supermarket and a clothing store in Tsumkwe.

Joseph Colboy (Male)

Mr. Colboy knows nothing about the Tsumkwe Energy Project. He can speak, read, and write English, Afrikaans, Otjiherero, Damara, and Ju|'hoan. His highest grade was Grade 10. He was trained to educate the San about environmental issues from 2006 to 2007. He also received one month of training in wildlife protection. He has mobilized voter registration. He worked for two years on environmental protection and HIV awareness projects. He received some training with computers and enjoyed it. He also received six months of vocational training for electrical work. He has not finished his courses, but said he would be interested in more training. He has repaired appliances such as radios, televisions, and computers and would like to open a business doing appliance repair. In Tsumkwe, he

would like to see a stable electricity supply, a stable water supply, better transportation, a supermarket, and a clothing store. According to him, alcohol consumption is a problem for the town. He also said that computer training would be useful for the town.

Olga Hendrich (Female)

Ms. Hendrich only knows that the Tsumkwe Energy Project will be a solar panel system and that appliances such as electric stoves will hurt the system. She can speak, read, and write English, Afrikaans, Ju|'hoan, and Damara. She also speaks a small amount of Otjiherero. Her highest grade was Grade 9. She received six months of nursing training in 1992, and then received another two years of training from 2001 to 2002. She is currently a nurse for San villages surrounding Tsumkwe.

Maria Hendrich (Female)

Ms. Hendrich's highest grade was Grade 9. She has received home-based care training and works in the San villages surrounding Tsumkwe.

Renathe Gomes (Female)

Ms. Gomes knows that the Tsumkwe Energy Project will produce electricity through solar power. She can speak, read, and write English, Afrikaans, Damara, Otjiherero, and Kavango and can speak Ju|'hoan. Her highest grade was Grade 9. She was part of an adult education program. She currently works as a teacher. She has had training in areas such as child abuse prevention, tuberculosis, and condom use. For one year and six months, she worked at Cash Loan. She worked for a take away business for eight months. She would like to see a bank, a supermarket, and a bakery in Tsumkwe.

Magrieda Hauala (Female)

Ms. Hauala knows nothing about the energy project. She can read, write, and speak in Afrikaans and Otjiherero and can speak Ju|'hoan. Her highest grade was Grade 7. Her only job was cleaning and other domestic work. She would like to see a supermarket, a clothing store, and a bank in Tsumkwe.

Marie Willem (Female)

Ms. Willem only knows that the Tsumkwe Energy Project will use solar panels. She can speak Afrikaans, Damara, Otjiherero, and Ju|'hoan. Her highest grade was Grade 4. She had received no training courses. She cleaned at the Lodge for ten years. She has been doing cleaning work at the local NBC studio for five years. She used to make crafts for personal use. She would like to see a clothes store, a supermarket, and a bank in Tsumkwe.

Batseba Gamses (Female)

Ms. Gamses knows that the Tsumkwe Energy Project will be a solar panel project. She can speak, read, and write English, Afrikaans, Otjiherero, and !Kung. Her highest grade was Grade 10. Previously, she worked at a car wash in Grootfontein. She now works as a teacher in the villages surrounding Tsumkwe. She would like to see a bank and a clothing store in Tsumkwe.

Magdalena Tsauses (Female)

Ms. Tsauses knows that the Tsumkwe Energy Project is going to use solar power. She can speak Afrikaans, Ju|'hoan, Kavango, and Oshiwambo, but cannot read or write. She was trained to do home-based care, but is not currently employed. She used to plant and sell tomatoes. She would like to see a clothing shop and a material shop in Tsumkwe.

Ana Musanga (Female)

Ms. Musanga knows that the Tsumkwe Energy Project will use solar energy. She speaks Afrikaans, Jul'hoan, and Otjiherero, but cannot read or write. She has attended adult education classes, but has not attended any training courses. She makes bags that she sells and cleans at the Lodge. She would like to see a material shop, a clothing shop, supermarket, and a bank in Tsumkwe.

!Xlosce N!ane (Female)

Ms. N!ane knows that the Tsumkwe Energy Project is a solar project. She can speak Jul'hoan, but does not know how to read and write. She currently makes and sells crafts. She wants a shop that sells s materials to make craft in Tsumkwe.

Ch!xon Kgao (Female)

Ms. Kgao knows that the Tsumkwe Energy Project will be use solar energy. She can speak Jul'hoan, Afrikaans, and Kavango, but cannot read or write. She has not attended to school. She currently makes and sells crafts. She would like to see a clothing shop and a materials shop in Tsumkwe.

Joanna Soroas (Female)

Ms. Soroas knows that the Tsumkwe Energy Project will install solar panels by 2010 and was asked about her energy usage during an earlier survey. She also knows that using propane stoves will allow the system to last longer. She can read, write, and speak English and Afrikaans and can speak Damara. Her highest grade was Grade 10. She is currently participating in a computer training course. She has never had a job. She would like to see a large supermarket, a large filling station, a bank, and a clothing store in Tsumkwe. She commented that current shops in Tsumkwe are expensive.

Katrina Boeto (Female)

Ms. Boeto had received Tsumkwe Energy Project stickers during a past survey and was told about the need for energy efficient appliances. She can speak, read, and write Ju|'hoan, Afrikaans, and English. Her highest grade was Grade 10. She has not participated in any training courses. She has read news at the local NBC studio since 2007. Before her job at NBC, she was a teacher. She would like to see a stable electricity supply in Tsumkwe.

Frida Ubu-Khais (Female)

Ms. Ubu-Khais knows that solar panels will be put in place by the Tsumkwe Energy Project. She can speak Damara, Ju|'hoan, and Otjiherero and can speak, read, and write Afrikaans. Her highest grade was Grade 4. She participated in a workshop about child abuse. She currently has no job, but used to do domestic work. She also knows how to make clothing. She would like to see a supermarket, a butchery, a clothing shop, a material shop, and stable electricity in Tsumkwe.

Lucia Soroas (Female)

Ms. Soroas said that she was told that the Tsumkwe Energy Project would give her electricity. She can speak Damara, Afrikaans, Otjiherero, and Oshiwambo, but cannot read or write. She has not attended school or training courses. Years ago, she was a domestic worker, but she has been unemployed for a long time. She would like to see a supermarket, a better road, brick making, electricity, and better living conditions in Tsumkwe. According to her, meat storage is a problem because of the lack of electricity.

Rudolf "Rasta" Namiseb (Male)

Mr. Namiseb founded, owns, and operates the Agro-Forestry Demonstration Garden in Tsumkwe. He knows nothing about the Tsumkwe Energy Project, but wants electricity so

that he can water his garden at night. The instability of the water supply in Tsumkwe that is caused by the instability of the energy supply has resulted in Mr. Namiseb losing crops. He started the garden in 2001 with some help from the German Development Service. He was given some posts and nets, but had no other help. He works in his garden every day, as long as there is water. He grows many types of plants, including tomatoes, grapes, bananas, mangos, oranges, sweet potatoes, potatoes, peppers, and apples. He also makes crafts and goes to places like Tsumeb to sell them. For two years and six months, the garden was not maintained because he left Tsumkwe to take care of his sick mother. He returned to Tsumkwe in August 2008 and began cultivating the garden again. He sells his crops from his garden, but currently lacks enough customers. He used to buy crafts from the San in the Tsumkwe area to sell, but does not any more. He gets the seeds for his garden in Grootfontein and gets the wood for his crafts locally. The local government asked him to train people about agriculture, but he said that he will not until he gets more training.

Mr. Namiseb can speak Afrikaans, Damara, Ju|'hoan, Kavango, Oshiwambo, English, Otjiherero, and Heikom. He cannot read or write and did not attend school. He received one year of agricultural training in 1991. He would like training to learn more about trees and other agriculture. Before working in agriculture, he was a soldier for four years. He would like to see a shoe shop, a clothing shop, and shops where people can sit down in Tsumkwe.

Olga Soroas (Female)

Ms. Soroas knows nothing about the Tsumkwe Energy Project. She speaks Afrikaans, English, Ju|'hoan, Kavango, and Damara. She can read and write Afrikaans and English. Her highest grade was Grade 10. She has not attended any training courses and has never had a job. She used to do volunteer work that involved helping sick people in the

Tsumkwe area. She would like to see a clothing shop, a shoe shop, and a furniture store in Tsumkwe.

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Jackie Weiko (Female)

Ms. Weiko knows that the Tsumkwe Energy Project involves solar panels and that it will provide energy for Tsumkwe. She knows that the electricity will be more stable than it is now. She can speak English, Afrikaans, Otjiherero, Oshiwambo, and Damara. She can read and write Afrikaans and Oshiwambo and read English. Her highest grade was Grade 9. She has attended training courses in cooking and sewing. She currently is a work hand for the Namibian Department of Nature Conservation. She works with wildlife and prevents elephants from damaging machinery and other things in the Tsumkwe area. She used to work in the fishing industry and packed fruits and vegetables in Tsumeb. She would like to see a bank, a clothing shop, a supermarket, better roads, access to news and other information, and entertainment in Tsumkwe. She also said that alcohol consumption is a big problem in Tsumkwe.

Raide Kandjambanga (Female)

Ms. Kandjambanga thinks that the solar panels will be a better source of electricity than the current generators. She can speak, read, and write Oshiwambo and can speak and read English. Her highest grade was Grade 5. She has received training in cooking and sewing. She is currently a laborer for the Ministry of Agriculture and cleans the local office. She has had no other jobs. She would like to see a bank, a clothing shop, a supermarket, and entertainment in Tsumkwe. She would also like training for cooking and making clothing.

Ishmael Gomeb (Male)

Mr. Gomeb knows that the Tsumkwe Energy Project will be building a solar system and that gas stoves should be used to replace electric stoves. He can speak, read, and write Afrikaans, Damara, three Jul'hoan dialects, and English and can speak Otjiherero. His highest grade was Grade 11. He is currently participating in independent study through the Institute of Open Learning. He received training in youth health from 1996 to 1997, customer care in 2007, coaching sports in 2007, SME business training in 1995, and literacy promoter training in 1995. He is now a clerical assistant and acts as an office administrator. He collects mail, organizes meetings, and handles payroll. He used to be a youth volunteer for UNICEF and the Directorate of Youth Development. He would like to see a clothing store, a bank, a car repair shop, butchery, a 24-hour filling station, and a supermarket in Tsumkwe.

Josephine Mbangula (Female)

Ms. Mbangula knows nothing about the energy project. She can speak, read, and write Oshiwambo and Otjiherero. She did not attend school, but did attend literacy classes for two years. She has received one year of training in needle work and six months of training in knitting. She currently works as a laborer and cleans. She has had no previous jobs. She would like to see a clothing shop, a bank, and a supermarket in Tsumkwe.

Owen Cukga (Male)

Mr. Cukga can speak, read, and write Jul'hoan, English, and Afrikaans. His highest grade was Grade 10. He has had training in legal assistance. He currently works at NBC as a

producer and presenter. He has had no other jobs, but helps at the Nyae Nyae Conservancy. He would like to see a clothing store and a supermarket in Tsumkwe.

Gerrie Cwi (Male)

Mr. Cwi can read, write, and speak English, Afrikaans, and Ju|'hoan. His highest grade was Grade 9. He has had religious training. He works at the church and preaches on Sundays. He has had no other jobs. He delivers food to villages outside of Tsumkwe and trains people about how to care for goats. He would like to see more cattle production in the villages and would like to see ostriches farmed for their eggs. He would also like better transportation in Tsumkwe and the surrounding area.

Gerrie Cwi (Male)

Mr. Cwi can read, speak, and write Afrikaans, English, and Ju|'hoan. His highest grade was Grade 9. He was trained to play rugby. He has never had a job and does not know what Tsumkwe needs.

Constancia Kazenango (Female)

Ms. Kazenango knows that the Tsumkwe Energy Project will bring electricity to Tsumkwe in 2010. She speaks Otjiherero. Her highest grade was Grade 6. She has not attended training courses, but would like training in sewing. She currently has no job, but used to clean houses and sell fat cakes. She would like to see a clothing store, a supermarket, and a butchery in Tsumkwe. She stated that the problem with workshops in Tsumkwe is that they are mainly aimed at helping the San and not other ethnic groups.

Theoplotine Tjombondo (Female)

Ms. Tjombondo knows that the Tsumkwe Energy Project will bring electricity to Tsumkwe in 2010 and that businesses and employment will be helped by the stable source of electricity. She can speak Otjiherero and Afrikaans. Her highest grade was Grade 8. She has not attended any training courses and has no job. She used to clean houses and sell fat cakes. She would like to see a clothing store, a supermarket, and butchery in Tsumkwe.

Tjimbware Mata (Male)

Mr. Mata knows that the Tsumkwe Energy Project will bring electricity to Tsumkwe. He can speak Otjiherero, Afrikaans, Otjizemba, Oshiwambo, English, and Rukwangali. He cannot read or write, but is trying to learn. He did not attend school. He has not attended any training courses. He is currently a general worker at the hostel at the school and knows how to cook. He used to work as a cattle worker and at the Savannah II Supermarket. He commented that using a gas stove in Tsumkwe is difficult because of the lack of a stable gas supply in the town. He also said that the town needs electricity. He would like to see a supermarket, a clothing store, and butchery in Tsumkwe.

Tuhateni Nashipili (Female)

Ms. Nashipili knows that the Tsumkwe Energy Project will produce 24-hour electricity and will use solar panels. Her highest grade was Grade 10. She can speak, read, and write English and Oshiwambo. She has attended no training courses. She used to work as a maid. She would like to see electricity and a bank in Tsumkwe.

She currently owns and runs the Omukuku Shebeen and sells clothes. She started her business two years ago. She wants to expand by doing needlework by using electricity. She needs to go to Oshikango and other towns to buy the things that she needs for her business.

She had no help starting her business. She has no employees, she handles her own accounting, and she takes stock once per month.

Immanuel Hawala (Male)

Mr. Hawala highest grade was Grade 12. He can speak, read, and write Oshiwambo and English and can speak Afrikaans. He has been trained in mineral exploration for mining and used to work at the MTB mineral exploration company. He would like to see electricity and butchery in Tsumkwe.

He currently runs a hair salon, which he began in December 2008 with no help. He keeps his books on a daily basis and would like to expand. He needs electricity in order to make his business more successful. Without a stable source of electricity, he cannot shave heads or use any other electric equipment.

Festus Jonas (Male)

Mr. Jonas's highest grade was Grade 2. He can speak, read, and write Oshiwambo. He has not participated in any training courses. He currently manages the E Vatel Shebeen. He would like to see a bank and electricity in Tsumkwe.

Mushinge Haimboti (Male)

Mr. Haimboti can speak Otjiherero and Afrikaans and can speak, read, and write Oshiwambo. His highest grade was Grade 6. He works for MTB and does drilling and exploration surveying. He also owns the E Vatel Shebeen. His first job was to perform mineral explorations for Rossing. He has owned his shebeen for three years, keeps his own books, takes stock once per month, has one employee, and would like to expand.

Erastus Kambathe Kaveto (Male)

Mr. Kaveto knows that the Tsumkwe Energy Project will bring solar energy to Tsumkwe. He knows how to speak 14 languages, including English, Otjiherero, Oshiwambo, Kavango, Kwangali, Afrikaans, and several Ju|'hoan dialects. His highest grade was Grade 11. He participated in an agricultural workshop for using animals for plowing. He also received youth training and nature conservation training. He currently has no job. He used to work for a construction company, translate for tourists, and plow on a government farm. He would like to see a clothing store, a supermarket, an appliance store, and a furniture store in Tsumkwe. He would also like stable sources of water and electricity. He now has a garden, but has trouble sustaining it because of the lack of water.

Mr. Kaveto has lived in Tsumkwe since 1981 and has traveled to the United States, Europe, and Canada. He was forced to move from his land in Tsumkwe for the building of a soccer field, but people later built houses on the land. He stated that elephants are a problem for people growing crops in Tsumkwe.

April 16, 2009

Hilde Tuku (Female)

Ms. Tuku can speak, read, and write English, Afrikaans, and Kavango and understands Ju|'hoan and Damara. Her highest grade was Grade 10. She has received training from Health Unlimited. She has never had a job. She buys crafts from the San and sells them at the Tsumkwe Country Lodge, Windhoek, and South Africa. She also sells clothing to the San about five times per month. She would like to see a supermarket, a clothing store, and better transportation in Tsumkwe.

Cristof Disho Djimi (Male)

Mr. Djimi knows that the Tsumkwe Energy Project will be a solar project. He can speak, read, and write English and Afrikaans and can speak Kavango and Otjiherero. His highest grade was Grade 9. He has no training and has never had a job. He grows beans and mahangu in his field and sells them to buy other goods. He would like to see a supermarket and a clothing store in Tsumkwe. He would like stable electricity so that the community improves and larger shops come to Tsumkwe.

Alexander Maghambayi Djimi (Male)

Mr. Djimi can speak, read, and write Kavango and can speak Afrikaans. His highest grade was Grade 2. He has training for the use of draft animals. He used to work at a mine on a six month contract, but the mine was shut down. He has a field and sells his crops. He would like to see a supermarket and a clothing shop in Tsumkwe. He wants a stable water supply in order irrigate his crops.

Eba Kanime (Female)

Ms. Kanime only knows that the Tsumkwe Energy Project will be a solar energy project. She can read, write, and speak Oshiwambo and understands English. Her highest grade was Grade 11. She received one week of computer training, but does not know much about using computers. She has owned and run the Okano Shebeen for three years and started the business in her house. She sells beer, chips, sweets, and cool drinks. She had no assistance in starting her business. She takes stock once per month in order to see what she needs to buy elsewhere. She has no employees. She would like to expand, but is limited by the cost of transportation for getting the goods she sells. She would like to see a supermarket and a shop where she can get supplies for her business in Tsumkwe.

Georgine Kamyone (Female)

Ms. Kamyone knows that the Tsumkwe Energy Project will bring electricity to Tsumkwe. She can read, write, and speak Otjiherero, Afrikaans, and English. Her highest grade was Grade 10. She has lived in Tsumkwe for 15 years. According to her, many people in Tsumkwe need employment. She used to work at the Tsumkwe Country Lodge, at a Shell Station, and at a meat company. She would like to see a supermarket and a clothing store in Tsumkwe.

Josephine Kamyone (Female)

Ms. Kamyone can speak Otjiherero and Afrikaans. She has not attended school. She used to do domestic work and needle work to make money. She would like a supermarket and stable water and electricity in Tsumkwe.

Shemaine Kamyone (Female)

Ms. Kamyone can speak, read, and write Afrikaans, English, and Otjiherero. Her highest grade was Grade 10. She has never been employed and has not participated in any training courses.

Veronica Siku (Female)

Ms. Siku knows nothing about the Tsumkwe Energy Project. She can speak, read, and write Afrikaans, English, and Otjiherero and can speak Kwangali and Ju|'hoan. Her highest grade was Grade 12. She has received computer training and youth credit training for applying for bank loans. She currently has no job, but helps at adult literacy classes that teach reading and writing in English. She sells fat cakes. She would like to see a supermarket, better transportation, and more shops in Tsumkwe.

Gabriel Hipandulwa (Male)

Mr. Hipandulwa knows that the Tsumkwe Energy Project is trying to install a solar system that will replace the diesel generators and provide the town with electricity. He knows that the system will be one of the biggest in Africa and will be funded by the European Union. He can speak, read, and write English, Afrikaans, Otjiherero, and Oshiwambo and can speak Damara. He completed Grade 12 and went to the University of Namibia for four years, where he studied Science and Natural Resources. He has had training for HIV/AIDS prevention, trophy hunting, and conservancy governance. He has been working for the Nyae Nyae Development Foundation for five years and advises on resource management. He has not had another job and enjoys his job a lot. He likes working in the wilderness and being with wildlife. He received some household repair training from the local church. He has a garden where he grows cabbage, spinach, and carrots. He would like to see a supermarket, shops, and gardening training in Tsumkwe.

Kanbonde Laina Tunegameno (Female)

Ms. Tunegameno knows that the Tsumkwe Energy Project will bring stable energy to Tsumkwe, which will help businesses and local development. She can speak, read, and write English and Oshiwambo and can speak Afrikaans. Her highest grade was Grade 12. She now works as a forest guard for the Ministry of Agriculture. She patrols the bush in order to preserve it and prevent illegal harvests. She has had her job since 1999 and has been working in Tsumkwe since 2005. Her only previous job was plowing in her father's field. She is interested in starting a gardening project or selling clothing. She would like to participate in training courses. She would like to see banks, a supermarket, better transport, clothing production, cheaper shops, and more investors in Tsumkwe.

Veronica Sivhute (Female)

Ms. Sivhute knows that the Tsumkwe Energy Project will use solar power. She can speak, read, and write English, Afrikaans, and Kwangali. She graduated from Grade 12 and went to the Polytechnic of Namibia for three years, where she studied Nature Conservation. She did not finish. She has had two to three months of first aid training. She has had no job, but makes and sells bread every day. She also knows how to sew. She would like to see a supermarket, a clothing shop, and a building materials store in Tsumkwe.

Eliowe Mandjoro (Male)

Mr. Mandjoro knows that the Tsumkwe Energy Project will help with local energy problems and will be a solar energy system. He can speak, read, and write English, Afrikaans, Damara, and Ju|'hoan. His highest grade was Grade 12 and he studied Basic Education at the College of Education for three years. He received his diploma six years ago. He was also trained to write children's stories. He has taught Grade 2 for three years at the school in Tsumkwe. He has had no other jobs. When he was 16 years old, his father taught him to be a carpenter, and he is confident about his carpentry skills. He has never considered starting a business with his skills. He would like to see a furniture store and a clothing store in Tsumkwe.

Vilho Ihemba (Male)

Mr. Ihemba knows that the Tsumkwe Energy Project will provide 24-hour electricity. He also knows that it will last a long time and be less expensive than the current electricity system. He can speak, read, and write English, Kavango, Oshiwambo, Caprivian, and Afrikaans and can understand Ju|'hoan. His highest grade was Grade 12 and he went to college in Zimbabwe for three years. He studied Community Development and Water

Supply. He finished his studies there 19 years ago. He was trained as an accountant and is now an assistant accountant. He collects and records revenue and keeps financial records at the end of each month. According to him, the affordability of electricity has been a problem, and there have been attempts to subsidize it. He used to work for a water supply project in Caprivi and worked for the Ministry of Home Affairs for five years. Outside of his job, he sets up internships for students at the school, which he has done for two years. He has trouble placing people from poor families into jobs. He knows how to do some carpentry work, such as building tables. He would like to see a post office, a bank, better transportation, stable electricity, and a better filling station in Tsumkwe.

Mwala Lutaka (Male)

Mr. Mwala knows that the Tsumkwe Energy Project is trying to bring electricity to Tsumkwe and that the project is still looking for a place to build. He knows how to speak, read, and write English, Subia, and Silozi. His highest grade was Grade 12. He had received hospitality, management, and administrative training. He is currently studying Human Resource Management at the University of Africa, and has completed two years of his studies. He currently works as the Chief Clerk and handles invoices for water and electricity use. He also handles payments, prepares reports, supervises Tsumkwe's electricity supply, and coordinates repairs to Tsumkwe's electrical system. He had previous jobs as a receiving clerk, a consultant, and a salesperson. He studied Supervisor Management at the Polytechnic of Namibia and has received computer training. He would like to see a supermarket, a clothing store, and 24-hour electricity in Tsumkwe.

April 17, 2009

Janet Joseph (Female)

Ms. Joseph can speak, read, and write English and Afrikaans and can speak Damara, Otjiherero, and Ju|'hoan. Her highest grade was Grade 6. She currently works as a caretaker for the local government. She used to work at the Tsumkwe Country Lodge. She received training in plumbing in Grootfontein. She would like to see 24-hour electricity, accommodation for visitors to Tsumkwe, a supermarket, and a clothing store in Tsumkwe.

Betrina Gamses (Female)

Ms. Gamses can speak Afrikaans, Damara, and Otjiherero, but cannot read or write. She did not attend school. She used to work as a domestic worker, but is now unemployed. She is skilled with respect to needlework and cooking and thinks she could make money using her skills. She would like to see 24-hour electricity, accommodation for visitors, a supermarket, and a clothing store in Tsumkwe. She thinks that there would be enough customers for new businesses and that new business might result in the road being improved.

Veronica Hoakhaos (Female)

Ms. Hoakhaos can speak, read, and write Afrikaans, English, and Damara. Her highest grade was Grade 12, and she then studied from 2007 to 2008 to get a certificate in Local Government Studies. She has participated in three HIV prevention courses. Since October 2007, she has worked as an administrator for the Regional Councilor. She identifies community needs, writes protocols, and arranges meetings for the government of the Tsumkwe Constituency. From 2005 to 2006, she was a government clerk. From July 2007 to November 2007, she was a temporary Social Studies teacher for Grades 5 to 7. She would like to see a clothing store, a supermarket, doctors, and a bank in Tsumkwe.

Though her job, Ms. Hoakhaos concentrates on San empowerment programs in western Tsumkwe. One program distributed three cattle to San families in order to teach them to raise cattle. At the end of a few years, three cattle needed to be returned. This program had varying success, with some San being able to raise many cattle and others not being able to return any. San programs are based around teaching the San self-sufficiency and new skills. Limited funding is a problem for the programs for the San. She would like village education projects, but funding needs to be used to provide food for the San. Assisting the sales of crafts could help the San gain more sustainable sources of incomes. Knowledge of traditional medicine and tracking could also help the San develop economically. According to her, the traditional knowledge of the San needs to be preserved. There are no programs to reduce poverty for the residents of Tsumkwe because they often have work, while the San do not.

Uaviara Muatjetjeja (Female)

Ms. Muatjetjeja can speak, read, and write English, Otjiherero, and Ju|'hoan. Her highest grade was Grade 12. She has not attended any training courses. She has worked in the government office in Tsumkwe since 2006 and had no previous jobs. She would like to see a clothing store, a supermarket, and a bank in Tsumkwe.

Geoffrey Gomme (Male)

Mr. Gomme can speak, read, and write English, Afrikaans, Ju|'hoan, and a Botswana language and can speak Otjiherero, Damara, and Caprivian. He attended school in Botswana, and his highest grade was Grade 12. He has received training in environmental protection, health, business management, youth health, gender issues, and employment. Since 1995, he has assisted with youth programs and has dealt with problems of drug and alcohol abuse for

the Regional Youth Office in Tsumkwe. He would like to see a clothing store, a supermarket, a furniture store, a filling station, and doctors in Tsumkwe.

According to Mr. Gomme, the main crime that occurs in Tsumkwe is stealing food. There is a lot of alcohol and drug addiction in Tsumkwe that hurts the ability of the town to develop. Tuberculosis and malaria are bigger problems in Tsumkwe than HIV. Girls often do not get enough education because they often leave school to get married. Crime is going down in Tsumkwe, but there are still problems that need to be fixed to improve the quality of life.

Susanna Swartz (Female)

Ms. Swartz can speak, read, and write English, Afrikaans, and Damara. Her highest grade was Grade 12, and she studied Public Management at the Polytechnic of Namibia for one year. She has been trained in peer education. She currently assists in administrative activity for the Youth Office in Tsumkwe and connects the office with the Tsumkwe community. She would like to see a supermarket, a clothing store, and doctors in Tsumkwe.

Siegfredth !Aebeb (Male)

Mr. !Aebeb is a National Program Coordinator based in Windhoek. He can speak, read, and write English, Afrikaans, Damara, and German. His highest grade was Grade 12. He then went to agricultural school and, later, received conservation training. He used to train dogs for use in police work and guarding livestock. He would like to see a clothing store, a supermarket, a material shop for craft supplies, and doctors in Tsumkwe.

According to Mr. !Aebeb, the San are traditionally environmentalists, and their knowledge of conservation can be incorporated into the programs that he runs. He thinks that any successful program needs to have an understanding of local culture. Donor dependency

is a problem for the people of Tsumkwe and prevents people from getting the help that they need. Poverty causes Tsumkwe residents to sell crafts cheaply. N\$10 to 15 million has been spent by donors in Tsumkwe, but it has not truly aided development. He stated that the biggest problem in Tsumkwe is drug and alcohol abuse. He thinks that problems can be reduced if awareness is raised in the community. He suggested that the Tsumkwe Energy Project examine the possibility of using solar radios in Tsumkwe in order to increase local communication.

Soini Hapinga (Female)

Ms. Hapinga knows nothing about the Tsumkwe Energy Project. She can speak, read, and write Oshiwambo and English and can speak Caprivian. Her highest grade was Grade 10. She has no training or job, but she sells cooked meat with Loide Shakuno. She would like to see more shops in Tsumkwe.

Loide Shakuno (Female)

Ms. Shakuno knows that the Tsumkwe Energy Project will bring 24-hour electricity to Tsumkwe. She can speak, read, and write English, Oshiwambo, and Otjiherero and can speak some Ju|'hoan. Her highest grade was Grade 10. She went to NamCol from 2004 to 2005 and has received training in agriculture. She currently sells cooked meat informally. She would like to see shops, a supermarket, a bank, and an open market in Tsumkwe.

For her business, she used to get her stock in Grootfontein. She had no help starting and keeps track of what she buys and sells. She has no thoughts of expanding her business. She would like an open market where she can sell her food. She cannot reheat her food, which is a problem for her. She started her business a month ago.

Katrina Cwi (Female)

Ms. Cwi can speak, read, and write English, Afrikaans, and Jul'hoan. She currently works as a producer at NBC. Her highest grade was Grade 12. She has not had any other jobs. In 1999, she received training from an NGO women's project. She would like to see shops and a bank in Tsumkwe.

Sheehama Gabriel (Male)

Mr. Gabriel knows that the Tsumkwe Energy Project will use solar panels. He can speak, read, and write English and Oshiwambo and can speak Afrikaans and Jul'hoan. His highest grade was Grade 12, and he then received an honors degree in Extension Agriculture from the University of Pretoria. He then received a National Diploma in Education. He has received training in group problem solving and budgeting. He has been a senior agricultural extension technician for six years at a government farm. He taught Mathematics and Life Science for Grades 8 to 10 for two years. He is planning to become a consultant for a farming association. He would like to see a bank, a supermarket, a car repair shop, internet access, current newspapers, and 24-hour electricity in Tsumkwe.

Ndafediba Tlifaine (Female)

Ms. Tlifaine knows that the solar energy system will require the use of energy-efficient appliances in order to function properly. She can speak, read, and write English, Oshiwambo, and Shona. Her highest grade was Grade 12, and she studied Education at a college in Zimbabwe for three years, where she got her diploma. She received computer training and medical awareness training. She currently teaches Biology, Physical Science, and Life Science for Grades 8 to 11. She previously worked as a clerk. She would like to see

a bank, better transportation, stable water, electricity, a supermarket, and a clothing store in Tsumkwe.

Anna Amuthenu (Female)

Ms. Amuthenu knows nothing about the Tsumkwe Energy Project. She can speak, read, and write English and Oshiwambo and is currently in Grade 10. She has had no job or training, but has some skill with agriculture. She would like to see a supermarket in Tsumkwe.

Alina Moongo (Female)

Ms. Moongo knows that the Tsumkwe Energy Project will use solar panels. She can speak, read, and write English and Oshiwambo. Her highest grade was Grade 12. She then studied Agriculture at the University of Namibia for three years and Education at the University of Zimbabwe for one year. She participated in a three-month interpretation training course. She has taught Agriculture for Grade 7 for three years. She was previously a cashier at Shoprite. She knows how to garden. She would like to see a better road, stable electricity, a supermarket, and clean water in Tsumkwe.

Elina Katale (Female)

Ms. Katale knows nothing about the Tsumkwe Energy Project. She can speak, read, and write English and Oshiwambo and can speak a language from Zimbabwe. Her highest grade was Grade 12. She received a diploma in Education after studying in Zimbabwe for three years. She has taught Mathematics for Grades 8 to 10 for two years and 4 months. Previously, she worked at a service station for a year. She would like to see a bank, a supermarket, and other large shops in Tsumkwe.

April 18, 2009

Asia Kaeka (Male)

Mr. Kaeka knows that the Tsumkwe Energy Project will use solar panels. He can speak, read, and write English, Afrikaans, and Otjiherero and can speak Oshiwambo. His highest grade was Grade 12. He then went to the College of Education in Windhoek for four years and earned a degree in Technology and Education. He has received training for counseling and basic computer training. He now teaches History for Grades 8 and 9 and Development Studies for Grades 11 and 12. He has been a teacher for twelve years. Informally, he does counseling for his neighbors. He would like to see a butchery and a vehicle repair shop in Tsumkwe.

Maria Kawala (Female)

Ms. Kawala knows that the Tsumkwe Energy Project will provide electricity to Tsumkwe. She can speak, read, and write English, Afrikaans, and Otjiherero and can speak Oshiwambo and Kavango. Her highest grade was Grade 10 and she attended NamCol. She has never had a job, but has sold meat since January 2009. She would like to see an open market, better transportation, and a clothing shop in Tsumkwe. She said that, in order for people to survive in Tsumkwe, they need to start their own small businesses.

Sara Jacobs (Female)

Ms. Jacobs knows that the Tsumkwe Energy Project will produce electricity for Tsumkwe. She can speak, read, and write English, Afrikaans, Ju|'hoan, Damara, and Oshiwambo. Her highest grade was Grade 12, and she is planning to go to university to study Community Development and Gender Development. She has received some training for Community Development. She currently promotes childhood development and income

generating activity while working for the Ministry of Gender Equality and Child Welfare.

She has informally sold meat since 2008. She would like to see a butchery, a clothing store, and other shops in Tsumkwe.

Appendix G: Excel Spreadsheet

	Name	Gender	Highest Grade	Attended College	Languages Spoken	Currently Employed	Ever Employed	Skilled	Skill Area	Skill Area	Skill Area
1	Josef Gerhardus Jacobus Steyn	Male	10	No	3	Yes	Yes	Yes	Welding	Electric	Plumbing
2	Fokus Tjatindi	Male	12	Yes	3	No	Yes	Yes	Leather		
3	Seppie Swartbooi	Male	10	No	6	Yes	Yes	Yes	Cars	Appliances	Electric
4	Charlie Nqeisji	Male	10	No	3	No	Yes	Yes	Translating		
5	Dina Jackson	Female	9	No	5	No	No	No			
6	Chris Nganjona	Male	0	No	6	No	No	Yes	Cars	Painting	Welding
7	Dino Mbaisa	Male	12	No	4	Yes	Yes	Yes	Gardening		
8	Adelheid Shilima	Female	10	No	2	No	No	No			
9	No Name	Female	10	No	3	No	No	No			
10	Longman Samuel Uapingene	Male	8	No	3	No	No	Yes	Painting	Welding	
11	Alfons Uapingene	Male	0	No	2	No	No	Yes	Painting	Welding	
12	Elisa Mandjoro	Female	5	No	2	No	No	Yes	Crafts	Cooking	
13	Maureen Colboy	Female	10	No	4	No	No	No			
14	Joseph Colboy	Male	10	No	6	No	Yes	Yes	Appliances		
15	Renathe Gomes	Female	9	No	6	Yes	Yes	No			
16	Magrieda Hauala	Female	7	No	3	Yes	Yes	No			
17	Maria Willem	Female	4	No	4	Yes	Yes	Yes	Crafts		
18	Badseba Gammes	Female	10	No	5	Yes	Yes	No			
19	Magdalena Tsauses	Female	10	No	5	Yes	Yes	No			
20	Anna Musonga	Female	0	No	3	Yes	Yes	Yes	Crafts		
21	!Xlosce Nlane	Female	0	No	1	No	No	Yes	Crafts		
22	Chilxon Kgao	Female	0	No	3	No	No	Yes	Crafts		
23	Joanna Soroas	Female	10	No	5	No	No	No			
24	Katrina Boeto	Female	10	No	3	Yes	Yes	No			
25	Frida Ubu-Khais	Female	4	No	4	No	Yes	Yes	Clothing		
26	Lucia Soroas	Female	0	No	4	No	Yes	No			
27	Rudolf Namiseb	Male	0	No	8	Yes	Yes	Yes	Gardening	Crafts	
28	Olga Soroas	Female	10	No	6	No	No	No			
29	Jackie Weiko	Female	9	No	5	Yes	Yes	Yes	Cooking		
30	Raide Kandjambanga	Female	5	No	2	Yes	Yes	Yes	Sewing	Cooking	
31	Ishmael Gomeb	Male	11	Yes	5	Yes	Yes	Yes	Business	Sports	
32	Josephine Mbangula	Female	0	No	2	Yes	Yes	Yes	Needlework		
33	Owen Cukga	Male	10	No	3	Yes	Yes	No			
34	Gerrie Cwi	Male	9	No	3	Yes	Yes	No			
35	Constancia Kazenango	Female	6	No	1	No	No	No			
36	Theopoltine Tjombonde	Female	8	No	2	No	No	No			
37	Tjimbware Mata	Male	0	No	5	Yes	Yes	No			

	Name	Gender	Highest Grade	Attended College	Languages Spoken	Currently Employed	Ever Employed	Skilled	Skill Area	Skill Area	Skill Area
38	Tuhateni Nashipili	Female	10	No	2	Yes	Yes	Yes	Needlework		
39	Immanuel Hawala	Male	12	No	3	Yes	Yes	Yes	Hair Cutting		
40	Festus Jonas	Male	2	No	1	Yes	Yes	No			
41	Mushingi Haimbodi	Male	6	No	3	Yes	Yes	No			
42	Erastus Kambathi Kaveto	Male	11	No	14	No	Yes	Yes	Translating	Building	
43	Hilde Tuku	Female	10	No	6	No	No	No			
44	Cristof Disho Djimi	Male	10	No	4	No	No	Yes	Gardening		
45	Alexander Maghambayi Djimi	Male	2	No	2	No	Yes	Yes	Gardening		
46	Eba Kanime	Female	11	No	2	Yes	Yes	No			
47	Georgine Kamyone	Female	10	No	3	Yes	Yes	No			
48	Shamaine Kamyone	Female	10	No	3	No	No	No			
49	Josephine Kamyone	Female	0	No	1	No	Yes	Yes	Needlework		
50	Veronica Siku	Female	12	No	5	No	No	No			
51	Gabriel Hipandulwa	Male	12	Yes	5	Yes	Yes	Yes	Gardening		
52	Kambonde Laina Tunegameno	Female	12	No	3	Yes	Yes	No			
53	Veronica Sivsute	Female	12	Yes	3	No	No	Yes	Sewing		
54	Eliowe Mondjoro	Male	12	Yes	4	Yes	Yes	Yes	Carpentry		
55	Vilho Ihemba	Male	12	Yes	6	Yes	Yes	Yes	Accounting	Carpentry	
56	Mwala Lutaka	Male	12	Yes	3	Yes	Yes	No			
57	Janet Joseph	Female	6	No	5	Yes	Yes	Yes	Plumbing		
58	Betrina Gamses	Female	0	No	3	No	Yes	Yes	Needlework	Cooking	
59	Veronica Hoakhaos	Female	12	Yes	3	Yes	Yes	No			
60	Uaviara Muatjetjeja	Female	12	No	3	Yes	Yes	No			
61	Geoffrey Gomme	Male	12	No	7	Yes	Yes	No			
62	Susanna Swartz	Female	12	Yes	3	Yes	Yes	No			
63	Siegfredth IAebbb	Male	12	Yes	4	Yes	Yes	No			
64	Loide Shakuno	Female	10	Yes	4	No	No	Yes	Cooking		
65	Katrina Cwi	Female	12	Yes	3	No	No	No			
66	Sheehama Gabriel	Male	12	Yes	4	Yes	Yes	Yes	Gardening		
67	Asia Kaeka	Male	12	Yes	4	Yes	Yes	No			
68	Maria Kawala	Female	10	No	7	No	No	No			
69	Sara Jacobs	Female	12	No	5	Yes	Yes	No			
70	Ndafediba Tlifaine	Female	12	Yes	3	Yes	Yes	No			
71	Anna Amuthenu	Female	10	No	2	No	No	No			
72	Alina Moongo	Female	12	Yes	2	Yes	Yes	Yes	Gardening		
73	Elina Katale	Female	12	Yes	3	Yes	Yes	No			

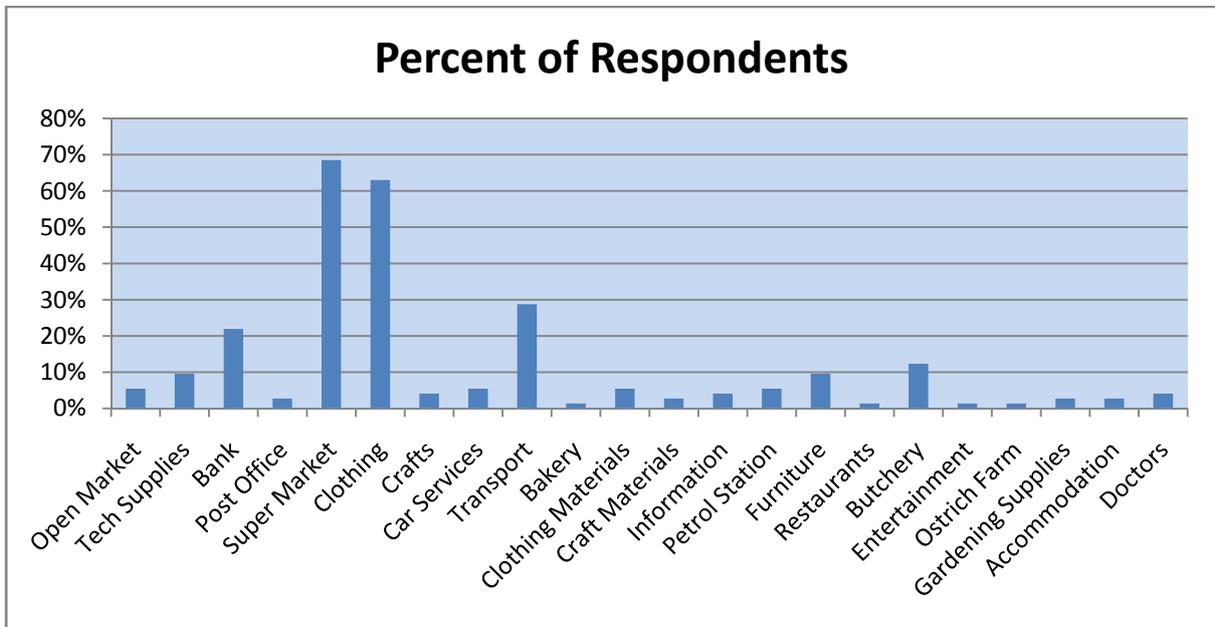
	Name	Businesses Wanted in Tsumkwe	Business Owner	Government Worker					
1	Josef Gerhardus Jacobus Steyn	Open Market	Tech Supplies	Transport				Yes	No
2	Fokus Tjatindi	Bank	Post Office					No	No
3	Seppie Swartbooi	Supermarket	Tech Supplies					No	No
4	Charlie Nqeisji	Supermarket	Clothing					No	No
5	Dina Jackson	Supermarket						Yes	No
6	Chris Nganjona	Clothing	Tech Supplies					No	No
7	Dino Mbaisa	Open Market	Tech Supplies					No	No
8	Adelheid Shilima	Clothing	Crafts					Yes	No
9	No Name	Car Services	Crafts					No	No
10	Longman Samuel Uapingene	Supermarket	Clothing					No	No
11	Alfons Uapingene	Tech Supplies	Supermarket	Training				No	No
12	Elisa Mandjoro	Clothing	Transport					No	No
13	Maureen Colboy	Clothing	Transport	Supermarket	Training			No	No
14	Joseph Colboy	Clothing	Transport	Supermarket	Training			No	No
15	Renathe Gomes	Bank	Supermarket	Bakery				No	Yes
16	Magrieda Hauala	Transport	Supermarket	Clothing				No	No
17	Maria Willem	Clothing	Supermarket					No	No
18	Badseba Gammes	Bank	Supermarket	Clothing				No	Yes
19	Magdalena Tsases	Clothing	Clothing Materials					No	No
20	Anna Musonga	Clothing Materials	Clothing	Supermarket	Bank			No	No
21	Ixlosce Nlane	Clothing	Clothing Materials					No	No
22	Chixon Kgao	Craft Materials						No	No
23	Joanna Soroas	Supermarket	Petrol Station	Bank	Clothing			No	No
24	Katrina Boeto	Information						No	No
25	Frida Ubu-Khais	Supermarket	Clothing	Clothing Materials	Butchery			No	No
26	Lucia Soroas	Supermarket	Transport					No	No
27	Rudolf Namiseb	Gardening Supplies	Clothing					Yes	No
28	Olga Soroas	Clothing	Furniture					No	No
29	Jackie Weiko	Bank	Transport	Supermarket	Transport	Restaurants	Clothing	No	Yes
30	Raide Kandjambanga	Clothing	Entertainment					No	Yes
31	Ishmael Gomeb	Clothing	Bank	Supermarket	Car Services	Butchery	Petrol Station	No	Yes
32	Josephine Mbangula	Clothing						No	Yes
33	Owen Cukga	Clothing	Supermarket	Crafts				No	No
34	Gerrie Cwi	Ostrich Farm	Transport					No	No
35	Constancia Kazenango	Clothing	Butchery	Supermarket				No	No
36	Theopoltine Tjombonde	Clothing	Butchery	Supermarket				No	No
37	Tjimbware Mata	Clothing	Butchery	Supermarket				No	No

	Name	Businesses Wanted in Tsumkwe	Business Owner	Government Worker					
38	Tuhateni Nashipili	Transport						Yes	No
39	Immanuel Hawala	Butchery	Transport					Yes	No
40	Festus Jonas	Transport						No	No
41	Mushingi Haimbodi	Transport						Yes	No
42	Erastus Kambathi Kaveto	Furniture	Clothing	Supermarket				No	No
43	Hilde Tuku	Supermarket	Clothing	Transport	Furniture			No	No
44	Cristof Disho Djimi	Supermarket	Clothing					Yes	No
45	Alexander Maghambayi Djimi	Supermarket	Clothing					Yes	No
46	Eba Kanime	Transport	Supermarket					Yes	No
47	Georgine Kamyone	Supermarket	Clothing					No	No
48	Shamaine Kamyone	Supermarket	Clothing					No	No
49	Josephine Kamyone	Supermarket	Clothing	Transport				No	No
50	Veronica Siku	Supermarket	Transport					Yes	No
51	Gabriel Hipandulwa	Supermarket	Petrol Station	Tech Supplies	Gardening Supplies			No	No
52	Kambonde Laina Tunegameno	Bank	Supermarket	Clothing	Transport			No	Yes
53	Veronica Sivsute	Supermarket	Clothing	Tech Supplies				No	No
54	Eliowe Mondjoro	Furniture	Supermarket	Clothing				No	Yes
55	Vilho Ihemba	Post Office	Bank	Transport	Petrol Station			No	Yes
56	Mwala Lutaka	Supermarket	Clothing					No	Yes
57	Janet Joseph	Accommodation	Clothing	Supermarket	Furniture	Road		No	Yes
58	Betrina Gamses	Accommodation	Clothing	Supermarket	Furniture	Road		No	No
59	Veronica Hoakhaos	Clothing	Supermarket	Doctors	Bank			No	Yes
60	Uaviara Muatjetjeja	Clothing	Supermarket	Bank				No	Yes
61	Geoffrey Gomme	Clothing	Supermarket	Furniture	Doctors			No	Yes
62	Susanna Swartz	Supermarket	Clothing	Doctors				No	Yes
63	Sieghredth IAebeb	Information	Craft Materials					No	Yes
64	Loide Shakuno	Bank	Clothing	Supermarket	Butchery	Open Market		Yes	No
65	Katrina Cwi	Bank	Supermarket					No	No
66	Sheehama Gabriel	Bank	Supermarket	Car Services	Information			No	Yes
67	Asia Kaeka	Butchery	Car Services					No	Yes
68	Maria Kawala	Open Market	Clothing	Supermarket				Yes	No
69	Sara Jacobs	Butchery	Clothing	Supermarket				No	Yes
70	Ndafediba Tlifaine	Bank	Transport	Supermarket	Clothing			No	Yes
71	Anna Amuthenu	Supermarket						No	No
72	Alina Moongo	Transport	Supermarket					No	Yes
73	Elina Katala	Bank	Supermarket					No	Yes

Appendix H: Data Analysis

Businesses wanted by all respondents

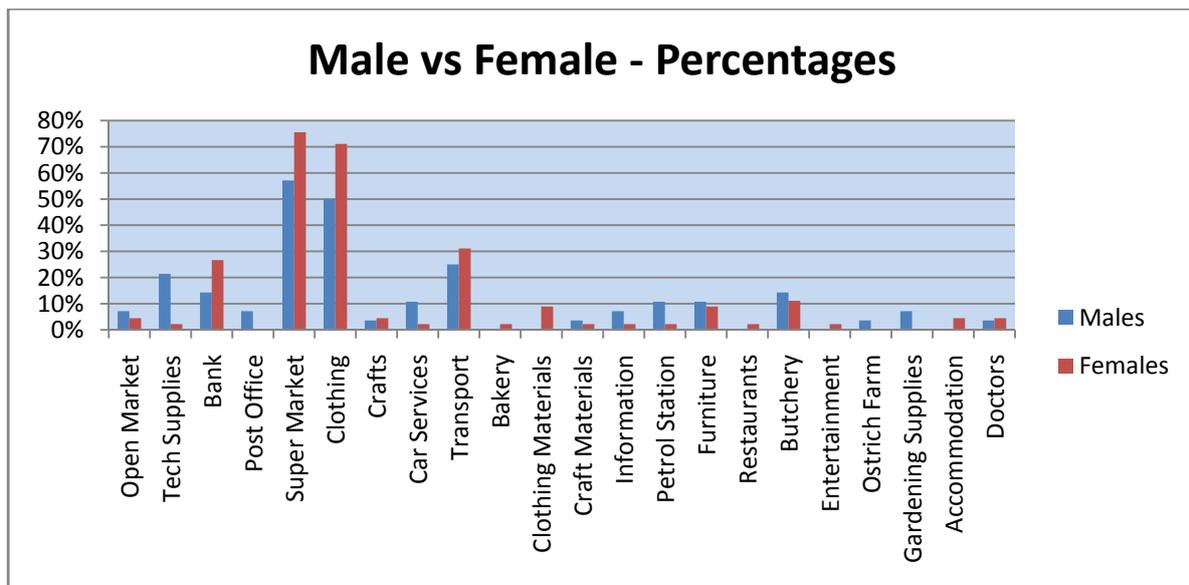
All	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals	Percentage of Total
Open Market	3	0	0	0	1	0	4	5%
Tech Supplies	1	4	2	0	0	0	7	10%
Bank	10	2	2	2	0	0	16	22%
Post Office	1	1	0	0	0	0	2	3%
Super Market	19	16	15	0	0	0	50	68%
Clothing	19	20	4	2	0	1	46	63%
Crafts	0	2	1	0	0	0	3	4%
Car Services	1	1	1	1	0	0	4	5%
Transport	6	9	4	2	0	0	21	29%
Bakery	0	0	1	0	0	0	1	1%
Clothing Materials	1	2	1	0	0	0	4	5%
Craft Materials	1	1	0	0	0	0	2	3%
Information	2	0	0	1	0	0	3	4%
Petrol Station	0	2	0	1	0	1	4	5%
Furniture	2	1	1	3	0	0	7	10%
Restaurants	0	0	0	0	1	0	1	1%
Butchery	3	3	0	2	1	0	9	12%
Entertainment	0	1	0	0	0	0	1	1%
Ostrich Farm	1	0	0	0	0	0	1	1%
Gardening Supplies	1	0	0	1	0	0	2	3%
Accommodation	2	0	0	0	0	0	2	3%
Doctors	0	0	2	1	0	0	3	4%



Businesses wanted – Male vs. Female

Males	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals	Percentage of Total
Open Market	2	0	0	0	0	0	2	7%
Tech Supplies	1	4	1	0	0	0	6	21%
Bank	2	2	0	0	0	0	4	14%
Post Office	1	1	0	0	0	0	2	7%
Super Market	7	5	4	0	0	0	16	57%
Clothing	6	7	1	0	0	0	14	50%
Crafts	0	0	1	0	0	0	1	4%
Car Services	0	1	1	1	0	0	3	11%
Transport	2	3	2	0	0	0	7	25%
Bakery	0	0	0	0	0	0	0	0%
Clothing Materials	0	0	0	0	0	0	0	0%
Craft Materials	0	1	0	0	0	0	1	4%
Information	1	0	0	1	0	0	2	7%
Petrol Station	0	1	0	1	0	1	3	11%
Furniture	2	0	1	0	0	0	3	11%
Restaurants	0	0	0	0	0	0	0	0%
Butchery	2	1	0	0	1	0	4	14%
Entertainment	0	0	0	0	0	0	0	0%
Ostrich Farm	1	0	0	0	0	0	1	4%
Gardening Supplies	1	0	0	1	0	0	2	7%
Accommodation	0	0	0	0	0	0	0	0%
Doctors	0	0	0	1	0	0	1	4%

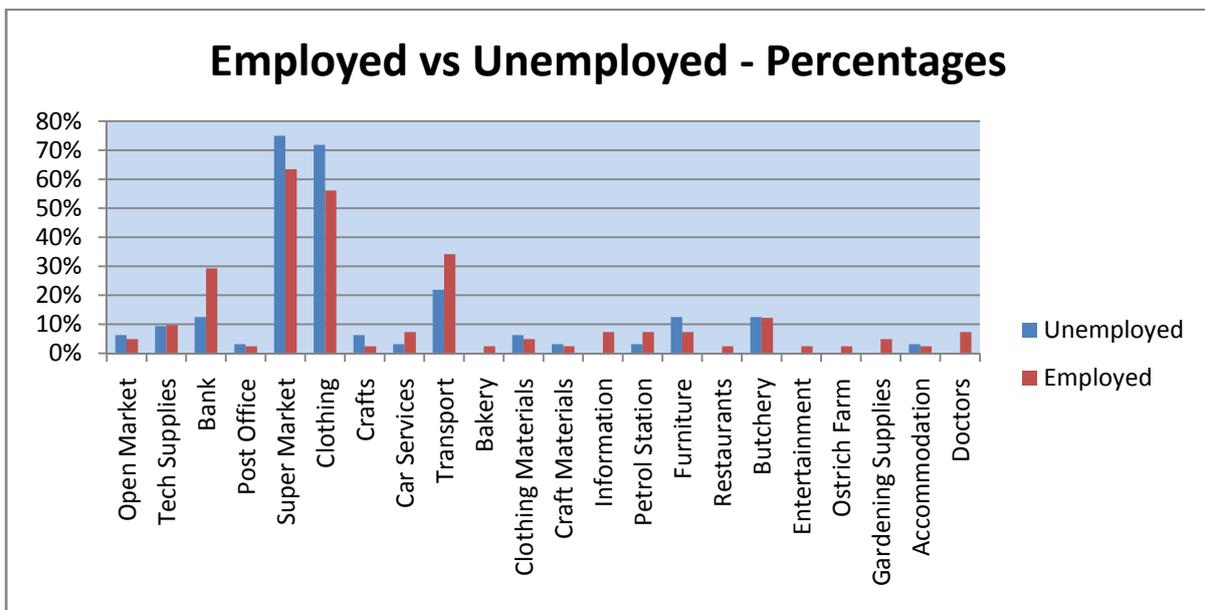
Females	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals	Percentage of Total
Open Market	1	0	0	0	1	0	2	4%
Tech Supplies	0	0	1	0	0	0	1	2%
Bank	8	0	2	2	0	0	12	27%
Post Office	0	0	0	0	0	0	0	0%
Super Market	12	11	11	0	0	0	34	76%
Clothing	13	13	3	2	0	1	32	71%
Crafts	0	2	0	0	0	0	2	4%
Car Services	1	0	0	0	0	0	1	2%
Transport	4	6	2	2	0	0	14	31%
Bakery	0	0	1	0	0	0	1	2%
Clothing Materials	1	2	1	0	0	0	4	9%
Craft Materials	1	0	0	0	0	0	1	2%
Information	1	0	0	0	0	0	1	2%
Petrol Station	0	1	0	0	0	0	1	2%
Furniture	0	1	0	3	0	0	4	9%
Restaurants	0	0	0	0	1	0	1	2%
Butchery	1	2	0	2	0	0	5	11%
Entertainment	0	1	0	0	0	0	1	2%
Ostrich Farm	0	0	0	0	0	0	0	0%
Gardening Supplies	0	0	0	0	0	0	0	0%
Accommodation	2	0	0	0	0	0	2	4%
Doctors	0	0	2	0	0	0	2	4%



Businesses wanted – Employed vs. Unemployed

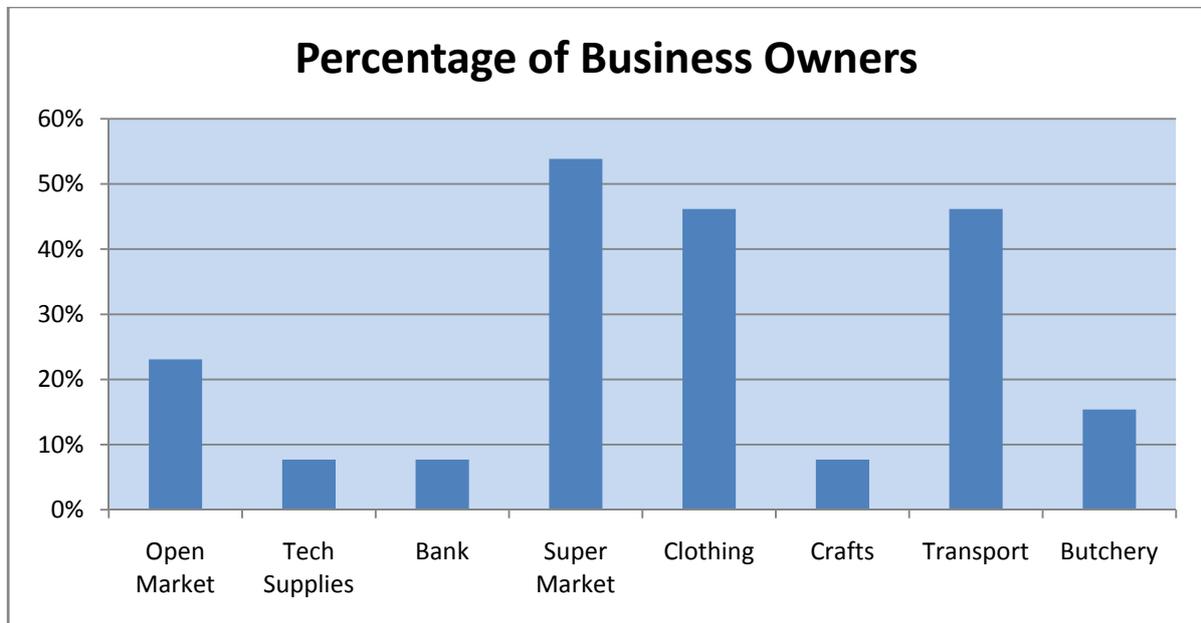
Employed	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals		Percentage of Total
Open Market	2	0	0	0	0	0	2	Open Market	5%
Tech Supplies	0	3	1	0	0	0	4	Tech Supplies	10%
Bank	7	2	1	2	0	0	12	Bank	29%
Post Office	1	0	0	0	0	0	1	Post Office	2%
Super Market	5	14	7	0	0	0	26	Super Market	63%
Clothing	10	7	4	1	0	1	23	Clothing	56%
Crafts	0	0	1	0	0	0	1	Crafts	2%
Car Services	0	1	1	1	0	0	3	Car Services	7%
Transport	6	4	2	2	0	0	14	Transport	34%
Bakery	0	0	1	0	0	0	1	Bakery	2%
Clothing Materials	1	1	0	0	0	0	2	Clothing Materials	5%
Craft Materials	0	1	0	0	0	0	1	Craft Materials	2%
Information	2	0	0	1	0	0	3	Information	7%
Petrol Station	0	1	0	1	0	1	3	Petrol Station	7%
Furniture	1	0	1	1	0	0	3	Furniture	7%
Restaurants	0	0	0	0	1	0	1	Restaurants	2%
Butchery	3	1	0	0	1	0	5	Butchery	12%
Entertainment	0	1	0	0	0	0	1	Entertainment	2%
Ostrich Farm	1	0	0	0	0	0	1	Ostrich Farm	2%
Gardening Supplies	1	0	0	1	0	0	2	Gardening Supplies	5%
Accommodation	1	0	0	0	0	0	1	Accommodation	2%
Doctors	0	0	2	1	0	0	3	Doctors	7%

Unemployed	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals		Percentage of Total
Open Market	1	0	0	0	1	0	2	Open Market	6%
Tech Supplies	1	1	1	0	0	0	3	Tech Supplies	9%
Bank	3	0	1	0	0	0	4	Bank	13%
Post Office	0	1	0	0	0	0	1	Post Office	3%
Super Market	14	2	8	0	0	0	24	Super Market	75%
Clothing	9	13	0	1	0	0	23	Clothing	72%
Crafts	0	2	0	0	0	0	2	Crafts	6%
Car Services	1	0	0	0	0	0	1	Car Services	3%
Transport	0	5	2	0	0	0	7	Transport	22%
Bakery	0	0	0	0	0	0	0	Bakery	0%
Clothing Materials	0	1	1	0	0	0	2	Clothing Materials	6%
Craft Materials	1	0	0	0	0	0	1	Craft Materials	3%
Information	0	0	0	0	0	0	0	Information	0%
Petrol Station	0	1	0	0	0	0	1	Petrol Station	3%
Furniture	1	1	0	2	0	0	4	Furniture	13%
Restaurants	0	0	0	0	0	0	0	Restaurants	0%
Butchery	0	2	0	2	0	0	4	Butchery	13%
Entertainment	0	0	0	0	0	0	0	Entertainment	0%
Ostrich Farm	0	0	0	0	0	0	0	Ostrich Farm	0%
Gardening Supplies	0	0	0	0	0	0	0	Gardening Supplies	0%
Accommodation	1	0	0	0	0	0	1	Accommodation	3%
Doctors	0	0	0	0	0	0	0	Doctors	0%



And Businesses wanted – Owners of Businesses

Owners of Businesses	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals		Percentage of Total
Open Market	2	0	0	0	1	0	3	Open Market	23%
Tech Supplies	0	1	0	0	0	0	1	Tech Supplies	8%
Bank	1	0	0	0	0	0	1	Bank	8%
Post Office	0	0	0	0	0	0	0	Post Office	0%
Super Market	4	1	2	0	0	0	7	Super Market	54%
Clothing	1	5	0	0	0	0	6	Clothing	46%
Crafts	0	1	0	0	0	0	1	Crafts	8%
Car Services	0	0	0	0	0	0	0	Car Services	0%
Transport	3	2	1	0	0	0	6	Transport	46%
Bakery	0	0	0	0	0	0	0	Bakery	0%
Clothing Materials	0	0	0	0	0	0	0	Clothing Materials	0%
Craft Materials	0	0	0	0	0	0	0	Craft Materials	0%
Information	0	0	0	0	0	0	0	Information	0%
Petrol Station	0	0	0	0	0	0	0	Petrol Station	0%
Furniture	0	0	0	0	0	0	0	Furniture	0%
Restaurants	0	0	0	0	0	0	0	Restaurants	0%
Butchery	1	0	0	1	0	0	2	Butchery	15%
Entertainment	0	0	0	0	0	0	0	Entertainment	0%
Ostrich Farm	0	0	0	0	0	0	0	Ostrich Farm	0%
Gardening Supplies	1	0	0	0	0	0	1	Gardening Supplies	8%
Accommodation	0	0	0	0	0	0	0	Accommodation	0%
Doctors	0	0	0	0	0	0	0	Doctors	0%



Businesses wanted – Government Workers

Government Workers	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Totals	Percentage of Total
Open Market	0	0	0	0	0	0	0	0%
Tech Supplies	0	0	0	0	0	0	0	0%
Bank	7	2	1	1	0	0	11	50%
Post Office	1	0	0	0	0	0	1	5%
Super Market	2	10	5	0	0	0	17	77%
Clothing	6	4	3	1	0	1	15	68%
Crafts	0	0	0	0	0	0	0	0%
Car Services	0	1	1	1	0	0	3	14%
Transport	1	2	1	2	0	0	6	27%
Bakery	0	0	1	0	0	0	1	5%
Clothing Materials	0	0	0	0	0	0	0	0%
Craft Materials	0	1	0	0	0	0	1	5%
Information	1	0	0	1	0	0	2	9%
Petrol Station	0	0	0	1	0	1	2	9%
Furniture	1	0	1	1	0	0	3	14%
Restaurants	0	0	0	0	1	0	1	5%
Butchery	2	0	0	0	1	0	3	14%
Entertainment	0	1	0	0	0	0	1	5%
Ostrich Farm	0	0	0	0	0	0	0	0%
Gardening Supplies	0	0	0	0	0	0	0	0%
Accommodation	1	0	0	0	0	0	1	5%
Doctors	0	0	2	1	0	0	3	14%

