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The purpose of this thesis is to provide information on Namibia for the CONNECT project run by the Federation of Universities of Applied Sciences. The main objective of the CONNECT project is to help small- and medium- sized Finnish enterprises (SMEs) operating in the field of renewable energy to enter markets in developing countries. This thesis provides an overview of the history, politics, economy, society, technology, culture and natural and legal environments in Namibia. There is a focus on the energy market and on renewable energy. In addition the challenges and benefits for market entry to Namibia are assessed, from the Finnish renewable energy SMEs point of view.

Namibia is a vast and thinly-populated country with a sizeable desert region and a population of only 2.1 million people. It is a developing country, but relatively developed compared to other African countries: it has a high gross domestic product, a modern constitution, a measure of environmental awareness among the population, and a modern infrastructure. The main problems in Namibia are the very unequal distribution of income, high unemployment, prevalence of AIDS, and excessive bureaucracy. Namibia has a long history of co-operation with Finland and relations are friendly. The political situation in Namibia is stable at the moment, but there is concern over the firm control exercised by the ruling party, the South-West African People's Organization'.

Namibia is facing an energy crisis as it imports most of its energy, and the supply from South Africa has been weak in recent years due to problems within its own energy market. There is great potential in Namibia for the utilization of renewable energy in solar, wind and hydro-power. The country has introduced many renewable energy programs that aim to ease the introduction of renewable energy to the market. Financing is a major obstacle in the introduction of renewable energy.

There are many financing schemes in place in Finland that Finnish renewable energy SMEs could qualify for in order to assist them in entering the Namibian market. There are also incentive schemes in place in Namibia for foreign companies. Namibia is welcoming towards foreign investment as its own resources, especially in energy production, are limited. Entering the Namibian market would not be without its problems. However, Namibia is a rare opportunity in that the general population is not only open to the idea of renewable energy, but also in active need of it. In a setting such as this, the benefits of introducing renewable energy to the market far outweigh the costs.

Keywords: Namibia, renewable energy, business operating environment

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Tämän opinnäytetyön tarkoitus on tuottaa tietoa Namibiasta CONNECT projektille. CONNECT projektin päätavoite on auttaa pieniä ja keskisuuria uusiutuvan energian saralla työskenteleviä suomalaisia yrityksiä pääsemään markkinoille kehittyvissä maissa. Tämä opinnäytetyö sisältää Namibiaan liittyvää perustietoa, kuten historiaa, politiikkaa, taloutta, sosiaalisia tekijöitä, teknologiaa, ympäristötekijöitä, lainsäädäntöä ja kulttuuritekijöitä. Tässä opinnäytetyössä keskitytään myös Namibian energiemarkkinoihin ja uusiutuvaan energiaan Namibiassa. Lisäksi arvioidaan suomalaisten uusiutuvan energian alalla toimivien pk-yritysten mahdollisia haasteita ja hyötyjä Namibian markkinoille menemisessä.

Namibia on harvaanasuttu maa, asukkaita on vain noin 2,1 miljoona. Namibia on kehitysmaa, mutta muihin Afrikan maihin verrattuna Namibialla asiat ovat melko hyvin. Namibiassa on korkea bruttokansantuote, moderni perustuslaki, ympäristöasiat tiedostetaan, ja maan infrastruktuuri on toimiva. Suurimmat ongelmat maassa ovat epätasainen tulojen jakautuminen, työttömyys, AIDS ja byrokratia. Namibialla on pitkä historia Suomen kanssa ja maiden väliset suhteet ovat hyvät. Namibian poliittinen tilanne on vakaa, mutta pieni huolenaihe on pääpuolueen SWAPON kova ote vallasta.

Namibiassa iso ongelma on tuleva energiapula, koska Namibia tuo suurimman osan energiastaan Etelä-Afrikasta: tuonti sieltä on ollut vähäistä viime vuosina maan omien energiaongelmien takia. Namibiassa on paljon mahdollisuuksia uusiutuvan energian hyödyntämiselle, esimerkiksi aurinko, vesi ja tuulivoiman saralla. Maassa on monia uusiutuvan energian tutustuttamiseen liittyviä ohjelmia käynnissä. Suurin ongelma uusiutuvan energian hyödyntämiseen Namibiassa on rahoituksen puute.

Suomessa on monia lainajärjestelmiä, joita suomalaiset uusiutuvan energian pk-yritykset voisivat hyödyntää toimintaansa varten Namibiassa. Namibia tarjoaa myös itse kannustimia ulkomaisille yrityksille, jotka toimivat maassa. Namibia on avoin ulkomaiselle liiketoiminnalle, koska sen omat resurssit - erityisesti energian tuottamisessa - ovat rajoitetut. Namibian markkinoille meneminen voi olla hankalaa paikallisen byrokratian takia. Namibiassa löytyy kiinnostusta uusiutuvaa energiaa kohtaan ja sille on myös tarvetta. Hyödyt jotka saataisiin uusiutuvan energian lisäämisestä maassa olisivat paljon suuremmat kuin mahdolliset haitat.

Asiasanat: Namibia, Uusiutuva energia, liiketoimintaympäristö

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1 Introduction

This thesis stems both from my own interest in international business as well as on the demand for related information for the CONNECT project. Namibia has been suggested by the CONNECT project as a subject of analysis. This thesis will first provide a general analysis on the business operating environment in Namibia, after which it will provide further information on the energy markets in Namibia with a focus on the renewable energy industry.

1.1 Background

The CONNECT project is a new project by the FUAS (Federation of Universities of Applied Sciences) alliance. The project is being funded by Tekes (Finnish Funding Agency for Technology and Innovation). FUAS includes Laurea, Häme and Lahti Universities of Applied Sciences. The FUAS alliance aims to aid students, business life and the public sector. The main goal of the CONNECT project is to help small and medium-sized Finnish enterprises to utilize their renewable energy solutions in developing countries. (Aurela 2012)

1.2 The purpose of the thesis

The CONNECT project starts out by identifying the market potential for Finnish small and medium enterprises (SMEs), through analysis of different markets and companies. After the information has been analyzed, possible problems for market entry can be defined and addressed by determining the possible intermediaries for the businesses. (Aurela 2012)

My part for this project will be to provide information on Namibia in a compact, clear and structured package by highlighting possible problem areas and possibilities in the market. On a personal level, I also hope to learn much more about Namibia as a country through this process. It is both interesting and beneficial to learn how a country so different from Finland operates. I also hope to gain more knowledge about the renewable energy market - not only in Finland - but also in a global perspective.

1.3 Research questions and methods

The CONNECT project works toward solving many varied problems: finding partners and maintaining those relationships; defining the new competences that need to be learned in

order to cope in the target market; the differences between business and company culture, the challenges in creating a standardized approach to entering the many different kinds of renewable energy markets found in developing countries.

The main question I hope to address in my thesis is how to find the best ways for Finnish SME's to handle the cultural challenges and market differences when dealing with Namibia within the field of renewable energy. I plan on putting particular focus on market entry challenges by looking into whether or not Namibian companies and organizations have interest in renewable energy.

My research is based upon existing empirical and theoretical data such as documents, statistics, reports, articles, various digital materials, and literature. As background information before beginning the thesis I have read the *Bradt Travel guide on Namibia*, Pekka Peltola's *Afrikassa*, and Päivi Lahti's thesis on Energy Production in Namibia.

1.4 Structure of the thesis

First I will provide information on the business operating environment in Namibia which will include political, economic, social, technological, environmental, cultural and legal factors. After this I will write about the energy market in Namibia in general, later focusing on the renewable energy market. The main focus of the thesis will be on the business operating environment in Namibia. Finally, as a conclusion, I will provide an analysis on challenges and benefits for Finnish renewable energy SMEs wishing to enter Namibia's market.

2 The business operating environment in Namibia

The Republic of Namibia - like so many of Africa's countries - is struggling with development due to poverty, illness and a difficult history. Namibia is very much a country of contrasts; the country is known for its stunning wilderness and wildlife, and yet many of its people suffer from AIDS and unemployment. Because of a high gross domestic product, Namibia may look good on paper, but that is far from the truth. Namibia has the most unequal distribution of income in the world. Potential, however, is something Namibia does not lack. The country is still relatively new; Namibia achieved its independence in 1990. Namibia as a country is just beginning to find its own way in the world.



Figure 1: Map of Namibia
(Lonely Planet, 2012)

2.1 History

Cave paintings found in Namibia suggest that the country has been habited since 26000 A.D., but actual written records of the history of the country only exist starting with the first settlers. Much of the other African regions were already settled, while Namibia remained untouched until Dutch settlers decided to take over Walvis Bay in 1793. By the second half of the 18th century the Dutch settlers began to expand to the interior of Namibia. The settlers did not get along well with the indigenous people and there were many battles. The invasion of the Dutch caused territorial wars within the different language speaking groups in Namibia, because many tribes had to relocate after the Dutch took over their areas. Missionaries began arriving in Namibia in the early 19th century. This meant the opening of more trade routes, but it also marked a spread of western weapons among the indigenous people, initially given to be used as a means of protection. The weapons sadly often ended up being used in wars for power within the many indigenous groups. (McInture 2011, 3-12; Peltola 2011, 36-42)

By mid-19th century, many hunters and traders were operating in Namibia. In the late 19th century, the British and Germans argued over the distribution of areas in the country. The Germans achieved a more permanent position in Namibia in 1884. As the German annexation began, Germany imported soldiers to Namibia. After the colonists began buying, or just simply taking, much of Namibia's land, the many skirmishes between the indigenous people and the colonists escalated into a full blown war known as the war of Namibian Resistance. The war lasted for three years, from 1904 to 1907. The war ended in favor of the colonists.

After the war, more and more German settlers began moving to Namibia, encouraged by the discovery of diamonds. Towns and railroads were built, but the position of the Namibian people got weaker; the most productive lands were given to Germans, and Namibians were used as a source of labor. During the First World War, the German troops surrendered to the South African forces backed by Britain. Unfortunately, this did not improve the situation for Namibians as the new colonists from South Africa continued the exploitation. The indigenous people were assigned areas which were not suitable for farming. Many of the natives were used as cheap labor in mines. (McInture 2011, 3-12; Peltola 2011, 36-42)

After the Second World War, South Africa announced its desire to annex Namibia. The United Nations opposed the effort. In the 1960's, the United Nations made several efforts toward establishing Namibia's independence. Armed conflicts began occurring in the late 1960's. The clashes were led by the South-West African People's Organization - SWAPO. In 1968 the United Nations finally declared South Africa's occupation of Namibia illegal. Liberating Namibia proved to be difficult as several sanctions needed to be applied and many western powers - including even the United Nations Security Council - opposed it, because they had much to lose due to the multinational companies operating in Namibia. SWAPO's forces were backed up by groups of guerrilla soldiers from Angola, which had just gained independence in 1975. (McInture 2011, 3-12; Peltola 2011, 36-42)

After the withdrawal of Cuban troops from Angola, South Africa agreed to end the occupation of Namibia. On 21st of March 1990 Namibia was officially independent. SWAPO won the first election in Namibia and the constitution was formed as a co-operation between its seven different political parties. Sam Nujoma, who had lead SWAPO in the war, became the country's first president. Although Namibia's constitution limits its presidents to a maximum of two terms in office, Sam Nujoma went on to serve three terms. In 2004, Nujoma's personally preferred successor - of SWAPO origin - Hifikepunye Pohamba became president. He was re-elected in 2009 and remains in power in 2012. (McInture 2011, 3-12; Peltola 2011, 36-42)

2.2 Political factors

The Republic of Namibia is a multiparty and multiracial democracy. The government is divided into three parts: The Executive, The Legislative and The Judiciary. Namibia's President serves as head of state and government and is elected every five years. General elections for the National Assembly are held every five years, and regional elections for the National Council are held every 6 years. Namibia's constitution was praised as one of the world's most democratic constitutions, because it was the first constitution in the world to include environmental matters. The constitution has a bill of rights that provides freedom of

speech, press, assembly, association and religion. The constitution provides the right to private ownership of property, but many of the main fields of Namibia's business are still being run by state owned enterprises. These include fields such as tourism, energy, telecommunications, water, transport, postal services, fishing and mining. (U.S. Department of State 2011; The Parliament of Namibia 2008; McIntyre 2011, p. 12)

The Executive branch of the government has the responsibility to make sure the laws passed by the National Assembly and National Council - the legislative part of government - are carried out. These executive powers are mainly the responsibility of the president and the cabinet. The government in Namibia is headed by the Prime Minister, currently Nahas Angula. The National Assembly has 72 voting members and 6 non-voting members who are chosen by the President. The National Council has 26 members whom originate from the 13 regions of Namibia. The National Council presents regional matters to the National Assembly and also assists in carrying out bills. The Judiciary part of government includes the Supreme Court, the Higher Court, and the Lower Courts. (The Parliament of Namibia, 2008)

2.2.1 Regional systems

The 13 regions of Namibia - Caprivi, Erongo, Hardap, Karas, Kavango, Khomas, Kunene, Omaheke, Ohangwena, Omusati, Oshana, Oshikoto and Otjozondjupa - are divided into 107 constituencies. Each region has a regional council which is comprised of members of each constituency. The constituencies vote for one councilor to join the regional council. The responsibility of the regional councils lie mainly within fiscal matters: they handle tax collection and levies. The regions have many local governments that are elected by the community to take care of community matters. All cities and urban centers have their own municipal and town bodies that govern over the areas. Both the local and regional bodies have the right to legislate their affairs within the framework of the constitution. (Office of the Prime Minister, 2012)



Figure 2: The different regions of Namibia, (Wikipedia 2012)

The reason for the high level of power held by the regional and local bodies is due to a longstanding tradition of community in African culture. The way in which punishment for crime is implemented also differs from that of western tradition. Prisons are not feasible in poor areas. When a crime is committed, the local council - which is usually comprised of tribal elders - decides what compensation is appropriate for the crime committed. The council then provides this compensation to the victim. Usually the payment is made in livestock, not money. The family of the perpetrator has to pay the council back, and it is often made sure that the offender makes amends with work as well. (Peltola 2011, pp. 258-259)

2.2.2 Political powers

Politically Namibia is considered to be a very stable country. Namibia's ruling political party has been South-West Africa People's Organization since the independence. Even though opposition parties are allowed, they are generally not considered to have any real chance of gaining power. Political parties are defined largely by ethnic groups. SWAPO has a two-thirds majority with 54 seats in the parliament. Other parties with seats in the National Assembly are Democratic Turnhalle Alliance, Congress of Democrats, Monitor Action Group, National Unity Democratic Organization, Republican Party and United Democratic Front. (U.S. Department of State 2011)

SWAPO has repeatedly promised to improve the unequal distribution of income, but the situation has remained the same throughout SWAPO's rule. The party has faced criticism for inequality; SWAPO has been criticized for distributing jobs and resources from a political basis. Any criticism toward the party is often quickly negated by accusations that the critics are being unpatriotic and are attempting to destabilize the unity of the Namibian people. This kind of approach has so far deemed itself quite effective, as the country's hard earned independence is fresh in the people's memory. (Teppo 2011, pp.145-146)

Corruption is a big problem in Namibia, but the situation there is better compared other African countries. According to the 2011 corruption study by Transparency International, Namibia is sharing the 57th position with Czech Republic and Saudi Arabia with a score of 4.4. A score of 0 means highly corrupt and a score of 10 is very clean (Transparency International, 2011). The corruption in Namibia is not just local; foreign multinational companies bribe local decision-makers on a regular basis. This usually happens when the company needs licenses to search for oil, minerals or gas. The company chooses someone inside the government and gives that person a manager position within the company - which usually involves a paycheck

without actual work. The company then gets the required permits and competition is stifled. (Peltola 2011, p.167)

Namibia can be quite a bureaucratic country - when it suits the needs of the government. Bureaucracy is lessened or increased depending on the situation; if it is favorable to the government, processes tend to be speed. If not, the process can be handled very slowly. The government has a lot of authority, which is emphasized by the fact that Namibia does not have a very strong civil society. Still, at the moment the government and its bureaucratic structures are considered to be working relatively fairly and efficiently. Many fear, however, that if SWAPO continues to strengthen its rule, the situation might change. (Friedman 2011, p.51)

There are many Namibian non-governmental organizations (NGOs). They play a large role in Namibia in relation to health issues such as AIDS prevention, education and care. Another field where there are very active is environmental sustainability. The Namibia NGO forum (NANGOF) is a forum for Namibian NGOs. It aims to create a network that enables NGOs to operate better to promote democracy, human rights and to eradicate poverty. Around 50% of people working in Namibia are organized, which is the highest percentage in any African country. Even though there are many NGOs, they lack organization, presence, and capital. The civil society in Namibia is considered to lack unity. The government aims to strengthen NGOs and community initiatives with cooperation and guidance provided by the government. (National Planning Commission 2005; Keulder & Nishoono 2009)

2.2.3 Taxation

Namibia's taxation is source based, which means that Namibians and foreign residents are only taxed based on the income they make in Namibia. Internal and external companies are also taxed based on the income they make in Namibia. The tax year in Namibia is the same as the financial year of the companies. (Deloitte 2011)

Income tax for individuals - Value: Namibian dollar	
N\$ 0 - N\$ 40 000	Not taxable
N\$ 40 0001 - N\$ 80 000	N\$ 0 + 27%
N\$ 80 0001 - N\$ 200 000	N\$ 10 800 + 32%
N\$ 200 001 - N\$ 750 000	N\$ 49 200 + 34%
Over N\$ 750 000	N\$ 236 200 + 37%

Table 1: Income tax for individuals, (Deloitte 2011)

Basic corporate income tax is 34%. Personal income tax is based on total taxable income, and people are taxed at progressive marginal rates over a series of income brackets. Value added tax is applied to the supply of goods and services and the imported goods and services to the country. Value added tax is 15%, with some exceptions. The export of goods and services, international transport, sale of a going concern, sale of residential land and buildings and erection of them, supply of municipal services to residential accounts, petrol, diesel, paraffin, certain food supplies, postage stamps, telecommunication services to residential accounts, supplies by charitable organizations and similar institutions, supply of livestock, and the supply of goods to be used as aid by handicapped people are VAT exempt. (PKF 2011; Deloitte 2011)

Namibia's municipal taxes are based on the value of fixed property. Namibia has an incentive program for manufacturers. The operations of manufacturers are required to be beneficial to Namibia by creating more work, increasing net value, replacing imports, or increasing net exports. The incentives include an 18% tax, buildings normal annual allowance 4% increased to 8%, and a 25% deduction of transport and training costs, export marketing expenses and remuneration of employees. These are only valid for a maximum of ten years. Exporters of manufactured goods are eligible for an 80% reduction in taxable income. Currently there are no environmental taxes in Namibia, but in 2010 the Minister of Finance proposed the introduction of a tax that would be imposed on environmentally damaging substances. (Deloitte 2011; PKF 2011; Tax Rates 2011)

2.2.4 Environmental policies

Namibia has strong environmental policies which are included in the country's constitution. The constitution states that it is essential to maintain the ecosystems, ecological processes and biological diversity of Namibia in a sustainable way for the people of Namibia. (German Development Cooperation 2011)

Environmental Policies in Namibia	Tasks	Goals
The Environmental Assessment Policy of Namibia	Environmental assessments	To better manage environmental sustainability
The National Policy on Enabling the Safe Use of Biotechnology	Advancement and monitoring of biotechnology	Biotechnology development in a sustainable manner
The Land-Use Planning Policy Document	Defines land forms and monitors land owners actions	To get land owners to act in a sustainable manner
The National Land Policy	Activate community involvement and provide financial and tax incentives	Protection and rehabilitation of natural environments
The Regional Planning and Development Policy	Education on sustainable agriculture methods	To achieve a sustainable agriculture system
The Water and Sanitation Policy	Community education and monitoring	A sustainable and clean water supply for all
The National Water Policy	Provides education and information on water management	Protect Namibia's ecosystem from dryness
The Development Forestry Policy	Provides guidelines and information on sustainable forestry	Sustainable forestry management
The Tourism White Paper	Provides information on ecotourism and educates entrepreneurs	To develop successful ecotourism ventures

Table 2: Environmental Policies in Namibia
(Ruppel & Ruppel-Schlichthng 2011, pp.97-104)

Namibia has further plans to better its environmental situation. The National Biodiversity Strategy and Action Plan aims to preserve and better the biodiversity in Namibia by encouraging the use of incentives in order to make the sustainable management of natural resources profitable. In 2009, an action plan for Climate Change and Strategy was proposed. It covers the risks of climate change for Namibia, as well as globally, and proposes strategies of mitigation and adaptation as responses to climate change. The Aquaculture Strategic Plan focuses on creating successful aquaculture ventures, with an emphasis on good water quality. The Strategic Action Plan for the Implementation of Renewable Energy Policies aims to increase energy efficiency by providing rural and economically challenged areas with more sustainable solutions. In the future the action plan will expand its impact assessment to emissions from all sources from a national, sub-regional and global perspective. The Forestry Strategic Plan aims to improve and increase forest management in Namibia. (Ruppel & Ruppel-Schlichthng 2011, pp.104-106)

2.2.5 International relations

Namibia has especially strong ties with the countries that helped with its independence, such as Cuba and Libya. Relations with Angola were strained due to the volume of refugees coming in at the beginning of the 21st century. With neighbor Botswana, Namibia has friendly relations and the countries are cooperating on economic development. Canada is popular with Namibian refugees. China has strong economic ties with Namibia as it has granted the country many loans in exchange for Chinese companies operating in the country. Namibia and India are active trade partners. Namibia also has strong relations with Russia, which has interest in investing in oil, hydro-electric power, and tourism. Namibia's economy is still closely related to South-Africa's; there are institutional relationships and privately owned mining concessions. The South-African rand is still considered a legal currency in Namibia even though the Namibian dollar is not in South Africa. Sweden supported Namibia in its independence movement and continued to provide development aid after the independence. The United States has supported Namibia through trade ties and many assistance programs. Namibia is a member of 46 international organizations, including the United Nations. (Wikipedia 2012)

Finland and Namibia have strong and good relations. Finnish missionaries first came to Namibia in the late 19th century. Finland was one of the main supporters of Namibia's independence. Finland has also provided support in Namibia for the development of education, working conditions, environmental protection, mining, health care and many other sectors. Finland first supported Namibia with an education program where many Namibian students came to Finland and graduated from universities. Later Finland aided Namibia with development aid. In 2002 Finland notified Namibia that the grant based development aid would end. There is not much trade between Namibia and Finland currently, but both parties are trying to strengthen economic and commercial ties. The Finnish Embassy in Windhoek strives towards a strengthened Namibian cultural identity by arranging collaborations with local communities. (Embassy of Finland - Windhoek 2012)

Currently Finland strives to support Namibia with cooperation in trade, institutions, commerce and tourism. Some cooperation projects already in place are the CIMO North-South-Exchange program for students and lectures of Universities and Universities of Applied Sciences; North-South Local Government Cooperation Program; Municipal cooperation, for example city of Vantaa and City of Windhoek; and Sister Organization Cooperation, for example State Forests of Finland and Namibia's Ministry of Environment and Tourism's Exchange Program. (Embassy of Finland - Windhoek 2012)

On the economic front there are many financial support systems for companies desiring to operate in Namibia. Concessional Credits is a new Finnish loan system that will soon be finalized. Projects are eligible for a loan if they benefit economic, social and environmental development. Concessional credits are not granted to revenue projects. The loan is 100% and the interest rate 0%. Payback is usually done within 15 years. The Ministry of Foreign Affairs in Finland provides support in the preparation stages for companies. It is crucial that the projects will offer Finnish knowledge and know-how in matters that would benefit Namibia particularly - such as in the field of renewable energy. Economic, industrial and technology-appropriations (EIT) are funding instruments from the Ministry of Foreign Affairs in Finland. Finnish companies that are not funded by public sources are eligible. Especially small and medium enterprises that have unique Finnish know-how are given the EIT-appropriations. EIT-appropriations are given for feasibility studies, training, acquiring expertise services and planning costs. The allocations cannot exceed 50% of the costs of the projects. Also Finnfund and the Nordic Investment Bank provide financing and loans. (Embassy of Finland - Windhoek 2012)

The Embassy of Finland in Windhoek and the Namibia Chamber of Commerce and Industry are arranging a Trade & Business Workshop on 14 & 15 May 2012. The goal of the workshop is to focus on business to business opportunities between Namibia and Finland and to promote Namibian business opportunities. Finnish companies share their knowledge with Namibian companies, and as there is real interest in Finnish companies in Namibia, the workshop aims to be a platform for networking between Finnish companies and funding agencies and Namibian companies. (NBIC 2012)

2.3 Economic factors

Namibia's economy is based on capital-intensive industry and farming. The Namibian government has actively pursued free-market economic principles. The government has aimed at gaining a large volume of foreign investment and donor assistance. Most of Namibia's imports originate from South-Africa. The Bank of Namibia tends to follow the actions taken by the Central South African Bank. (Finpro, 2012)

Main figures of Namibia's economic situation	
GDP	12.2 billion US dollars (2010)
GDP (PPP)	14.99 billion US dollars (2010)
GDP growth rate	4.8 % (2010)
Per capita GNI	4500 US dollars (2010)
Inflation	4.8 % (2010)
Population below poverty line	55.8% (2010)
GINI - index	70.7 (2003)
Unemployment	51% (2010)
Account Balance	108.7 million US dollars (2011 est.)
Exports	4.568 billion US dollars (2011 est.)
Imports	5.345 billion US dollars (2011 est.)

Table 3: Main Figures of Namibia's economic situation
(CIA 2012)

Namibia's economy is an exception among developing countries; it is classified as an upper middle income country. Namibia's gross domestic product was 12.2 billion dollars. The purchasing-power parity adjusted GDP was 14.99 billion dollars. The GDP growth rate was 4.8%, which was a positive development after the 2009 recession. Overall the GDP has been growing steadily. Namibia's imports accounted for 38% of the GDP in 2010 and exports for 47%. Gross National Income per capita was 4500\$. Inflation was at 4.8%. Namibia's 2011 account balance is estimated at 108.7\$ million. It had lowered slightly from the previous year (125.2\$ million), but it is a great recovery from the recent recession. Over half of Namibia's population lives below the poverty line. Distribution of family income; GINI-index, was at 70.7% in 2003. The GINI is calculated according to the Lorenz curve in which cumulative family income is compared to families arranged from poorest to richest. Namibia has the most unequal distribution of income in the world. (Finpro 2012; World Bank 2010; CIA 2012; Wikipedia 2012)

The unemployment situation in Namibia is a big issue as over half of the work force is estimated to be unemployed. Out of women in Namibia 58.4% were unemployed in 2008 and out of men 40% according to the Namibia Labor Force Survey done in 2008. Unemployment continues to rise - the 2011 estimate is 51.2%. In March 2011, the government announced that

it would introduce a 3-year-budget with a 30% addition to public works, and that it would create more employment opportunities. (Duddy 2010; U.S. Department of State 2011)

Namibia's labor force was estimated to be at 803 700 in 2011. The service sector employs 61.3%, industry 22.3% and agriculture 16.3%. Labor costs in Namibia have been criticized for being too high - especially in the business sector and high ranking positions. (Vries 2007)

There are various business forms that can be registered in Namibia. There are public and private companies. Joint ventures and sole trade are both common. There are many branches of foreign companies. Closed corporations and partnerships are also common. Companies are currently regulated under the 2004 Companies Act. The Act covers both domestic companies and those that have relocated outside of Namibia but are trading through local branches. (U.S. Department of State 2012)

2.3.1 Trade

Namibia is very economically integrated regionally; it is a member of the Southern African Development Community, which aims to unify regulations and understanding regarding trade between member states and the Southern African Customs Union (SACU). SACU's other members are South Africa, Botswana, Lesotho, and Swaziland. SACU abolished all tariffs on goods produced and moving from member countries. SACU also made a trade agreement with United States in 2008 and is planning on making agreements with China, India, Kenya, and Nigeria. Namibia is a General Agreement on Tariffs and Trade signatory and also a member of International Monetary Fund, The World Bank and the World Trade Organization. (U.S. Department of State 2011; CIA 2012; SADC 2009)

The Ministry of Trade and Industry (MIT) is the governmental authority which is responsible for foreign trade in Namibia. The Namibia Investment Center (NIC) was established by the MIT. It is the main point of contact for potential investors. The NIC was established to help investors with bureaucratic matters, and to provide information and advice on incentives, procedures and opportunities. There are not many restrictions for foreign companies, save for two major exceptions: a foreign company cannot exploit Namibia's natural resources, unless there is local participation, and no foreign company can acquire agricultural land without the consent of the Minister of Lands. (U.S. Department of State 2011)

Namibia's economy mostly relies on the extraction and processing of minerals for export. Mining provides over 50% of foreign exchange earnings. Exports are significant for Namibia, but since the beginning of the century their significance relative to the GDP has lowered. Export commodities include diamonds, copper, gold, zinc, lead, uranium, cattle, fishes and karakul

skins. Namibia's most important export partners are South Africa and the European Union - especially the United Kingdom. Other important export partners are Angola, Canada and the United States. Namibia imports machinery, equipment, chemicals, petroleum products, fuel and foodstuffs. Out of all imports 69% are manufactures, fuels and mining are 21%, and agricultural products 7%. South-Africa is Namibia's most important import partner with 70% of imports originating from the region. Other important import partners are China, India, EU and the United States. (CIA 2012; Finpro 2012; U.S. Department of State 2011)

2.3.2 Domestic market

A large portion of Namibians are dependent on agriculture even though it only accounts for 4-6% of the country's GDP. The government encourages locally sourcing agriculture products and all retailers of these products are obliged to purchase nearly 30% from local farmers. The commercial raising of cattle is mostly run by Namibian Caucasians in the north of Namibia. Growing table grapes has been a growing part of agriculture in the south. It also provides for a lot of important seasonal work during harvests. (U.S. Department of State 2011)

The Namibian manufacturing sector has potential, but it has been inhibited by a small domestic market. Namibia is also very dependent on imported goods. There is a limited supply of local capital due to Namibia's small population. Because Namibia is such sparsely populated country, there is not enough labor force in one place to establish large manufacturing plants. Namibia's skilled labor force is small and many educated people move to South-Africa because the wage rates there are higher. Tourism is the third largest source of foreign exchange in Namibia. Tourism has been increasing steadily and more international tourists are coming in, although most of the tourists still originate from South Africa. Tourism holds great potential for Namibia economically, as ecotourism is gaining popularity. The fact that Namibia is politically stable, culturally diverse and has beautiful natural areas is a huge asset. Tourism has had a positive impact on the country as it creates jobs, revenue, rural development and nature conservation areas. (U.S. Department of State 2011; Finpro 2012)

2.4 Social factors

With a population of over 2 million Namibia is one of the least densely populated countries in the world. The population is estimated to be 2,165,828 as of July 2012. Most of Namibians live in the fertile north, while 30 % live in the center. Less than 10% live in the dry south. The Capital Windhoek has about 340 000 inhabitants. Half of Namibians belong to the Ovambo people, who are usually small scale farmers and herd cattle. Other ethnic groups are the Kavango, Herero, Himba, Damara, Caprivians, San, Caucasians, Basters and Nama. Most of the

ethnic groups are centered geographically and they have their own languages or dialects. (Namibia Travel 2010)

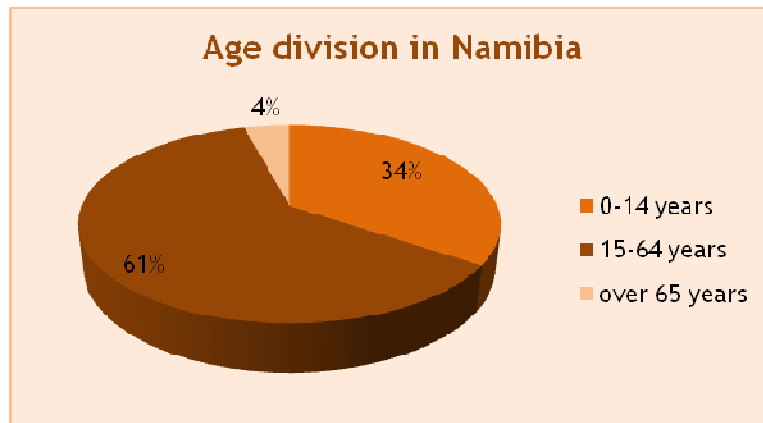


Figure 3: Age Division in Namibia
(CIA 2012)

Statistics on population	
Population growth rate	0,8% (2012 estimate)
Death rate	13.09 deaths/1000 population (July 2011 estimate)
Birth rate	21.11 births/1000 population (2011 estimate)
HIV/AIDS adult prevalence rate	13.1% (2009 estimate)

Table 4: Statistics on population
(CIA 2012)

Most of Namibians are between the ages of 15 to 64 years old. The average lifespan is around 53 years. Very few live over the age of 64 (4% a 2012 estimate). The population growth rate in Namibia is low compared to other African countries. The death rate is high due to AIDS and HIV. In 2009 around 180 000 people in Namibia had HIV or AIDS. The portion of health expenditures related to the GDP are relatively high at 5, 9% in 2009. Although money is being spent on public health, the improvements have been minimal. Health services in Namibia are managed by the Ministry of Health and Social Services on a national level and regionally by the regional management directed by the regional council. Most health centers are in bigger

cities and in more remote areas people still do not have ready access to health services. (CIA 2012; SEEN 2002)

2.4.1 Education

Literacy level in Namibia was at 88.2% in 2011. School is compulsory for 10 years in Namibia. Namibians start school when they are 6 years old. There are around 1500 schools in Namibia and out of those approximately 100 are private. Primary education is free in Namibia. The quality of education in Namibia is very poor even though approximately 7 % of the gross domestic product is being used on education expenditures. The teachers lack specialized training and dropout and failure rates are high. Only 12 % of pupils proceed with tertiary education. This is partly due to limited places in universities. Namibia has two public tertiary institutions which are the Polytechnic of Namibia and the University of Namibia. There are also a number of specialized tertiary institutions related to mining, arts, maritime and technology. A National Conference on Education was held in 2011, where plans were made in order to radically improve on the faults in the education system. In 2006 the government introduced Education and Training Improvement Program (ETSIP) which aims to improve the Namibian education system within fifteen years. (Wikipedia 2012)

2.4.2 Social structures

The apartheid era has left a mark on the social structures of Namibia. There is still a clear white upper class, but this is changing as a small non-white upper class has developed. The presence of poverty remains consistent. There are many problems in the Namibian society today such as tribal conflicts, racism and the unequal development of the country geographically (Peltola, 2011, pp. 124-125). Wages in Namibia are over 10 times higher for minister and secretary general positions than lower governmental positions. The leaders of SWAPO are among the richest in the country (Peltola, 2011, p. 165). Recently there has been a scandal of lost money from the National Employment Pension Fund. In 2006 the governments auditing bureau discovered that money from the pension fund had been taken out and used to help new companies that had been founded by its board of directors or their relatives. Around 70 million had been taken. No concrete action has been taken against the people responsible yet. (Peltola 2011, p.168)

Namibia's Vision 2030 program launched by former president Sam Nujoma in 2004 is a vision for a better Namibia. The Vision 2030 statement is "A prosperous and industrialized Namibia, developed by her human resources, enjoying peace, harmony and political stability." There are some broad strategies and objectives outlined in the project that aim for a more equal Namibia. (National Planning Commission Secretariat 2012)

The weak position of women has been a problem in Namibia, but things have been actively improved and the results so far are good. There has been a clear increase in the seats held by women in the National Assembly. There is still a strong perception of what a woman's role in society should be and there is a gender imbalance in economic and business decision making levels. (National Planning Commission 2007)

2.4.3 Human rights issues

Elections in Namibia are considered to be free and fair even though there are many prevailing human rights issues. Police using excessive force and making arbitrary arrests is a problem. Prisons are also overcrowded and conditions are poor in detention centers. Prolonged pre-trial detention and long delays in trials are common. Due to SWAPO's tight grip on power, harassment and intimidation of opposition members and criticism of nongovernmental organizations occurs often. Societal abuses in Namibia include violence against women and children, including rape and child abuse. There is discrimination against women, ethnic minorities, indigenous people, and discrimination based on sexual orientation and on gender identity. There have been events of child trafficking and child labor. (Amnesty International 2011)

A major human rights issue in Namibia has been the Caprivi trial. In 1999, 113 Caprivians were accused of treason after Caprivi separatists attacked government facilities. The trial is still ongoing, and 21 detainees have died in captivity. Three freed Caprivi detainees have accused the Minister of Home Affairs and Minister of Defense of condoning torture, but the case was dismissed by the high court. Freedom of expression is a major concern for Namibia, as those who criticize the ruling party face threats, deportation and bans. The director of Namibian Rights and Responsibilities Inc., which was formerly the National Society for Human Rights in Namibia, criticized former president Sam Nujoma of inciting violence, after which he received death threats and the National assembly called for action against him by the judiciary and law enforcement agencies. Namibian Rights and Responsibilities Inc. reports, monitors, educates, lobbies, trains and renders paralegal and humanitarian assistance in matters related to human rights. (NAMRIGHTS 2012; Bureau of Democracy, Human Rights and Labour 2011)

2.5 Technological factors

The Namibia Scientific Society and the Ministry of Higher Education, Training and Employment Creation (MHETEC) make decisions, supervises and implements Namibia's technological policies. Namibia has a national technology policy that focuses on human resource

development innovation and technology development. The Science and Technology Act is a tool to regulate the operations of all the science institutions and firms in Namibia. The Policy on the use of Biotechnology as well as Bio-safety aims to develop mechanisms to monitor the use, import and development of biotech-based products. Most of the funding for technology in Namibia comes from the national budget and the European Union. (United Nations 2002)

Out of 183 nations Namibia ranked as 78th country to do business in 2012, based on the World Bank Survey of Doing Business 2012 (World Bank, 2012). In Namibia the amount of available enthusiastic young employees is high, but the skill and education level is low. A new labor act was passed in 2011, which clarifies the conditions and terms of employment. Namibia does not have a minimum wage. Cost of employees is low, but employees are often given some benefits in addition to their wages such as housing or medical aid. (Ministry of Trade and Industry 2010)

2.6 Environmental factors

Namibia's main borders are with South Africa, Botswana and Angola. It shares a small border with Zambia. Namibia has a sub-tropical desert climate which means low-rainfall. The temperatures in Namibia vary greatly from day to night and summer to winter. Summer in Namibia is from November to April and winter from May to October. In the dry season from April to September, temperatures are around 25 Celsius, but nights are much colder with possible frost. Most of the rainfall in Namibia occurs from December to March and temperatures can reach above 40 Celsius. The coast and most of the southern areas of Namibia are the driest with no rainfall some years. (McIntyre 2011, p.33)

Namibia's natural resources are rich in minerals: diamonds, copper, uranium, gold, silver, lead, tin, lithium, cadmium, tungsten, zinc and salt. Other natural resources are fish and hydropower, and there are suspected deposits of oil, coal and iron ore. Only 0.99% of Namibia's land is considered to be arable. (CIA 2012)

2.6.1 Environmental issues

Environmental issues in Namibia include limited natural fresh water sources, desertification, wildlife poaching, habitat fragmentation and land degradation. Prolonged periods of drought are the main concern in Namibia environmentally. Namibia has signed and ratified international environmental agreements such as Antarctic-Marine Living Resources, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection and Wetlands. (CIA 2012)

As a country Namibia is very vulnerable to climate change, because its economy is so dependent on its natural resources and the dry climate. The effects of climate change in Namibia would be manifold. There would be an increase in the already hot temperatures, which would in turn lead to droughts. This would amount to severe water scarcity in some areas and increased rain in others. Dryness would lead to reduced crop production. Livestock losses and increased humidity would lead to increased malaria. Namibia would become even more of an arid environment. The sea level rising would lead to losses in food supply and in the availability of breeding sites for animals. (Ministry of Environment and Tourism 2009)

2.6.2 Infrastructure

Namibia's infrastructure is well structured compared to other African countries. Namibia has an extensive road network and a modern aviation industry. The roads link Namibia with its neighboring countries. The highways of TransKalahari and TransCaprivi are quick ways to move from one end of the country to the other. The Namibia Airports Company is responsible for maintaining the airport operations. Namibia has three airports. Hosea Kutako International Airport is situated 48km from Windhoek, and is the main airport. Walvis Bay airport houses mostly domestic flights. Eros Airport accommodates small aircrafts. Air Namibia is the country's national airline and has daily connections to Frankfurt. (Finpro 2012; Senior Road Executive Seminar 2003)

Walvis Bay is a modern deep-water port where the country's fishing infrastructure is mostly based. Lüderitz is another well-functioning port. Rail networks in Namibia run from the South African border via Windhoek to the northern town of Ondangwa. The rail network is old and is criticized for delays and for being slow. The government has plans for extending and renewing it. The telecommunications infrastructure in Namibia is well developed. Telecom Namibia, which is owned by the government, provides telephone services, multimedia services, data connections, broadband services and digital lease lines. There are also other telephone and internet service providers. (U.S. Department of State 2012)

2.7 Legal factors

Namibia has a unique legal system, because it has elements of Roman-Dutch law as well as customary law. Namibia has a Supreme Court, a High Court and the magistrates' courts. Both the customary law and common law must not conflict with the constitution. Namibia's labor court handles appeals from lower district labor courts. The Office of Ombudsman in Namibia is for those with complaints related to human rights, administrative practices, corruption and the environment. Most of the complaints the Ombudsman receives are related to human rights issues. (Ruppel & Ambunda 2011)

The Executive branches of president and cabinet function mainly on a consultative level considering legal matters, and their main function is policy-making. However, on the recommendation of the Judicial Service Commission, the president is responsible for the appointment of chief justice, the judge president and the judges of the high and the Supreme Court. The executive is also responsible for negotiation and signing of international agreements. The Constitution in Namibia accounts public international law as a part of the law of Namibia. (Ruppel & Ambunda 2011)

The Legislative organ is made out of the National Assembly and the National Council. The National Assembly makes and repeals laws and the National Council considers and reviews legislation passed by the National Assembly. The Judiciary consists of the courts and is responsible for the realization of fundamental rights and freedoms of individuals. The Parliament is the main legislative authority in Namibia. (Ruppel & Ambunda 2011)

2.8 Cultural factors

Each of Namibia's ethnic groups has their own cultural customs, although the customs may not seem that different from each other to an outsider. Things are generally done in a slower pace in Africa than in the western world. Shaking hands and other greetings are important. In Namibia everyone must be greeted - including strangers. Christianity is the predominant religion in Namibia, as 80-90% of the population is Christian. Traditional African religious beliefs and practices are still practiced in some areas. Namibia has many languages, though English was made the official language after the independence. There are still many German speakers. Afrikaans is very common, and among the older population and in rural areas it might be the only language spoken. (McIntyre 2011, pp.16,27-28)

Time is viewed differently from western society - the concept of time is often flexible. Being late for informal social situations is the norm, but for more formal situations punctuality is important. The views on how women should conduct themselves are still somewhat conservative. Women are expected not to drink in public and they should not disagree with men of higher positions in public. Women also dress conservatively - covering their shoulders and wearing long skirts. Foreign women are not expected to act similarly to Namibian women, and differences are understood. (Culture Crossing 2012)

Business culture in Namibia is formal, but drinking and socializing are considered important in building business relationships. It is important to be punctual and to dress accordingly. Namibians like to avoid confrontations. This can be seen in business discussions; a Namibian party will often tell the other party what they think the other party wants to hear, instead of

their real opinion. It is important to present and receive items with your right hand, for example a business card. It is polite to refer to people by their surname and to use formal titles. Small talk is very common and is expected in business meetings. (Culture Crossing 2012)

3 The energy market in Namibia

The Ministry of Mines and Energy (MME) is responsible for national energy policy. MME states that a sufficient supply of sustainable energy should be secured. Being as sustainable as possible within the economic framework is one of the top priorities of the ministry. Another one of their priorities is to provide energy to all equally. One of the main challenges the MME faces is ensuring economic efficiency in the energy industry; this problem is being addressed by promoting investment in energy. Creating effective and adequate energy governance is important. The Energy Directorate is responsible for researching new and renewable sources of energy. The Electricity Control Board (ECB) which acts as Namibia's electricity regulator accepts unsolicited power generation projects through its IPP framework. The Minister of Mines and Energy has final authority to approve and refuse IPP licenses. The main energy provider is the government owned Nampower. It is a power corporation that has a monopoly on electricity import, generation and transmission. The Energy Directorate researches new and renewable sources of energy. (The Ministry of Mines and Energy 2006)

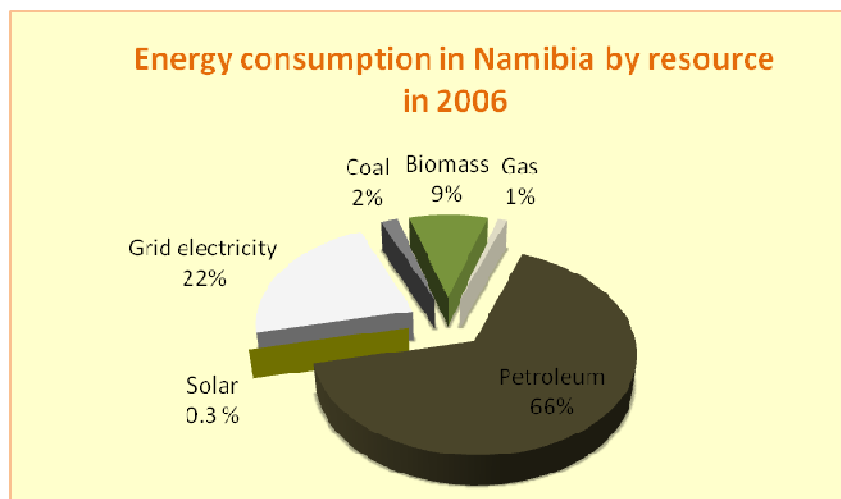


Figure 4: Energy consumption in Namibia by resource in 2006
(The Ministry of Mines and Energy 2006)

Namibians use mostly petroleum as a source of energy, which is to be expected in a country where transportation is paramount. Namibia's electrification level is 20% which is the third

highest in Africa. Grid electricity provides 22% of Namibia's energy use. Biomass is at 9% of total energy consumption, because in the more rural parts of the country wood is the primal source of energy. (The Ministry of Mines and Energy 2006)

3.1 Energy sources

Namibia is mainly dependent on electricity imports. In 2009, 81% of the energy used was imported. Most of Namibia's electricity imports come from Eskom in South Africa. Eskom has had problems supplying energy to Namibia in recent years, due to government intervention and a stagnant electricity supply industry. The constrained imports from Eskom have been a huge issue in Namibia in recent years. There have been energy shortages in rural areas and electricity pricing has gone up. As a short term solution, Namibia has recently signed power purchase agreements with utilities in Botswana, Zambia, Zimbabwe, the Democratic Republic of Congo and Mozambique. NamPower also completed a N\$3.2 billion TransCaprivi Interconnector which connects central Namibia directly with Zambia and Zimbabwe's power grids. (emCON 2008)

Namibia's own energy production comes from the Ruacana hydroelectric station on the Kunene River, which was responsible for 96% of the country's domestic production in 2009 and 2010. Another notable power station is the coal-fired Van Eck thermal station at Windhoek, though it only accounted for 4 % of domestic power. The diesel power station Paratus is out of production, as a new diesel power station is being planned in the area. All power stations in Namibia are owned by Nampower. The government is planning to start generating wind power on the coast, and solar power in the south. The Kudu natural gas field, situated in the south of the coast, is the only place in Namibia where oil and gas have been found. These natural gas and oil reserves have just begun to be utilized. (Finpro 2012; emCON 2008; Lahti 2011; World Bank 2010)

3.2 Nuclear power

Namibia is the fourth largest provider of uranium in the world. There has been much talk recently in Namibia about using uranium as a source of energy due to the looming energy crisis. Namibia began looking into building its own nuclear power plant in 2008. In 2009, there was a ministerial visit from Namibia to Finland. The Namibian Minister of Mines and Energy, at the time Erkki Nghimtina, visited Geological Research Center (GTK), Radiation and Nuclear Safety Authority (STUK), Olkiluoto nuclear power plant, and Aalto University School of Science and Technology in Finland, to see how nuclear energy is handled in Finland. In 2011, Finland's Nuclear and Radiation Authority helped Namibia's MME develop a nuclear policy. Namibia first planned to create its own nuclear power plant by 2018, but due to the cost of the project the

plan has been changed to 2025 or 2027. The Namibian government has been in talks with French multinational Areva, which focuses on nuclear power, to do a feasibility study for them on nuclear energy. There has been much discussion on the lack of technology in Namibia for the introduction of nuclear power, and the effect it would have on Namibia's nature and landscape in the long-term. (Lahti 2011; Duddy 2012; Weidlich 2011)

4 The renewable energy market in Namibia

Namibia is the first country in the world to include the protection of the environment in its constitution. Namibians know that their country is particularly vulnerable to climate change. There is much more awareness of and initiatives focused on renewable energy in Namibia than in many developed countries. In the 1998 Energy Policy Whitepaper, the Namibian government put in motion a plan to promote the use of renewable energy through the establishment of an institutional and planning framework. The plan also included development of human resources, financing systems, and raising public awareness. It also seeks to solve development challenges through improved access to renewable energy sources, particularly in rural electrification, rural water supply, solar housing, and water heating. (Energy Policy Committee 1998)

4.1 The current situation and the future outlook of the renewable energy market

Currently in Namibia, the introduction of renewable energy sources is hindered by their expensive cost. The Ministry of Mines and Energy (MME) has supported the use of solar energy by providing loans through the Solar Revolving Fund to citizens who wish to install solar energy systems in their homes. The MME has also done extensive research into building a wind park in Lüderitz port, but research concluded that that a wind park would not be financially possible unless the international donor community is willing to provide additional financial support. Small scale biomass production has been initiated by MME, by building stoves for the local communities. In 2006, MME and the Namibia Renewable Energy Programme (NAMREP) released a feasibility assessment study on replacing diesel pumps with solar pumps. The study concluded that the replacement of diesel pumps with solar pumps would be beneficial and cost effective. However, there are still problems to be faced before solar pumps can be introduced. The main issue is theft, as photovoltaic panels are hard to protect and easy to steal. Other problems are the people's perception that solar pumps would cost more, and that the technology would be complicated and difficult to acquire. (The Ministry of Mines and Energy 2006; Energy 2006)

Renewable energy projects are mainly financed by the Namibian government and the Global Environment Facility (GEF), which grants funds to improve environmental problems in

developing countries. Some local banks have started to offer financing for renewable energy projects in recent years, but only on a small scale. Bank Windhoek and the Ministry of Mines and Energy reached an agreement of financing clean energy projects through NAMREP in 2006. Local financial institutes in Namibia include Bank Windhoek, Namibia Agricultural Bank, First National Bank of Namibia, Standard Bank of Namibia Limited, NedBank of Namibia Limited, and Development Bank of Namibia Limited. The local financial institutes do not lack the funds to finance renewable energy projects - mainly they are just hesitant to do so. Many of the financial institutions see investment in renewable energy as risky because of a lack of knowledge in the field and technology. In the future, there will most likely be an increase in financing on part of these institutions as NAMREP continues its work in establishing connections. (Ministry of Environment and Tourism 2007)

Technology in Namibia related to renewable energy sources is lacking. There are not enough training institutions or related study programs yet - which amounts to lack of trained technicians. The national technical standards are also loose. There have been improvements through NAMREP in the area of technical capacity building. NAMREP has trained about 140 renewable energy technicians, government officials and NGOs. The training has helped make renewable energy more available throughout the country, as SMEs have been set up in different parts of the country. By 2005, around thirty renewable energy technicians had set up renewable energy SMEs. (MME Directorate of Energy 2005)

4.2 Renewable Energy Authorities, Institutions and Organizations

The Energy Directorate of The Ministry of Mines and Energy is the main government authority which finances, plans and supervises the use of renewable energy in Namibia. Barrier removal to the Namibian Renewable Energy Program was established to address challenges in the renewable energy market by removing the technical, financial, social, institutional capacity, public awareness and social acceptability barriers in the sector. One of NAMREP's goals is to make the government lower duties and import taxes on renewable energy products and technology brought to Namibia from abroad. Collaboration between MME and the Polytechnic of Namibia began in 2006. It created a center of excellence called the Renewable Energy and Energy Efficiency Institute (REEEI), which undertakes research on renewable energy sources and energy efficiency. REEEI promotes research in renewable energy, energy efficiency and related technologies. REEEI also aims to collaborate actively with other institutions in the field of renewable energy efficiency. (Ministry of Environment and Tourism 2007)

The United Nations Development Program (UNDP) focuses on assisting the government of Namibia and its people to reach the aspirations of the national vision for 2030, and the Millennium Development Goals. The UNDP supports NAMREP and REEEI. UNDP provides

resources, and GEF finances the research made by NAMREP and REEEI. The United Nations University's Priority Africa project is in collaboration with University of Namibia (UNAM) in a project that will increase the supply of sustainable bio-energy resources from microalgae. The Science and Technology Division at UNAM train young Namibians in clean technology production and energy efficient products. (United Nations University 2012; MME Directorate of Energy 2005)

There are NGOs operating on a small scale with renewable energy in Namibia. The Namibian Association of Community Based Natural Resource Management (CBNRM) Support Organizations (NACSO) is an association comprising 14 NGOs and the University of Namibia. NACSO's goal is to help rural communities manage and utilize their natural resources sustainably.

Non-governmental organizations for sustainable development	Tasks	Goals
Desert Research Foundation of Namibia (DRFN)	Institution building and lobbying for policies	Enhanced decision making
Integrated Rural Development and Nature Conservation (IRDNC)	Involving local communities in conservation	Reducing poverty and protecting nature
Centre for Research Information in Africa -Southern African Development and Consulting (CRIA SA-DC)	Developing post-harvest technologies and diversifying products, to securing sustainability, fair trade and organic accreditation	To develop smart commercial partnerships and sustainable economic ventures based on natural resources
Namibia Development Trust	Arranging local and international cooperation	To advocate and foster sustainable development

Table 5: Non-governmental organizations for sustainable development (NACSO 2009)

The main NGO's in the field of sustainable development are members of NACSO, such as Desert Research Foundation of Namibia (DRFN), Integrated Rural Development and Nature

Conservation (IRDNC), Centre for Research Information in Africa - Southern African Development and Consulting (CRIAA SA-DC), and Namibia Development Trust. DRFN works toward enhancing decision making in the field of sustainable development by contributing to robust national policies and building institutions for environmental management. IRDNC helps sustainable development by directly involving local communities in conservation, and thus trying to reduce poverty. CRIAA SA-DC supports rural and poor communities to benefit from sustainably produced indigenous natural and smallholder crops. Namibia Development Trust aims to advocate and foster environmental development through local and international cooperation efforts. (NACSO 2009)

4.3 Challenges and Benefits for Finnish Renewable Energy SMEs

There is great interest in Namibia in general for foreign direct investment. For a country struggling with development, foreign investment is always welcome. Especially if it will benefit the country directly by providing much needed jobs and creating new technologies or sources for energy - the lack of which this country in particular is suffering from. (U.S. Department of State 2012)

The biggest challenge for Finnish renewable energy SMEs is the actual entry process to the market. According to the 2012 Doing Business report by the World Bank, the investment climate is favorable; though registering a business takes a sizeable period of time - an average of 66 days - and requires many procedures. Acquiring work permits is also a lengthy and difficult process. If SMEs desire to export or import products, they should be prepared for lengthy procedures: according to the World Bank's 2012 Doing Business Report, Namibia ranked 142 out of 183 countries for trading across borders. The average time to export is 29 days, while 24 days on average are required for imports. (World Bank 2012)

Finnish SMEs with interest in developing small power generation facilities of their own should contact Namibia's Regional Energy Distributors (REDs). Due to power shortages, many REDs are looking to be self-sufficient in energy. Partnering with a RED might help Finnish SMEs in market entry and local procedures. (U.S. Department of State 2012)

Electronic commerce in Namibia is small due to the fact that less than 10% of the population have internet. Advertising through radio, television and printed media is common, and there are many Namibian firms that support advertising functions. There are many sources where advertisements can be placed, such as many daily and weekly newspapers. English is the first language, but as it is not spoken by everyone Afrikaans and English both are used in packaging materials. After purchasing the product, after sales services are common in Namibia. For

example, a Finnish renewable energy SME selling solar panels would be expected to help with installation and delivery. (U.S. Department of State 2012)

Intellectual property rights in Namibia are handled notably differently from many other countries. Foreign patents are not protected within Namibia, and a foreign company might be denied the right to patent protection in Namibia if the Parliament so rules. This is due to the price of patents in international markets: as many Namibians cannot afford to buy expensive international patents, it is preferred to protect the right of Namibians within their own market. Finnish SMEs should take this into account, and apply for patents before entering the products on the market. (Amoo & Harring 2010)

Namibia also lacks technology related to renewable energy. This means Finnish SMEs would have to be prepared to put extra resources into training locals and creating or importing technology. Finnish companies should look into Namibia's incentive scheme for manufacturers. In order to qualify for the incentive scheme, companies must register with the Ministry of Trade and Industry and the Ministry of Finance. Finnish SMEs should also check if they qualify for EIT appropriations from Finland. (Embassy of Finland - Windhoek 2012)

In 2009, the Namibia Investment Center released projects that would need foreign investment and collaboration. One of the projects is the creation of a sustainable hydropower plant on the Orange River. Another investment project is a bio-gas construction company. A feasibility study conducted by the MME has noted that bio-gas usage would be viable. The project needs financing and technological partners. (Namibia Investment Centre 2009)

5 Discussion

Namibia is a country of great potential. It is unclear whether Namibia will face a bright future or go through yet more struggles. How the political situation develops in the near future will determine much. In order for Namibia to develop into a healthier, more sustainable country, its own people will have to do most of the work. Still, there is a part to be played by the international community - hopefully a positive one.

There may be challenges to be faced in regards to collaboration with local authorities, and the technicalities of establishing a business in Namibia may not be the most expedient or the easiest, but many organizations in Namibia will provide assistance and collaboration. It would be beneficial to be in contact with local NGOs and tertiary educational institutions. Contacting NAMREP would be beneficial as well. It is a Namibian program gaining more and more momentum, and it might be able to help Finnish SMEs with the local bureaucracy. NAMREP aims to remove barriers from renewable energy introduction to the market, and I

believe Finnish SMEs would be welcomed as they can provide the technology, know-how and finances that are lacking in Namibia's market. The Finnish Embassy in Windhoek aims to enhance Finnish and Namibian economic ties, and will surely provide assistance in market entry as well.

Right now Namibia is facing an energy crisis and needs new energy sources fast. There has been great interest in nuclear energy, as it is thought to be a clean local source. Now would be the perfect time to introduce other possibilities to the market.

Longstanding relations between Finland and Namibia mean that there is already a basis of cultural familiarity, which serves to make cooperation easier. There are many obvious cultural differences between Finland and Namibia, but in general Namibians are a friendly and welcoming people. As long as the Finnish half of the negotiation is willing to remain open minded and aware of the differences, there should be no obstacles regarding business interaction.

For Finnish small and medium sized enterprises operating in the field of renewable energy, Namibia is a great opportunity to expand their operations abroad. The economic and social conditions are well suited for international companies to enter the market, and the country is welcoming toward international businesses. There are many Finnish sources already in place for Finnish SMEs to get financial support for operations in Namibia. Namibia is a country unusually aware of renewable energy, and it has a government that actively promotes sustainable development. If Finnish renewable energy SMEs succeed in the Namibian market, it would set a positive example for the rest of the world as well. It would go to show that sustainable development and international cooperation are possible, even between two very different cultures with the geographical distance to match. It is an opportunity to make a positive, environmentally sound impact on a developing country. It would also increase much needed positive collaboration between developing and developed countries.

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