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# Doing business in SADC region

## Central Baltic SME Aisle for maritime and ports, ICT, automation, renewable energy and machinery in Southern African markets

EUROPEAN UNION
European Regional Development Fund

Interreg
Central Baltic

SME Aisle

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Satakunta University of Applied Sciences
Pori
2018

**Project:** SME Aisle – Exports of clusters of CB economic strengths shipbuilding, maritime, renewable energy, automation and ICT to Namibia as a stable point of entry to the Southern African markets

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Satakunnan ammattikorkeakoulu (SAMK) | Satakunta University of Applied Sciences
Series B, Reports 13/2018
ISSN 2323-8356 (pdf) | ISBN 978-951-633-263-8

**Publisher:**
Satakunta University of Applied Sciences
Satakunnankatu 23 | FI-28101 PORI
www.samk.fi



**Graphic design and lay-out**: Teija Järvenpää, Kristiina Kortelainen & Nina Savela
**Cover photos**: Minna Keinänen-Toivola & Rieke Homeyer
Photos Minna M. Keinänen-Toivola, unless otherwise mentioned.

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# ABSTRACT

This report is a market analysis, which aims to provide basic information of the Southern African Development Community's (SADC) business environment. The report is prepared in accordance with the Central Baltic project SME Aisle (duration 1.3.2018–31.8.2021) project and its core themes, which include shipbuilding, maritime and logistics, renewable energy, automation and ICT. In addition to the overall analysis of the SADC business environment, the report pays close attention to the following countries: Namibia, South Africa, Angola, Mozambique, Botswana and Zambia. The SME Aisle project is an adaptable and scalable product and services concept for coastal areas of SADC. It supports Central Baltic maritime clusters' small and medium-size enterprises (SMEs) from Finland (including Åland), Sweden, Latvia and Estonia with the ambition and potential to enter into new markets in Southern Africa through Namibia, which acts as a stable point of entry to these Southern African markets.

# CONTENTS

# ABBREVIATIONS

| | |
|---|---|
| ACP | The African, Caribbean and Pacific Group of States |
| AfDB | African Development Bank |
| AGOA | The African Growth and Opportunity Act |
| ANC | The African National Congress ANC |
| AOSIS | The Alliance of Small Island States |
| ASEAN | Association of Southeast Asian Nations |
| AU | African Union |
| B2B | Business to Business |
| BIH | Botswana Innovation Hub |
| BIS | Bank for International Settlements |
| BOCRA | Botswana Communications Regulatory Authority |
| BRICS | Brazil, Russia, India, China and South Africa |
| BTC | The Botswana Telecommunications Corporation |
| CAEU | The Council of Arab Economic Unity |
| CB | Central Baltic |
| CEMAC | Economic and Monetary Community of Central Africa |
| CEPGL | The Economic Community of the Great Lakes Countries |
| CFM | Portos e Caminhos de Ferro de Moçambique |
| CIA | Central Intelligence Agency |
| COMESA | Common Market for Eastern and Southern Africa |
| CPLP | The Community of Portuguese Language Countries |
| CRAN | Communication Regulatory Authority |
| DFI | Development Finance Institution |
| EAC | East African Community |
| EASSy | The East Africa Submarine Cable System |
| EFTA | European Free Trade Association |
| EITI | The Extractive Industries Transparency Initiative |
| ENE | Empresa Nacional de Electricidade de Angola |
| EPA | Economic Partnership Agreement |
| EPZ | Export Processing Zone |
| EU | The European Union |
| FAO | Food and Agriculture Organization |
| FATF | Financial Action Task Force |
| FTA | Free-Trade Agreement |
| GDP | Gross Domestic Product |

| | |
|---|---|
| IAEA | International Atomic Energy Agency |
| IBRD | The International Bank for Reconstruction and Development |
| ICAO | International Civil Aviation Organization |
| ICC | International Criminal Court |
| ICRM | International Red Cross and Red Crescent Movement |
| IDA | International Disability Alliance |
| IFAD | International Fund for Agricultural Development |
| IFC | International Finance Control |
| IFRCS | The International Federation of Red Cross and Red Crescent Societies |
| IHO | International Hydrographic Organization |
| ILO | International Labour Organization |
| IMF | International Monetary Fund |
| IMO | International Maritime Organization |
| IMPA | The Maritime and Port Institute |
| IMSO | The International Mobile Satellite Organization |
| IOC | International Olympic Committee |
| IOM | International Organization for Migration |
| IOR-ARC | Indian Ocean Rim Association for Regional Cooperation |
| IPPs | Independent Power Producers |
| IPU | Inter-Parliamentary Union |
| IRP | Integrated Resource Plan |
| ISO | International Organization for Standardization |
| ITSO | International Telecommunications Satellite Organization |
| ITU | International Telecommunication Union |
| ITUC | International Trade Union Confederation |
| LAS | League of Arab States |
| MIGA | The Multilateral Investment Guarantee Agency |
| MINEA | Angolan Ministry of Energy and Water |
| NAM | Non-Aligned Movement |
| NEPAD | The New Partnership for Africa's Development |
| NGO | Non-governmental Organization |
| NSG | Nuclear Suppliers Group |
| OAPI | The African Intellectual Property Organisation |
| OECD | The Organisation for Economic Co-operation and Development |
| OIF | The Organisation internationale de la Francophonie |
| OPCW | The Organisation for the Prohibition of Chemical Weapons |
| OPEC | Organization of the Petroleum Exporting Countries |
| PCA | The Permanent Court of Arbitration |
| PMAESA | The Port Management Association of Eastern and Southern Africa |
| PPA | Power Purchase Agreement |
| PTA | Parent-Teacher Association |
| RENAMO | The Mozambican National Resistance |

| | |
|---|---|
| SA | South Africa |
| SACS | The South Atlantic Cable System |
| SACU | Southern African Custom Union |
| SADC | Southern African Development Cooperation |
| SADCC | The Southern African Development Conference |
| SALGA | The South Africa Local Government Association |
| SAPP | Southern African Power Pool |
| TDCA | The Trade, Development and Cooperation Agreement |
| UN | The United Nations |
| UNCTAD | The United Nations Conference on Trade and Development |
| UNESCO | World Heritage Centre |
| UNHCR | The United Nations Refugee Agency |
| UNIDO | The United Nations Industrial Development Organization |
| UNITAR | The United Nations Institute for Training and Research |
| UNWTO | World Tourism Organization |
| UPU | Universal Postal Union |
| WCO | World Customs Organization |
| WFTU | World Federation of Trade Unions |
| WHO | World Health Organization |
| WIPO | World Intellectual Property Organization |
| WMO | World Meteorological Organization |
| WTO | World Trade Organization |

## Tables & Figures

# 1. INTRODUCTION

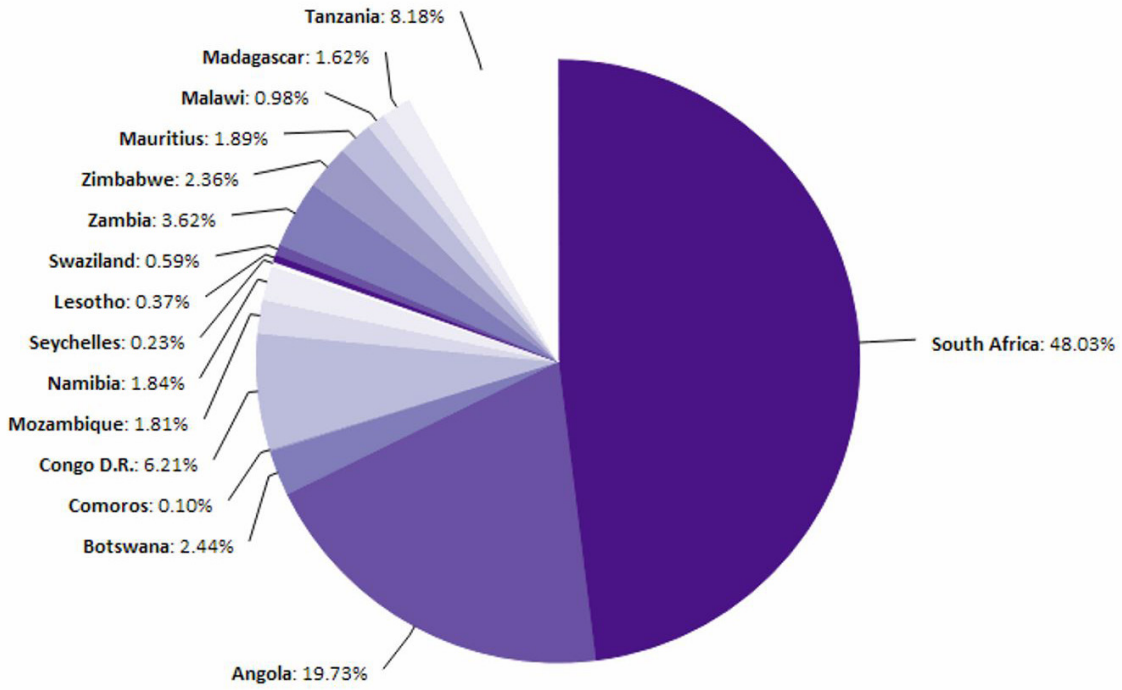
With its 300 million potential customers, port gateways, and aim for political stability and economic conditions, SADC region is seen as the future place for investments. There is a growing middle-income class in the area ready to dispose of their income and a growing need for infrastructure development, education and services. Moreover, rapid urbanization is a key development in many countries of SADC and moreover, by year 2050, 62% of the global population will live in Africa, reaching one billion inhabitants in 2040. In addition, by 2035 half of the continent's population will be urban.

The SADC in its first form was established in 1980 in Lusaka Zambia, when the countries Angola, Botswana, Lesotho, Malawi, Swaziland, Zimbabwe, Mozambique, Tanzania and Zambia created The Southern African Development Conference (SADCC) to reduce economic dependency on South Africa and to enhance regional integration. In 1992 in Windhoek Namibia, SADCC was transformed into the Southern African Development Community, SADC, which meant that the association now turned into a legally binding arrangement. The economic dimension highlighted the aim to deepen economic co-operation and integration. The number of memberships increased to 15 with the accession of Namibia in 1990, South Africa in 1994, Mauritius in 1995, Seychelles and the Democratic Republic of Congo in 1997, and Madagascar in 2005 (OECD Economic Surveys 2017b). Today SADC member countries include South Africa, Namibia, Botswana, Zambia, Seychelles, Angola, Mozambique, Mauritius, Malawi, Lesotho, Swaziland, Zimbabwe, Comoros (member since 2017), Tanzania, Democratic Republic of Congo and Madagascar.

Still today, the SADC region is faced with the small amount of intra-trade within the region, which is currently only 10% of the regional total exports compared to about 25% in ASEAN or 40% in the EU. The lack of intra-trade is explained mostly by the similarity of the SADC members states' economies (OECD Economic Surveys 2017a). In addition, many member states' economies are facing future challenges in ICT development, automation, environmental pollution and lack of resources such as energy and water. Fundamentals such as infrastructure, health and education and a higher uptake of new technologies will be necessary for sustained growth to occur within the SADC region (Brand South Africa, 2016). However, in recent years, SADC has taken numerous legislative initiatives to deepen the regional cooperation and many member states have shown willingness to further diversify their economies for example through tourism, renewable energy solutions and port development. Moreover, SADC countries are more integrated in global value chains than in regional ones, which has been seen as a factor in boosting trade in the case of emerging economies in the past. Most of the foreign value-added embedded in exports comes from outside the region (OECD Economic Surveys 2017b). This with an estimated future growth rate of 2-2.3% per year, creates great opportunities to Central Baltic countries in these markets.

Currently South Africa is the biggest actor in SADC in terms of current GDP. Angola holds the second place mainly due to its substantial oil and gas sector (OECD Economic Survey 2017a).

Figure 1. Current GDP (US$ billion), 2018 estimation. Based on data of International Monetary Fund available at Islamic Development Bank (2018).



## Data

Basic information for this report, such as numeric data and sources, was obtained from various databases online, such as the CIA World Factbook, The World Bank, OECD reports and SADC webpages. This information can be seen in attached table on basic information of SADC countries (Annex 1). All the reports and web sources are listed in the sources at the end of this report.

Indicators of the World Bank's 2018 Doing Business survey are also used to represent the overall business environment of the selected countries in this report. The explanations for these indicators are as following:

- **Starting a business:** Procedures, time, cost and paid-in minimum capital to start a limited liability company.
- **Dealing with construction permits:** Procedures, time and cost to complete all formalities to build a warehouse and the quality control and safety mechanisms in the construction permitting system.
- **Getting electricity:** Procedures, time and cost to get connected to the electrical grid, the reliability of the electricity supply and the transparency of tariffs.
- **Registering property:** Procedures, time and cost to transfer a property and the quality of the land administration system.
- **Getting credit:** Movable collateral laws and credit information systems.
- **Protecting minority investors:** Minority shareholders' rights in related-party transactions and in corporate governance.
- **Paying taxes:** Payments, time and total tax rate for a firm to comply with all tax regulations as well as post-filing processes.
- **Trading across borders:** Time and cost to export the product of comparative advantage and import auto parts.
- **Enforcing contracts:** Time and cost to resolve a commercial dispute and the quality of judicial processes.
- **Resolving insolvency:** Time, cost, outcome and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency.

Source: World Bank 2018.

The export areas, in which the project is focusing on, are shipbuilding, maritime and logistics, renewable energy, automation and ICT from Central Baltic (CB) areas. The project supports CB company sale initiatives and their aims to enter the Southern African markets using Namibia as a stable entry point. The aim of this report is to provide general information on the Southern African target market, SADC and the following countries: Namibia, South Africa, Angola, Mozambique, Namibia, Botswana and Zambia. For more information about the project visit the project's webpage http://smarturbanbusiness.samk.fi/smeaisle/.

# 2. THEMES OF SME AISLE AND SADC

In this report, first an oversight of the SADC business environment is made, after which some general points of the main themes of SME Aisle (ports and maritime, renewable energy, automation, machinery and infrastructure and ICT) are represented. After the overall review, the report moves to an analysis of the current business environment of selected countries (Namibia, South Africa, Angola, Mozambique, Botswana and Zambia). In conclusion, the scope of the need for further information is discussed.

## 2.1. PORTS AND MARITIME

The port industry is an important sector for many SADC countries in terms of their economic development. For example, in 2009 the SADC region processed 92 million tons of traffic through the primary seaport at Durban, South Africa and other ports along the eastern and western seaboards. By 2027 it is estimated that this traffic will increase to 500 million tons and thus, marine transport is an essential component in international trade for the region (SADC 2012a). The importance of port development is outlined in the SADC Protocol on Transport, Communication and Meteorology, which encourages the members to facilitate their port development, harmonize their regional policies and to support private sector investments to establish a system best suited to the mutual needs of ship-owners, ship operators, port authorities, and other stakeholders (SADC 1996).

In 2012, the SADC member states had 64 on-going maritime and inland waterway transport projects. These projects are to date manifested in two centers: in Dar-es-Salaam (Tanzania) and in Walvis Bay (Namibia). In Dar-es-Salaam, the aim of the project is to develop port infrastructure through 2027, increase the number of available berths at existing ports and to install new ports at Mwambani Bay and Mbegani near Bagamoyo. In Walvis Bay, the aim is to add berths, container terminals, maintain quays, and develop marina during the next 25 years. Significant developments are also underway at Nacala, Beira, and Maputo in Mozambique,

Luanda in Angola and in the port of Durban in South Africa (SADC 2012a). Primarily three corridors are the focus of the most development. These are the North-South Corridor running north from Durban, South Africa, the Maputo Corridor running through Mozambique and the Dar-es-Salaam Corridor in Tanzania (SADC 2012a).

The private sector is much involved in this development. The sector has managed especially the construction of infrastructure, which facilitates industrial development. Ports at Dar-es-Salaam and Beira have benefited greatly from private sector investment through their connections to copper mines in Zambia and the Moatize coal mine in Mozambique. In these cases, state bodies have supplied infrastructure to be operated by private enterprises through lease-holding options. The efficacy of these public-private partnerships has encouraged interest in the region. Thus, SADC aims for similar partnerships in the further development of maritime and inland waterway transport (SADC 2012a).

To address the challenges, there is a need for further development and strategies as well as more investment to increase container terminals capacity and inland clearance depot. According to the Ntibarekerwa' presentation (2010), key challenges in these ports include insufficient container storage space, long container dwell time, rapid increase in container traffic, low performance of inland modes of transport (especially the rail lines with very low availability of wagons and locomotives), acquirement of more space for port activities, infrastructure development. Examples of the possibilities in the ports include purchasing new equipment, the use of Inland Container Depots (ICDs), developing IT systems and free port activities, restructuring the management model and improving safety, security and environment protection to meet international standards.

## 2.2. RENEWABLE ENERGY

SADC's main source of renewable energy for electricity generation is large-scale hydropower. Current potential hydro resources in the region amount to just under 41,000 MW (note that the major expansion on the Congo River is excluded from this estimation). Installed hydro capacity is just under 12,000 MW, representing about 21.5% of total electricity capacity. In this proportion, 97.6% is considered a large-scale hydro. The existing projects and those planned for development in the six riverine countries, Angola, the DRC, Malawi, Mozambique, Zambia and Zimbabwe, have a total potential capacity of 21,580 MW. Of this total, 61% is undeveloped at present. However, Lesotho, Mauritius, Malawi, Zimbabwe, South Africa and Swaziland are all actively developing small-scale and micro hydro resources (REN21 2015). Despite the large proportion of hydropower use in many SADC countries, as a return, many SADC countries are facing future water scarcity and must rely on unsustainable energy resources such as fossil fuels.

Yet, the use of renewable energy in the SADC power sector is increasing rapidly. Renewables now account for approximately 23.5% of generation, including commercial biomass and hydro. Interest in solar (particularly photovoltaics) and wind energy technologies is growing. The solar power potential of the SADC region is at approximately 20,000 terawatt-hours (TWh) per year. By comparison, current installed solar capacity is less than 1% of this figure. IRENA has estimated the wind energy potential of the SADC region to be approximately 800 TWh per year (IRENA 2015). The potential for biomass-generated electricity is estimated at 9,500 MW, based on agricultural waste alone. The use of renewable energy sources in transport is also growing, despite that this development is narrowed to the immediate future due to the use of ethanol and biodiesel for transport fuel. This is an established practice in Malawi and Zimbabwe, in addition to Angola, Mozambique, South Africa, Swaziland and Zambia, who have established mandates for regular blending of ethanol and biodiesel with fossil fuels. Moreover, South Africa has developed a progressive strategy which includes both biofuel substitution and increased efficiency in transport (REN21 2015).

The SADC region faces challenges such as access to energy, health and environment, energy security, infrastructure and financing. For example, fuelwood cutting creates the most severe health and environmental concerns as it has impacts the deforestation process. The persistent use of biomass for cooking and heating in the domestic sector affects indoor air quality and further to the health of populations using these fuels. Therefore, more than 153,000 people die each year from household air pollution in the member states, caused mainly by burning of solid fuels for cooking. Moreover, according to the statistics of 2013, The SADC region barely fulfilled its energy demand as the peak power demand was 53,8 GW against

the available capacity of only 51.7 GW, meaning that 96% of the requirement was fulfilled, with Angola being the only country fulfilling its energy requirements. Due to the differing size of the systems, South Africa accounts for nearly 80% of the total available energy capacity of the region, while the smallest systems in Lesotho and Swaziland account just over 0.1% (IRENA 2015). Overall, it might be said that whereas energy security was a key issue driving the formation of SADC in 1980, it remains critical also today (REN21 2015).

Importantly, several member states and their utilities have reduced the demand for energy as a means of energy efficiency and have thereby delayed the requirement for new generation capacity. For example, replacing incandescent bulbs with compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) can reduce demand during peak evening hours, as can the introduction of solar water heaters or the use of hot water load control (REN21 2015).

## 2.3. AUTOMATION

As mentioned before, the port industry is an important sector for many SADC countries in terms of their economic development. However, the lack of automation capacity in ports creates accidents and delays and higher operational costs, which again cause billions of loses in trade. In turn, a reduction in delays could at its best boost the capacity especially of the three busiest corridors: 1) the Trans-Kalahari Corridor (TKC), between Namibia, Botswana and South Africa; 2) the North–South corridor (NSC), between Tanzania and South Africa; and 3) the Maputo Corridor, between Mozambique and South Africa and potentially lift the value of their trade by a “billion” (Greve 2015).

The lack of automation creates barriers in harmonization of regional maritime protocols and affects the further integration attempts of the region. The reasons for not being able to inherit these protocols and conventions are mainly the lack of technological capacity and lack of trained staff and know-how to operate this future improved technology. Other challenges include dual memberships, lack of infrastructure to implement e.g. OSBP (One Stop Border Post), a lack of a regional implementation plan, implementation deadlines and a lack of monitoring mechanism for the regional instruments (AECOM 2011). For example, for Lesotho, the lack of automation is a huge barrier for risk management (AECOM 2011).

In 2011, only two countries, Malawi and Tanzania, were connected to the Revenue Authorities Digital Data Exchange (RADDEx) system established in 2010 as Namibia and Botswana were given a cloud computing network in cooperation with Microsoft (AECOM 2011). In 2011, Eight Member States used the Automated System for Customs Data (ASYCUDA), two use Trade Information Management Systems

(TIMS), one used CAPE/TATIS (customs automotive processing entries), one used CMS, and one was not automated. In terms of network, eight used WAN, one used LAN, and two used both LAN +WAN. However, in the financial sector the potential of automation has been received positively and with curiosity among regional finance professionals, among countries like Zimbabwe. Automation in this sector gives firms a geographical flexibility and thus an ability to collaborate efficiently across borders. Automation also creates trust, as updated technology reduces the risk for fraud and further, enhances national business transparency (CaseWare Africa 2018).

## 2.4. MACHINERY AND INFRASTRUCTURE

In many member states of the SADC, substantial private and public investments have been made to construct and update infrastructure because of past civil conflicts and political upheavals of these countries. The past conflicts have caused mismanagement of the infrastructure, especially related to road and water and electricity infrastructure. However, despite the positive gains of private sector involvement, funding and technical capacity are lacking for maintenance and rehabilitation of the region's roads, railways, ports, and airports, which are a high priority of many member countries' political agenda. Rural areas still struggle with accessibility issues and this affects the huge portion of population living in these areas. Moreover, development of transport infrastructure and its increased utilization may negatively influence the environment and sustainability (SADC 2012c).

Investment in water supply infrastructure is extremely important to ensure industrialization and economic development in the SADC region. This is also well recognized by the region, as there are more than 16 different policy, strategic, and regulatory frameworks dedicated to effective water use (list available at: https://www.sadc.int/themes/infrastructure/water-sanitation/). There are 15 shared river basins in the SADC region, with only six are functional or in operational phase.

Zambezi River is the border between Zambia and Zimbabwe. Photo: Rieke Homeyer.

All SADC member states share one or more river basins with exception of the oceanic member states. According to the SADC, out of 300 million people in the region, only 60% have access to clean drinking water (APA News 2018). Investment opportunities in water infrastructure development in the SADC area include: irrigation, hydropower generation, water supply and sanitation and water use efficiency (e.g. metering, leak detection and reducing unaccounted for water). Also, water storage capacity in the SADC region is still very low compared to other regions (Makube 2012).

An efficient transport system is the key for stronger integration among the SADC states. Although the transport network in Southern Africa (e.g. roads, railways, ports and airways) currently meets the demand of most users, the use of this network will exceed its current capacity due to the development of the economies in the region. For example, by 2030, traffic for landlocked SADC countries will increase to 50 million tons, reaching to 148 million tons by 2040, with an 8.2% annual growth rate (SADC 2012c).

Waste management, pollution, inadequate access to sanitation services and poor urban conditions are some of the major challenges to development in the SADC. Waste management is particularly one of the priority issues affecting the region. Especially due to rapid urbanization, most SADC cities are now battling the problem of high volume of waste, low capacity to manage this waste and the handling costs. Furthermore, these cities lack proper disposal technologies and methodologies, inadequate manpower and insufficient equipment. With the problem of inefficient law enforcement, this results in illegal dumping of domestic and industrial waste. This has a detrimental impact on health and the environment. Information about the kinds of waste and amounts generated in the SADC member states is not collected nor reported routinely. However, SADC has taken steps to change this through regional programs (SADC 2012d).

At the household level, waste consisting of biodegradable materials, paper, gravel, metal and glass are recoverable, reusable and recyclable. Plastic recycling is increasingly a focus because discarded plastic can create serious problems, block drains and cause flooding during the rainy season. Because of blocking, water may stagnate, and this creates a breeding ground for mosquitos which might spread malaria. Open-burning of plastics generates toxic fumes further posing health risks (SADC 2012d).

## 2.5. ICT

New information and communication technologies, such as expanded voice telephony, undersea fiber optic cables, and constant worldwide internet access have a crucial role in supporting stronger regional integration and economic development of the SADC region (SADC 2012b). SADC has recognized the need for ICT development for example by passing its Declaration on Information and Communication Technologies in 2001 which sets out the broad policy for the region, and the Regional Infrastructure Development Master Plan of 2012, which sets out priorities for new infrastructure through 2027, and the SADC Customs Information Communication Technology Strategy of 2012. The Latter recognizes the importance of ICT in customs modernization. According to the SADC ICT Strategy of 2012, the overall target is to be the leading and seamlessly interconnected customs ICT environment within Southern Africa (SADC 2013).

**Internal strengths** in the ICT sector include political and economic stability in the Southern African region, traders who are ICT receptive, national stakeholder partnerships, existence of bilateral initiatives and ongoing regional initiatives, existing strategic partnerships, the latter meaning potential for expansion. **Internal weaknesses** include varying levels of technological development and infrastructure between member states, their differing data structure, multiple memberships of member states in regional communities, lack of regional ICT policy approach, poor turnaround times in exchange of information and poor mechanisms for addressing issues. **External opportunities** include readily available policies and frameworks (excluding unchartered waters), possible joint development effort with COMESA (and possibly East African Community (EAC), for a transit management system, the advancements in technology such as Service Orientated Architecture (SOA) allows easier exchange of data, and leverage with the SADC Organ WAN project. **External threats** include transnational crime and cyber-attacks (SADC 2013).

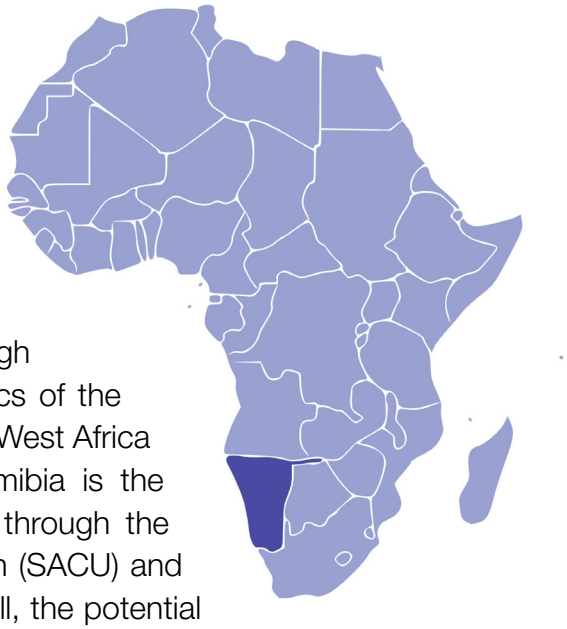
A more detailed description of different member states' ICT technologies in terms with telecommunication infrastructure may be found from Annex 1.

Constant worldwide internet access supports also economic development. Photo: Pixabay.

# 3. GENERAL REVIEW – COUNTRY CASES

As mentioned in the introduction, the main objective in the project is to support Central Baltic company sale initiatives and their aims to enter the Southern African markets. The African countries in this report were selected according to their business potential to CB countries, including Namibia, South Africa, Angola, Mozambique and further the landlocked countries Botswana and Zambia. Next, these countries are analyzed in more detail under the themes of SME Aisle represented in the previous chapter. As mining, education and tourism sectors play an important role in many countries listed here and are also linked to SME Aisle themes, they are included in some cases in the analysis.

## 3.1. NAMIBIA



Namibia is Africa's most sparsely populated country and has vast open space, with a total surface area of 824 269 km². Namibia is known for its post-independent stability after 1990, when it gained independence from South Africa. Before that it was under the rule of Germany which took control of the area in the late 1800s. Although Namibia is a multi-party democracy, the party-politics of the country has been led in practice by one party, South-West Africa People's Organisation (SWAPO) (BBC 2018a). Namibia is the leading advocate of regional economic integration through the memberships of the Southern African Custom Union (SACU) and SADC. While the size of the domestic market is small, the potential of regional markets of these memberships ensures access to a market of over 55 million and 300 million people, respectively. The combined GDP is more than US$ 200 billion and US$ 662.7 billion, respectively (NamBizOne 2017a).

Namibia is situated favorably in geographical terms on the south-western coast of the African continent bordering with Angola, Botswana, South Africa, Zambia and Zimbabwe. Thus, it is in a good position to become the transport and logistics hub in Southern Africa. The port of Walvis Bay is in an ideallocation for shipments to and from Europe and the Americas. Namibia has well-developed ports, well maintained road infrastructure and other favorable conditions and, as the SADC region currently relies heavily on South African ports or underdeveloped and overfilled ports in other countries in the region and this creates possibilities for Namibia to grow economically and develop (NamBizOne 2017a). To do successful business in Namibia, it is helpful and strongly recommended (though not required) to have a local presence or a local partner.

However, Namibia is among the countries with the worst income disparities in the world and in 2015, the adult prevalence rate of HIV was estimated to be 13.3%, according to UNAIDS. Moreover, despite high unemployment, there is a critical shortage of skilled labor. Although there is no local participation requirement for foreign investments except in the natural resource sectors (primarily mining and fishing), the government actively encourages partnerships with historically disadvantaged Namibians. Due to ongoing government land reform efforts, foreigners are generally prohibited from purchasing agricultural land. Employers often cite productivity as one of their major challenges. The process for obtaining work permits for foreign employees is bureaucratically burdensome and time consuming. As in much of southern Africa, the demand for electricity outstrips domestic supply (Export.gov. 2018a).

Also, shortage of water is a prevailing issue in the country and affects businesses especially in the central part of Namibia, such as in the capital Windhoek area.

Table 1. Namibia: Doing business rankings 2018.

| **Namibia: Doing business rankings 2018** | |
|---|---|
| The ease of doing business | 106/190 |
| The ease of starting a business | 172/190 |
| Dealing with construction permits | 107/190 |
| **The ease of getting electricity** | **68/190** |
| The ease of registering property | 175/190 |
| **The ease of getting credit** | **68/190** |
| **Protecting minority investors** | **89/190** |
| **The ease of paying taxes** | **79/190** |
| The ease of trading across borders | 132/190 |
| **The ease of enforcing contracts** | **59/190** |
| The ease of solving insolvency | 123/190 |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on the data of 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## PORTS AND MARITIME

The Port of Walvis Bay on the Atlantic coast has become the preferred African West coast port and logistics corridor for southern and central African logistics operations. The Walvis Bay Port is being expanded (from 350,000 TEUs to 750,000 TEUs per year) and this has raised high expectations about the positive effects of the expansion among major shipping lines. Other plans include the expansion of the Lüderitz Port and strengthening of its connectivity with the Northern Cape Province of South Africa in terms of economic activity. Potential transport cargos for Lüderitz are manganese ore, zinc products, zinc ore and ingot of zinc, and fruit, table grapes and dates (NamBizOne 2017a).

The cargo handling volume at Lüderitz Port could currently be exceeding 500,000 tons. The plans of developing a Master Plan for the International Logistics Hub for SADC Countries in Namibia is underway and is expected to be completed by 2025. It is stated that all elements related to transport and logistics (road, railway, maritime & port and aviation), should be aimed to be up to "international standards" to transform Namibia into an international logistics hub. Namibia is also strategically placed to take advantage of the air transport industry. Plans are underway to expand the country's international airport at Windhoek while the Walvis Bay airport has recently been extended to allow larger planes to land there (NamBizOne 2017a).

There are about 20 different commercial fishing species available in Namibia's 200 nautical mile Exclusive Economic Zone (EEZ)'s. These are namely pelagic species (pilchard, anchovy, horse mackerel and mackerel) and lobster along the shallower onshore waters on the continental shelf, as well as large pelagic species including adult mackerel, demersal hake and other deep-sea species (monkfish, sole and crab) in the waters further offshore. Out of the 20 fish species commercially exploited in Namibia, eight species are regulated through TACs (Total Allowable Catch). Resources available in quantity for export are horse mackerel and hake. Namibian horse mackerel is the dominating species in terms of volume in the Namibian waters. It contains only 3% to 8% body fat, it is both healthy and highly nutritional as well as a vital staple food source for many nations in the region. Hake products are of good quality and increasingly in demand in the EU and other international markets for the catering and retail markets (FAO 2007).

The orange roughy is another marine resource of Namibia. This "diamond of the sea" is a rare, high-priced addition to Namibia's exports in this sector. Namibia

has become the world's second largest supplier of Orange roughy, however the catches of the species have been small in recent years. Besides the marine captured fisheries, Namibia also has a small but vibrant aquaculture sector. Marine aquaculture enterprises currently produce abalone, oysters, mussels and seaweed in the Luderitz sea lagoons and the salt-ponds of Walvis Bay and Swakopmund. Inland captured fisheries exist in the north-east and north-west of Namibia, where various types of tilapia species and catfish are harvested from rivers and flood plains. Commercial freshwater aquaculture of tilapia and catfish is also undertaken (FAO 2007).

However, although being one of the most important sectors for the Namibian economy, the fishing sector is also a significant energy consumer. Energy issues such as security of supply and energy efficiency are becoming increasingly important for the Namibian fishing industry due to the rising costs of energy in the country (VTT 2016). This creates opportunities for businesses. Other opportunities in this sector include port-related services, cargo handling facilities, warehousing & distributing, corridor projects, cruise ships and value addition projects.

The Namibian government has also started to recognize the potential of the shipbuilding industry in job creation especially in the fishing sector. For example, in year 2017, the first post-independent shipbuilding project was launched, which entailed a new fishing vessel, ordered by the Tunacor Group Limited in Namibia from a Spanish Shipyard (Namib times 2017).

**Important actors in ports and maritime:** Namibian Ports Authority (NamPort), Walvis Bay Corridor group, the Ministry of Works, Transport and communications, Ministry of Fisheries and Maritime Resources, EBH Namibia (Pty) Ltd.

## ENERGY

Namibia is currently under pressure to provide enough electricity for the needs of future economic growth. This is due to rising domestic consumption, dependency on electricity imports, peak power challenges, transmission congestion on the import corridor and the declination of surplus generation capacity in the SADC, which has traditionally secured power supply and projected electricity demand in Namibia. Presently 61% of Namibia's energy is imported, as local generation produces 39% of electricity. Namibia's total electricity demand is currently estimated at 600 MW per annum and this demand is expected to grow at about 5% per annum. The country's total generation capacity delivers approximately 400 MW, thereby the deficit is about 200 MW.

The Namibian market currently operates on a Single Buyer Model whereby the state parastatal NamPower is the generator as well as the single buyer of electricity. The power utility Nampower is seeking alternative power generation sources and has therefore started various projects aimed at ensuring that the country has a reliable supply of electricity. This creates opportunities for Independent Power Producers (IPPs). Current generation facilities and their generation capacity are Ruacana Hydropower Station (332 MW), Van Eck Coal Power Station (108 MW), Paratus Diesel Power Station (24 MW) and Anixas Power Station (22.5 MW) (NamBizOne, 2017b). To date, Namibia has escaped any large-scale power outages and load shedding, but it remains heavily reliant on buying electricity from South Africa (Export.gov. 2018g).

The Namibian Government remains committed towards providing electricity to all educational and health facilities, and to all households, especially rural households. Under the Harambee Prosperity Plan, the government wishes to increase local electricity generating capacity from 400 MW to 600 MW, assure the provision of electricity to all schools and health facilities by 2020 and to increase the rural electrification rate from 34% in 2015 to 50% by 2020. The country's oil and gas industry is still in its infancy, with the discovery of non-commercial volumes of oil in 2013. Based on geological data, there are still considerable reserves in the offshore basins of Walvis Bay, Lüderitz and the Orange River and the onshore basins of Namib in northern Namibia (NamBizOne 2017b).

The wind energy potential in Namibia is high, especially in its coastal area Lüderitz and Walvis Bay. In addition, solar radiation maps indicate that the country has proven solar resources which are particularly suited for solar energy projects, for example concentrated solar power (CSP). Passive solar water desalination plants are also a possibility in the mining and agricultural sector as water is a scarce resource in Namibia. Due to the high dependency on imported electricity from the

neighboring countries through a decentralized national grid, the use of solar energy offers investors an opportunity to decentralize the electricity distribution network. Moreover, Namibia is gradually developing innovative off-grid projects, such as the Gobabeb Training and Research Station, a solar PV installation of 26 kW and two diesel generators of 50 kVA (REN21 2015).

The following options for renewable energy procurement are offered in Namibia: renewable Feed-in Tariff (REFIT) scheme, net metering program and the competitive bidding system. The REFIT scheme permits private investors, IPPs and covers renewable energy-based projects with capacities between 500 kW and 5 MW. The scheme is targeted to investors who are interested in procuring, owning, and operating medium-scale electricity generation facilities. An interim 70 MW REFIT program is running whereby twenty-seven participants are pursuing fourteen 14 IPPs (solar PV, wind, and biomass) 5 MW generation licenses under the current program. The Net metering program is designed according to a private ownership model whereby small-scale renewable energy projects can feed excess generated energy into the national grid. This program is limited to residential and commercial users with renewable energy technologies (such as solar, wind, water, geothermal, biomass, biogas, biofuel, or fuel cell) to systems of equal or less than 500 kVA installed capacity. The Net Metering Rules are still under promulgation. The competitive bidding system is based on national energy projects based on the government's long term renewable energy targets. Projects in this scheme are more than 5 MW and are procured through a fair and free competitive bidding system initiated by an invitation to IPPs to submit bids for a renewable energy project with a pre-determined capacity. The least-cost bidder that also fulfils the technical requirements is awarded and signed to a PPA (Power Purchase Agreement) and TCA (Transmission Connection Agreement) with NamPower. The PPA guarantees a fixed price over a certain period of time which is indexed and revised annually (NamBizOne 2017).

InnoSun solar park in Namibia.

Namibia has one of the best locations to invest in renewable energy both for domestic and regional markets. First, its connectivity to neighboring countries in terms of infrastructure enables it to become a potential net exporter of electricity. Second, there is a large regional energy market with the whole SADC region suffering from electricity shortages and Namibia is ideally placed to supply the neighboring countries with electricity.

Investment opportunities in the energy sector include debt financing and equity participation in upstream and downstream operations, power generation as IPPs, financing of transmission lines, engineering, procurement and construction as well as drilling and production and renewable energy such as wind and solar energy.

**Important actors in energy sector**: NamPower, Erongo RED, Cenored, Nored, Electricity Control Board, The Ministry of Mines and Energy, IPPs.

## INFRASTRUCTURE

Namibia's well-established road infrastructure is considered one of the best on the continent. The road network compromises more than 44,500 km and most towns and communities are reachable through this network. Namibia links with Angola, Zambia, Zimbabwe, Botswana, South Africa and the Democratic Republic of Congo via the road network. In addition, Namibia has 4 corridors; Trans-Kalahari via Botswana, Trans-Caprivi, Trans-Cunene via Angola to DRC and Trans-Oranje via South Africa that links to the SADC countries. Especially the Trans-Kalahari road provides a comfortable road link between the Namibian Port of Walvis Bay and to landlocked neighboring countries. This corridor stretches over 1,900 km along Walvis Bay-Windhoek-Gaborone-Johannesburg/Pretoria and is supported by a railway line from the Port of Walvis Bay to Gobabis (via Windhoek), where there are transshipment facilities, and continues from Lobatse in Botswana. It is complemented by the Maputo Corridor on the east coast of Africa stretching all the way over the entire breadth of southern Africa (NamBizOne 2017a).

Also, the government is upgrading the railway network to double the volume of cargo transported between Walvis Bay and Kranzberg, Kranzberg and Oshikango, and Kranzberg and Windhoek. At the moment, the government is rehabilitating the track between Kranzberg and Tsumeb. The need to upgrade highways is motivated by the intention to reduce shipping times for imports and exports from the neighboring countries to the markets of Western Europe and the Americas by at least five days compared to the traditional routes in southern Africa. The government of Namibia has also committed to upgrading 1,480 km of roads over the next five years. This will improve accessibility across the country. However, despite the extensive road network, most of the country's road infrastructure has been in existence prior to independence and are in urgent need of rehabilitation and maintenance (NamBizOne 2017a).

Namibia is an arid country that is regularly afflicted by droughts. The expansion of industrial and agricultural activities, in addition to the population growth in the urban areas, continues to put pressure on water resources. Droughts and the lack of water resources are estimated to remain critical for the next coming years. The bulk of water supply in Namibia is sourced from the Hardap, Von Bach, Swakop, Goreangab and Naute dams. Other small dams are the Omatako, Friedenau, Otjivero and Oanob dam. These are supplemented by perennial rivers on the borderlands of Namibia's far north and south. However, these rivers are far away from the population centers, hence water supply is critical in most parts of the country especially the central part which includes Windhoek (NamBizOne 2017a). The state parastatal NamWater is the only bulk water supplier in Namibia and is currently under great pressure to meet the future water demand. In addition to the water shortage, there is an urgent need to rehabilitate and maintain the water infrastructure, such as pipes, in many cities, such as Walvis Bay.

Despite the good transportation infrastructure in general, massive investment opportunities still exist in this sector, such as railway development and linkage, cargo handling facility, warehousing and distributing, corridor projects, truck stop facilities, value addition projects, flood and rainwater harvesting, seawater desalination plants, groundwater (borehole drilling) and constructed pipelines to transport water over large distances.

**Important actors in infrastructure sector:** NamWater, Ministry of Agriculture, Water and Rural Development, Ministry of Works, Transport and Communications, the Namibia Airport Company (NAC), TransNamib Holdings LTD., NamPower, Municipality of Walvis Bay.

The road between Swakopmund and Walvis Bay in Namibia.

## MANUFACTURING

Manufacturing activities in the country are concentrated in the subsectors of meat processing, fish processing, other food and beverages, and mineral beneficiation. The latter largely represents the smelting of copper and zinc ore, and the cutting and polishing of rough diamonds. Manufacturing has been identified as an economic priority in the National Development Plan as well as in the "Growth at Home" strategy with "Promotion of local value addition" being the most important feature in the strategy. The aim of Namibia's Industrial Policy is to improve export competitiveness, increase domestic production and create an enabling environment for industries. The Namibian Government has also signed various preferential free trade agreements with several countries, including those in the SADC region. This creates possibilities for the country's manufacturing sector to engage in the production of other manufactured products which are currently not being produced, as these agreements allow for potentially larger market access for locally produced products (NamBizOne 2017c).

In addition, the government of Namibia encourages new investments and supports the existing companies in the manufacturing sector by providing both fiscal and non-fiscal incentives to the sector including Export Processing Zone (EPZ) status. It supports the companies by allowing zero corporate tax to manufacturing investors meeting the EPZ criteria, providing direct subsidies to local SMEs to acquire machinery and offering tax-related subsidies in the form of exemptions. It promotes small and medium-sized enterprises in rural and urban areas to enhance labor intensive light manufacturing activities. It facilitates access to export markets for locally produced products through various export development programs which are to promote the export of manufactured products in the region and to the rest of the world. It also provides Investor aftercare through technical advisory and policy advocacy activities to continuously improve the business environment. At last, it is the signatory to various bilateral and multilateral trade agreements which ensure wider regional and international markets access (NamBizOne 2017c).

Namibia's manufacturing sector has considerable investment potential as the domestic economy is based on natural resource factors such as raw materials, abundant land, and rich minerals. Currently, Namibia does not have its own steel production facilities and thus, it is fully dependent on imports mainly from South Africa. There has been a willingness to develop the Namibian steel manufacturing industry to meet the needs of the domestic market, foster the metal products manufacturing sector, develop linkages into other sectors such as the construction industry, as well as establish steel exports to neighboring countries (NamBizOne 2017c).

The Namibian automotive sector is still at a rather early stage of development. The value chains are relatively short and not very deep. Namibia Press and Tools is an established automotive supplier based at Walvis Bay manufacturing engine parts for various European car manufacturers, such as Volkswagen, Audi, BMW, Renault, and Opel. Most other enterprises are active in the automotive after-market (such as repair services, engines refurbishing, panel beaters, tooling, outdoor accessories, and tire services). Windhoeker Maschinenfabrik (1998) (PTY) Ltd has some experience in manufacturing vehicles, however it concentrates more on military and agricultural vehicles (NamBizOne 2017c).

The domestic chemical industry remains in its infancy and is largely restricted to manufacturing of cleaning and painting products, while a large share of Namibia's raw materials is exported to neighboring countries for further value addition. Chemicals and chemical products constitute approximately 8% of the total value added from the manufacturing sector. However, there is potential in expanding Namibia's chemical industry, especially in the salt value chain. Namibia is a significant producer of salt in Sub-Saharan Africa and the local arid coastal climate with evaporation significantly exceeding precipitation creates a favorable environment to produce cheap solar salt (NamBizOne 2017c).

Other potential target markets for investments include jewelry, the food industry, leather, wool and textiles.

**Important actors in manufacturing sector:** The Namibian Manufacturers Association (NMA), Bank of Namibia, Development Bank of Namibia, Namibia Agricultural Union, Namibia Agronomic Board, Namibia Chamber of Commerce and Industry, Namibia Competition Commission, Namibia Development Corporation, Namibia Employers' Federation, Namibia Investment Centre, Namibia Logistics Association, Namibian Standards Institution, Namibia Trade Forum, National Planning Commission, Ministry of Finance, Ministry of Trade and Industry, SME Bank, SME Compete, Team Namibia.

In Sub-Saharan Africa, Namibia is a significant producer of salt. Photo: Pixabay.

## ICT

Namibia has invested in the modernization and expansion of telecommunications. For example, International satellite services link Namibia to telecommunication services worldwide. Namibia has a digital telecommunications infrastructure, which covers 98% of the country and provides direct dialing to most places in the world. Namibia has cellular coverage in most towns, and road coverage along virtually all of the major routes in the country (NamBizOne 2017a). Moreover, mobile subscriptions are recorded at over 119 per 100 inhabitants. The number of active mobile broadband subscribers increased from 1.5 million to 1.6 million from June 2016 to June 2017, which means that more people are using internet via their mobile phones (Mamabolo 2017).

Telecom Namibia Ltd is Namibia's national communications operator. Namibia's cellular network service providers are MTC, operational since 1995, and Leo, previously known as Cell One, which was re-launched in October 2009. Telecommunications operators have installed fiber optic cable technology across the country. The newly established Communication Regulatory Authority (CRAN) regulates the Namibian communications, broadcasting and postal services (Namibia Investment Center 2016).

Challenges in this sector include the scarcity of electricity infrastructure in semi-urban and remote rural areas and insufficient telecommunications backhaul infrastructure in very remote rural areas. Also, Namibia has a low ICT literacy rate which hinders the uptake of e-commerce and internet access and the limited internet access points in public facilities, especially in rural areas. This in turn hinders the potential of the sector. For the ICT sector to create economic opportunities for an inclusive society it is necessary that ICT services must become affordable to the users. In this regard, Research ICT Africa has rated Namibia as the second cheapest country within the SADC region offering low cost prepaid mobile broadband data (Mamabolo 2017). Training and youth involvement are also both important and bringing opportunities to the sector as youth unemployment is a major issue in the country.

**Important actors in ICT sector:** Telecom Namibia, MTC Namibia, TN Mobile, Ministry of Information and Communication Technology, the CRAN, ICT Professionals Association of Namibia (ICTPAN).

## TOURISM

The tourism sector is the fastest growing sector in Namibia and the most competitive in the world. It is also one of the prioritized sectors in NDP4 and the Harambee Prosperity Plan. The sector has proven to be a valuable industry to Namibia, as it makes considerable direct and indirect contributions to GDP as well as acts as a substantial employer, especially in the rural areas, and thereby reduces rural poverty. Namibia's tourism industry gives it a comparative advantage as a low population density and good environmental management have led to the preservation of scenery and increased wildlife populations. Namibia is ranked 4th in Africa by the World Economic Forum Travel and Tourism competitiveness report 2015 and one of the world's most scenically magnificent countries, ranked 5th in the world by Traveler News 24 (2015). Namibia offers vast open spaces, abundant and diverse biodiversity and wildlife, rich cultural diversities and valuable traditional knowledge (NamBizOne 2017c).

The Namibian tourism sector offers numerous opportunities for investment through direct investments or joint ventures with entrepreneurs in Namibia such as business tourism investment in the form of Business Tourism Centers, modern IT-smart and multipurpose hotels with first-class service, recuperation (health or medical tourism), cultural tourism which offers significant potential throughout Namibia, conference facilities and sport or adventure tourism against the backdrop of Namibia's wilderness areas.

**Important actors in tourism sector:** Ministry of Environment and Tourism, The Namibia Tourism Board, Air Namibia.

## BUSINESS OPPORTUNITIES IN NAMIBIA

- **Maritime**: the fishing industry, especially energy and water sectors, port-related services; cargo handling facilities, warehousing & distributing, corridor projects, shipbuilding (e.g. cruise ships) and value addition projects.
- **Energy**: debt financing and equity participation in upstream and downstream operations, power generation as IPPs, financing of transmission lines, engineering, procurement and construction, drilling and production and renewable energy such as wind and solar energy.
- **Infrastructure**: railway development and linkage, cargo handling facility, warehousing and distributing, corridor projects, truck stop facilities, value addition projects, flood and rainwater harvesting, seawater desalination plants, groundwater (borehole drilling) and constructed pipelines to transport water over large distances.
- **Manufacturing**: value addition projects, chemical industry, especially in the salt value chain, jewelry, the food industry, leather, wool and textiles.
- **ICT**: training and youth involvement, insufficient telecommunications backhaul infrastructure in very remote rural areas, solutions for power generation.
- **Tourism**: direct investments or joint ventures; Business Tourism Centers, modern IT-smart and multipurpose hotels with first-class service, recuperation (health or medical tourism), cultural tourism, facilities and sport or adventure tourism.

Construction work in the city of Windhoek, Namibia.

## 3.2. SOUTH AFRICA

South Africa (SA) is the southernmost country in Africa. Its economy is said to be the most advanced economy on the African continent. Its merits are a sophisticated financial system, one of the top 10 stock exchanges in the world, and well-developed infrastructure in energy, transport and telecommunications. Also, the country inherits sound macro conditions and robust financial and legal frameworks (Institute of export & international trade 2017). South Africa is the 2nd fastest growing region in the world with an average growth rate of around 5% a year (Institute of export & international trade 2017). Corporate tax and VAT in the country are considered affordable (For example VAT percentage is currently 28). In addition, over 30 airlines are flying to SA (Institute of export & international trade 2017).

South Africa was ruled by a white minority government up until 1994 and separation of races was prevalent under the policy “apartheid”. After decades of international isolation, armed opposition and mass protests, the apartheid government eventually negotiated itself out of power. Since then, the African National Congress (ANC) has long remained the ruling political party, which enjoys relative trust in polls (Institute of export & international trade 2017). The democratically-elected leadership encouraged reconciliation and addresses imbalances, but the economy has struggled, and social inequality remains (BBC 2018b).

South Africa’s business environment has its challenges. Challenges include cultural diversity, a skill deficit, poor labor relations, and lack of electricity and corruption (Institute of export & international trade 2017). However, these challenges are already being addressed by the government of South Africa, for example in terms of powerful interventions in policy forms such as the National Development Plan and the New Growth Path, which aim to provide a strong blueprint for tackling these issues. The country has also improved in a range of other areas such as starting a business, registering property, trading across borders, enforcing contracts and paying taxes (Institute of export & international trade 2017). Diversity also creates opportunities to businesses. Penetration of SA companies into other African countries makes business easier, which includes finding local partners in third country markets.

Table 2. South Africa: Doing business rankings 2018.

| **South Africa: Doing business rankings 2018** | |
|---|---|
| **The ease of doing business** | **82/190** |
| The ease of starting a business | 136/190 |
| **Dealing with construction permits** | **94/190** |
| The ease of getting electricity | 112/190 |
| The ease of registering property | 107/190 |
| **The ease of getting credit** | **68/190** |
| **Protecting minority investors** | **24/190** |
| **The ease of paying taxes** | **46/190** |
| The ease of trading across borders | 147/190 |
| The ease of enforcing contracts | 115/190 |
| **The ease of solving insolvency** | **55/190** |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on the data of 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## PORTS AND MARITIME

The marine cargo industry in Africa will boom within the next few decades and the sector has showed steady growth in South Africa as well over the past years. This industry thus offers great opportunities to countries and importing and exporting companies. For example, in August 2016, over 19 million tons of cargo was handled in South Africa's eight commercial ports. In addition, intra-African trade is expected to grow by 715% over the next 35 years to the year 2050 (Institute of export & international trade 2017).

Moreover, various ports in South Africa are implementing projects, which offer business opportunities. For example, Richard's Bay Safety-critical, environmental and legal compliance projects are planned to be carried out, which signifies the added need for expertise in these areas. The port is also looking at developing opportunities in oil and gas, ship/rig repair and maritime vessel building. Port Elizabeth serves the immediate area of the Eastern Cape, where its main business focuses on the needs and requirements of the motor vehicle and components industry as well as various agricultural products. Due to the aims of expansion of South Africa's manganese export capacity, the port is exploring the untapped market of boat building in the niche market of tug boats and navy vessels. There are also plans to develop a cruise terminal in the Port of Cape Town and other development projects in the Durban Port. For more detailed information visit Export.gov. 2018b.

In general, there are no specific restrictions on foreign participation in port projects. However, the Broad-Based Black Economic Empowerment (B-BBEE) should be considered when conducting business in South Africa. The B-BBEE Act No. 53 of 2003 and codes of good practice issued aim at promoting the participation of black South Africans in the ownership and management structures of enterprises. The act provides that every organ of state and public entity must consider and apply any relevant code of good practice in developing and implementing a preferential procurement policy (for more details see the Rebublic of South Africa (n.a.). Other legal considerations in ports may be found from GTDT 2017).

Approximately 13 000 vessels stop at South African ports every year. Currently inspections, ship repair, maintenance, modifications, ship building and other related services, taking place at the 6 major ports, have a service potential of upwards to 2500 vessels per year based on the facilities and skills available. Green shipping opportunities include alternative bunker fuels such as LNG and hydrogen as well as hybrid systems including electric engines waste management facilities and systems, programs for environmentally sustainable shipping operations along South African waters and in ports, emission abatement technologies and emission control. Moreover, local ship builders are interested in partnering with companies offering design services, materials and components to build more efficient vessels for the local and African market (ÅKP 2016).

**The important actors in ports and maritime:** The South African Maritime Safety Authority (SAMSA), The Minister of transport, Transnet National Ports Authority (TNPA), The Department of Home Affairs, the Minister of Environmental Affairs, Transnet, The SAASR (The South African Association of Ship Builders and Repairers), Southern African Shipyards.

Port in Cape Town, South Africa. Photo: Rieke Homeyer.

## ENERGY

The electricity sector in the country is dominated by the state utility Eskom, which is responsible for most of generation, transmission and distribution of electricity. There are 137 municipal power companies that buy 40% of electricity generated by ESKOM to supply to end-users. These companies hold negligible generation capacity. Currently, generation is dominated by coal power, but this is expected to be changed due to anticipated increasing investments in gas, renewables and nuclear power. The energy markets in South Africa are characterized by large IPP markets and in the future, it is expected that these markets contribute 30% of South Africa's future generation capacity. SA is a member of the South African Power Pool (SAPP), which means that it is both importing and exporting power from and to its neighbor countries (RECP 2018).

The electrification rate in the country is comparatively high, standing between 85% to 90% (RECP 2018). The country's peak demand has been 34,481 MW in 2015/2016 with ESKOM transmitting and distributing 214,487 GWh to South African customers. Most of the electricity is sold to municipalities (42%) that distribute electricity to end-users, to industrial consumers (23%) and mining (14%). As the economic growth in the country has been moderate in recent years, the growth in electricity demand has been low, about 1%. As a result, the electricity demand forecasts have been revised downwards, estimating peak demand of approximately 350,000 GWh by 2030 in the draft Integrated Resource Plan (IRP) 2016, as compared to a forecast of 450,000 GWh by 2030 in the IRP 2010. Despite the current situation, the South African economy is characterized by an extreme electricity intensity compared to international standards. In addition, industrial energy efficiency in the country is on average significantly lower than in other countries. In 2015, the country suffered from loadsheddings due to drought, insufficient investment and aging infrastructure (RECP 2018).

However, South Africa has also been active in renewable energy projects. Recent project examples include the 4.4 MW Bronkhorstspruit biogas generation project, which uses methane from cow dung decomposition to fire a boiler and generator. Other examples include the generation of electricity from wood waste at pulp and paper plants in South Africa and the expanded use of surplus bagasse for power generation in the sugar industry. South Africa has also pioneered in the use of methane from municipal waste for power generation. The development of mini-grids and of distributed energy more generally is moving forward in the region. The Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) has been the key factor in the development of solar energy in South Africa, which is now a global leader in applying this technology to on-grid power supply. South Africa has led the way in wind development through its tender process. (REN21 2015).

The government is also promoting the adaptation of solar water heaters (SWH) in households and commercial buildings. According to the National Development Plan, the target is to have 5 million SWH's by 2030. South Africa is contributing to the implementation of the Mozambique-Zimbabwe-South Africa (MOZISA) transmission project to enhance the transmission network and the connectivity to neighbor countries (RECP 2018).

Investment opportunities include the coastline of approximately 3,000 km for wind power possibilities and flat terrain and high irradiation for solar power. As the east coast is tropical with large wood and sugar plantations, this creates promising bioenergy opportunities. In addition, South Africa disposes almost all of its refuse in landfill sites. It has been estimated that the total domestic and industrial refuse has an energy content of about 11.000 GWh per annum. Although South Africa is a water scarce country, opportunities in small-scale hydropower exist and have been exploited in recent years. In the future, tidal/wave power has the potential to become an important technology in South Africa especially on the southwest coast. For more detailed information visit RECP 2018.

**Important actors in energy sector:** Eskom, IPPs, National Energy Regulator of South Africa (NERSA), the Department of Energy (DoE), The Department of Trade and Industry (the DTI), Sasol, The South African National Energy Development Institute (Sanedi), PetroSA, The Petroleum Agency of South Africa, IGas, Petronet, RED's (such as municipalities).

## INFRASTRUCTURE

South Africa has a large infrastructure sector with a great demand and value for businesses overseas. For example, the Trans-Caledon Tunnel Authority (TCTA) of South Africa is currently involved in several major infrastructure projects and moreover, the transport sector is currently worth 2,9 billion US dollars. Transport infrastructure investments are especially focused on railway projects. In addition, large investments are expected in ports, terminals, bus rapid transport systems and airports (UK trade and investment 2010).

In terms of Green technology, the Industrial Development Corporation under the South African government has committed to invest close to 2 billion US dollars in South Africa's "green economy" over the next 5 years. Also, the Government has allocated over 50 billion US dollars to the sector (Business Sweden 2016). In its work, TCTA highlights consultancy, innovation and technology as their three key requirements with a focus on SIM/modelling, engineering and design, monitoring, automation (in purification), education and training and project finance support. Business opportunities include overseas knowledge, products and services to help the Trans-Caledon Tunnel Authority to achieve both the creation of the agency, primarily consultancy and in the end, the major task of improving and expanding South Africa's water sector infrastructure. (UK trade and investment 2010).

The water service sector in South Africa is characterized as large and complex because of the demographics of the sector and due to widespread and largescale transfers of water across catchments that have had to be implemented. The inland water resources include 22 major rivers, 264 large dams, more than 4,000 medium and small dams on public and private land, and hundreds of small rivers. The largest sectors in terms of water use are agriculture, forestry, industry, mining, power generation and domestic sectors. There has been a legacy of inadequate provision of water services to large sections of the South African population due to apartheid. Progress has been made in the post-apartheid era, but still, there are approximately 3 million people that lack access to clean safe water. 15 million people in South Africa (32% of the population) do not have access to basic sanitation, and about 150 thousand people still use a bucket toilet system (UK trade and investment 2010).

Private sector involvement is required in the water and waste water sector in South Africa for example in asset management, consultancy and training, design, building and operating bulk infrastructure projects. For example, it has been reported that the engineers in South Africa who produce the design information are usually over 50 years of age, which is not considered a sustainable position given the future volume of infrastructure work to be implemented in South Africa. In addition, the

Department of Water (DoW) has repetitiously required private sector infrastructure investment across the water and waste water sector. Despite the investments of the South African National Treasury, DoW reported that funds to address the backlogs required from private investment were approximately R50 billion. The South Africa Local Government Association (SALGA) specifically highlighted the waste water sub-sector as an area of serious concern. It is also stated that it would be beneficial for operators of waste water treatment plants to adopt the franchise model, specifically for the maintenance. In addition, Rand Water (one of the largest water providers in South Africa) has been looking into several potential CDM (clean development mechanism) projects that they could implement at their plants. According to Rand Water, within the next 10-20 years larger scale water transfers would need to be considered (UK trade and investment 2010).

Mining contributes 60% of South Africa's exports. The recent unrest in the mining sector has pressured government to focus on eliminating risks, improve asset utilization and upskill workers as part of the government's 2030 vision.

**Important actors in infrastructure sector:** Eskom, Transnet, Airports Company of South Africa (ACSA), Trans-Caledon Tunnel Authority (TCTA), SALGA, South Africa's Public Investment Commission (PIC), South African National Roads Agency, Cross Border Road Transport Agency, National Water Resource Infrastructure Agency (NWRIA), Department of Water and Sanitation, Rand Water.

## MANUFACTURING

The well-developed metals industry combined with the vast natural resources and a supportive infrastructure, represents roughly a third of all South Africa's manufacturing. It includes basic iron ore and steel, basic non-ferrous metals and metal products. The iron and steel basic industries involve the manufacture of primary iron and steel products from smelting to semi-finished stages. South Africa was ranked the world's 19th largest steel producing country in 2001 and it is the largest steel producer in Africa (almost 60% of Africa's total production). Primary steel products and semi-finished products include billets, blooms, slabs, forgings, reinforcing bars, railway track material, wire rod, seamless tubes and plates. Approximately 500 000 tons of ferrous-scrap were exported by metal recyclers in 2001. Imports accounted for only 5,8% of total domestic consumption of primary steel products in 2001 (Brand South Africa 2017).

South Africa's non-ferrous metal industries comprise aluminum and other metals (including copper, brass, lead, zinc and tin). Aluminum is the largest sector in the country and South Africa is ranked eighth in world production of aluminum but, as SA has no commercially exploitable deposits, feedstock is imported. Other non-

ferrous metals are small in relation but are still important for exports and foreign exchange earnings. Although the country's copper, brass and bronze industries have declined, it is hoped that new mining and reclamation technologies will allow exploitation of previously unviable deposits (Brand South Africa 2017).

The international and local steel industry has changed dramatically over the past two years. Several steel companies have fallen away, and protectionism has increased. To survive in these harsh conditions, the South African primary steel industry has taken major steps to become more efficient and competitive. Many of the local steelworks have engaged in ongoing restructuring processes and productivity improvements. For example, South Africa's largest steel producer Mittal Steel South Africa and its mining divisions were unbundled towards the end of 2001 and Saldanha Steel was 100% integrated into Iscor early in 2002 (Brand South Africa 2017).

In the global economy, South Africa is an emerging market and a leader and a competitive producer of raw commodity exports and value-added goods, such as motor vehicles. One-third of the manufacturing sector's contribution to GDP is by modern and sophisticated metal and engineering industries. The dependency of the country's economy on mining has declined and simultaneously, its degree of exposure to commodity prices (SADC 2012e).

One of the most important sectors in South Africa is the automotive industry, as many of the major multinationals use South Africa to source components and assemble vehicles for both the local and international markets. It is said that South Africa produces high quality products at prices competitive with other automotive manufacturing and assembly centers. The South African automotive and components industry is growing rapidly and is perfectly placed for investment opportunities. Vehicle manufacturers such as BMW, Ford, Volkswagen, Daimler-Chrysler and Toyota have production plants in the country, while component manufacturers (Arvin Exhust, Bloxwitch, Corning, Senior Flexonics) have established production bases in the country. The industry is largely situated in two provinces,

the Eastern Cape (coastal) and Gauteng (inland). Companies with production plants in South Africa take advantage of the low production costs, combined with the access to new markets because of trade agreements with the European Union and the Southern African Development Community free trade area. Opportunities also lie in the production of materials (automotive steel and components). Interest rates are currently at historically low levels, reducing the cost of investments. The outlook for the vehicle industry is bright in terms of both exports and the domestic market. A key challenge will be to raise local content, particularly in the vehicles now being exported in large volumes (Brand South Africa 2017).

There is also a possibility for continental expertise and the ability to act as a base for critical services, such as auditing, for doing business on the rest of the continent. Thus, South Africa may be called as a 'gateway to Africa' for investors (Institute of export & international trade 2017).

**Important actors in manufacturing sector:** Department of Trade and Industry, Manufacturing Circle, The Nuclear Fuels Corporation of South Africa (NUFCOR), Department of Agriculture, Agricultural Research Council, Department of Land Affairs, Agri SA, National Association of Automobile Manufacturers of SA, Automotive Industry Export Council, Automotive Industry Development Centre, Chemical and Allied Industries' Association, Sasol, AECI, Dow Sentrachem, SA Iron and Steel Institute, Mittal Steel, ArcelorMittal South Africa, Scaw Metals, Cape Gate, Columbus Stainless Steel, Highveld Steel and Vanadium, Cisco, Billiton (with smelters in Richards Bay) and Hulett Aluminium.

### ICT

In terms of information technology, South Africa has the biggest markets in Africa by value. The special expertise in the country includes the mobile software field, security software and electronic banking services. The ICT sector is becoming an increasingly important influencer on the growth of the country's GDP. It is considered as a regional hub and a supply base for neighboring countries. Several international organizations are operating subsidiaries, such as IBM, Unisys, Microsoft, Intel, Dell, Novell and Compaq. Most of the new fixed and wireless telecoms networks established across the continent in recent years are established by South African companies and subsidiaries of international companies. However, the country still lacks inter-city connectivity and infrastructure in rural areas. The adoption of cloud services and smart infrastructure as well as improvements in network infrastructure predict a strong growth of smartphones offsetting PC and laptop usage. As a result, the metropolitan areas have shown eagerness to connect all South Africans to the internet and to create free Wi-Fi hubs especially in townships. During the year 2016, the demand for wireless connectivity grew by roughly 19% (Institute of export & international trade 2017).

Currently there are about 10 000 Wi-Fi hotspots around the country. Still, the number of hotspots per person is below the global average (one hotspot for every 6160 South Africans, global average being one hotspot for 150 people). The industry is nevertheless growing and bringing lots of opportunities to businesses. For example, cloud computing is becoming more and more widespread due to improved bandwidth availability and its lower cost, competition of different internet providers in the market. Opportunities in cloud computing include retailing and banking and increased investments in data centers and related infrastructure (Institute of export & international trade 2017).

The growth of the IT industry outstrips the world average. The sector comprises 3000 companies and was ranked 22nd in 2001 in terms of total worldwide IT spending. The sector can be divided into three main sub-sectors: telecommunications, electronics and information technology. The telecommunications sector contributes more than 7% to South Africa's gross domestic product (GDP). With approximately 5,5 million installed fixed-line telephones, South Africa is ranked 23rd in telecommunications development in the world and represents more than 30% of the total lines installed in South Africa. Telkom, the sole fixed-line operator in South Africa, is a key player in a 630 million US dollars optical fiber undersea cable project that should serve for Africa's growing telecommunications needs for the next 25 years. The fourth fastest growing cellphone market in the world grows in an annual growth rate of 50% and, the world's leading telecommunication brands like Siemens, Alcatel, SBC Communications, Telecom Malaysia, Cell C and Vodaphone have made significant investments in the country. The industry is characterized by a handful of generalist companies with strong capabilities in professional electronics, while small to medium companies specialize in security systems and electricity pre-payment meters (Brand South Africa 2017).

Investment opportunities lie in the development of access control systems and security equipment, automotive electronic subsystems, systems and software development in the banking and financial services sector, silicon processing for fiber optics, integrated circuits and solar cells. There are also significant opportunities for the export of hardware and associated services as well as software and peripherals (Brand South Africa 2017).

Opportunities in terms of Green and Smart Ports include systems that perform complex data and information processing, deployment of innovative technology solutions that improve operational efficiencies, cyber security measures, maritime connectivity, real time port environmental monitoring and integration with port cities (ÅKP 2016).

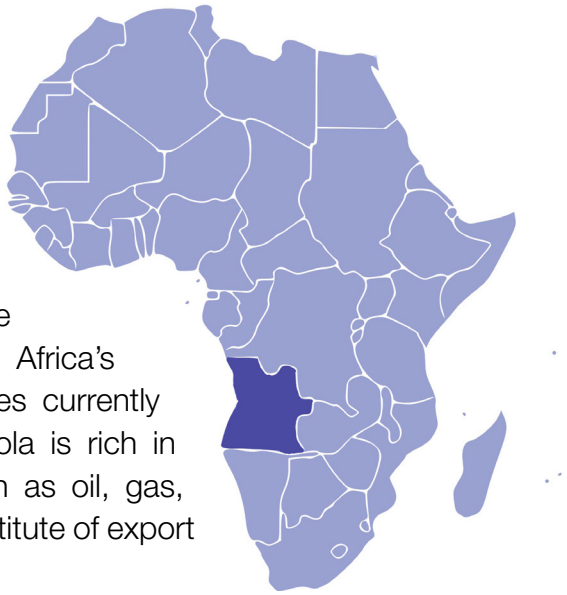
**Important actors in ICT sector:** Telkom, Neotel, Sentech, Virgin Mobile, Vodacom, MTN and Cell C, Neotel, InfraCo Africa, Seacom, Infraco, Sentech, Independent Communications Authority of SA, State Information Technology Agency.

## BUSINESS OPPORTUNITIES IN SOUTH AFRICA

- **Maritime**: green shipping opportunities; alternative bunker fuels such as LNG and hydrogen as well as hybrid systems including electric engines, waste management facilities and systems, programs for environmentally sustainable shipping operations along South African waters and in ports, emission abatement technologies and emission control, design services, materials and components to build more efficient vessels.
- **Energy**: wind and solar power possibilities, large wood and sugar plantations create bioenergy opportunities, recycling, opportunities in small-scale hydropower, in the future tidal/wave power especially on the southwest coast.
- **Infrastructure**: overseas knowledge, products and services to improve and expand South Africa's water sector infrastructure, asset management, consultancy and training, design, building and operating bulk infrastructure projects, CDM (clean development mechanism) projects.
- **Manufacturing**: automotive and components industry, continental expertise (for example in auditing).
- **ICT**: development of access control systems and security equipment, automotive electronic subsystems, systems and software development in the banking and financial services sector, silicon processing for fiber optics, integrated circuits and solar cells, technologies for complex data and information processing, deployment of innovative technology solutions that improve operational efficiencies, cyber security measures, maritime connectivity, real time port environmental monitoring and integration with port cities.

The coast of Cape Town, South Africa. Photo: Rieke Homeyer.

## 3.3. ANGOLA



Angola is the third biggest market in Sub-Saharan Africa and one of its fastest growing economies. For example, it is estimated that Angola will overtake Nigeria by 2020 to become Sub-Saharan Africa's leading oil producer with production figures currently close to two million barrels per day. Angola is rich in minerals and other natural resources such as oil, gas, diamonds, coffee, sisal, marble and iron (Institute of export and international trade 2015).

After its independence and withdrawal of the Portuguese in 1975, Angola suffered from a 27-year civil war as the rival former independence movements competed for power until 2002 (BBC 2018c). After nearly three decades of conflict, Angola has only recently started rebuilding its infrastructure, which was not taken care of during the war. In addition, institutions and human capital are weak and rebuilding is bringing huge challenges for the government. Angola's economy is almost fully dependent on revenues from the oil industry, which is responsible of a share of nearly 86% of the total GDP (Institute of export and international trade 2015).

After 30 years of war, the government has decided to support a market economy which is backed by a program of economic diversification to minimize the country's dependency on oil revenue. Thus, the Ministry of Macro Economic Coordination was created with the sole purpose of finding modern mechanisms of self-sustainability through the concept of diversification, enhancing private investment in the primary, secondary and tertiary sectors. The Ministry has also been interested in privatizing several industries and the government has passed a law permitting public-private partnership (PPP) initiatives (Institute of export and international trade 2015). In addition, the new private investment law was passed to increase the volume of private investment, both domestic and foreign, and make the investment procedure simpler and less bureaucratic (Institute of export and international trade 2015). The fastest growing sectors in Angola are oil and gas and increasingly renewable energy, construction and infrastructure and agriculture (Institute of export and international trade 2015). The economy is bolstered by abundant natural resources and it has enjoyed double-digit growth since 1990. The country has a growing middle class and a young population, 50% of which is under 21 and eager to learn.

The business environment surrounding the Angolan market is challenging. Companies who intend to invest in Angola must consider several aspects such as high costs, slow payment, lack of capacity, complex bureaucracy, ineffective communications network, language barriers and cultural norms and customs (Institute of export and international trade 2015). Portuguese is the official language in the country and comprehension/penetration of English language is one of the lowest in the world. Among business circles, some English is spoken but in the oil and gas sector nearly all senior managers speak English. However, very few support staff (such as drivers, secretaries, receptionists) speak English (Institute of export and international trade 2015).

The challenges of doing business in Angola are reflected in its ranking in the World Bank's 2018 Ease of Doing Business Survey, such as its general ranking in the list, forcing contracts, trading across borders and getting credit. In addition, corruption remains a persistent problem. Despite the considerable entry barriers in Angolan business, the returns from doing business in Angola are potentially high (Institute of export and international trade 2015). In addition, the country is showing great improvement in many areas of business.

Table 3. Angola: Doing business rankings 2018.

| **Angola: Doing business rankings 2018** | |
|---|---|
| The ease of doing business | 175/190 |
| The ease of starting a business | 134/190 |
| **Dealing with construction permits** | 80/190 |
| The ease of getting electricity | 165/190 |
| The ease of registering property | 172/190 |
| The ease of getting credit | 183/190 |
| **Protecting minority investors** | 81/190 |
| The ease of paying taxes | 103/190 |
| The ease of trading across borders | 180/190 |
| The ease of enforcing contracts | 186/190 |
| The ease of solving insolvency | 168/190 |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on the data of 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## PORTS AND MARITIME

The port of Luanda (the main port) handles about 1.5 million tons of cargo per year, mostly import cargo (1.2 million tons) half of which is containerized cargo. The goods are varied and range from wheat flour, rice or sugar and cereals or frozen cargo to construction materials and steel products. (Megalog Lda Angola 2012). Initial discoveries of oil have been made onshore in the Kwanza Basin area, but now nearly 75% of production comes from offshore, mostly deep-water. More discoveries are expected to be made in the ultra-deep water and pre-salt fields (UK trade and investment 2013).

The Angolan Ministry of Fisheries is in the process of establishing several technical training and support centers for the artisanal fishery industry as well as regional processing and cold storage facilities. In addition, several private sector aquaculture farms are under development and in its 2017 budget the Angola government earmarked 254 million US dollars for seaport infrastructure rehabilitation and construction (Export.gov. 2018c).

An increased focus on maritime security opens opportunities for companies with solutions related to coastal patrolling, search and rescue, and related communications and monitoring technologies. The Ministry of Defense in Angola takes the lead in these initiatives, with the Ministries such as Transportation (Ports) and Fisheries also taking an essential role. In 2016, an Angolan government decree formally authorized the establishment of a new National Search and Rescue Center under the Maritime and Port Institute (IMPA) involving inter-ministerial cooperation. Internal studies are underway to ensure existing infrastructure and to determine needed communication systems, equipment and training for the center. However, due to current government budgetary constraints, funding has not been allocated to implement the project (Export.gov., 2018c).

Lobito harbor is considered to be the finest and best-equipped port in the country, but it has been underutilized since corn exports from the Bié Plateau and mineral traffic from the Republic of the Congo ceased, with traffic reduced to about one-fifth of pre-independence levels. Since the cessation of iron ore shipments, Namibe's activity has been based essentially on its role as the country's major fishing port. Cabinda is the major port for loading petroleum shipments and ports Malongo and Soyo have grown in importance with the oil boom, although they have much poorer natural harbors. The lower Congo River is used by seagoing vessels up to Nóqui on the Congolese frontier, and small craft ply the lower Cuanza River for about 140 miles (225 km). Although Luanda port has relatively well-constructed harbor facilities, it has been poorly managed and by the end of the 20th century, it has handled less than half the cargo it did before 1975. Following the end of the civil war in 2002, renovation began on Luanda's port facilities (Encyclopedia Britannica 2018a).

Commercial sales opportunities exist for equipment and technology providers in the areas of aquaculture cultivation, small scale fishing equipment, fish processing, cold chain equipment and logistics services. Once Angola's economy improves and cargo levels resume back to normal, potential exists for companies in some of the technology-based areas of port operations such as those related to security, enhancing productivity and vessel tracking (Export.gov. 2018c).

Angola's maritime and shipbuilding industry has been traditionally concentrated on the offshore oil industry. However, the government has taken steps to change this situation through the known as Angolanization and through training programs for local staff. Opportunities include growing seaborne trade, large investments by offshore industry, new port developments and hinterland connections, low labour costs, dredging of rivers and ports, short sea shipping, local shipbuilding (OSVs, tugs, cargo, ferries) and training (Helenic-African Chamber of Commerce n.a.).

**Important actors in ports:** Luanda Port Authority, The Ministry of Fisheries, IMPA.

## ENERGY

The approved Private Investment Law (Law No. 20/11 of 20th May 2011) defines the energy and water area as one of the priority areas for private investment in Angola. Although substantial investments in the power sector have been made from a governmental level, the productive capacity does not fulfill the country's demand. It is estimated that currently Angola's electricity system serves 43% of the population, although the rate is expected to grow to 60% in 2025. Businesses must rely on their own generators to run their operations, mainly on diesel generators. This translates at the micro level to high operational costs and at the macro level to slow development and diversification of the local industry. Angola's current lack of capacity throughout the value chain, high downtime and the irregular supply of energy to domestic and industrial consumers is understandable after nearly three decades of civil war that only ended in 2002. Furthermore, the local authorities have ambitious development plans to merge the three independent systems that currently provide electricity to different parts of the country (Export.gov. 2018d).

Angola's transmission infrastructure includes three separate grid systems (northern, central, and southern) in addition to isolated grids in the east. The northern grid covers Luanda, Bengo, Malange, Kwanza Norte, and Kwanza Sul. The central network includes Benguela and Huambo, and the southern grid serves Huila and Namibe. There are plans to link the grids through a north-central-south backbone and expand the grid from 3,354 km to 16,350 km by 2025. Angola is currently a non-operating member of the Southern African Power Pool, but plans exist to connect to the pool through Namibia (Baynes) and the Democratic Republic of

Congo (Inga) (Export.gov. 2018e). Due to the aims of diversification of their economy, the government is offering attractive incentives to encourage companies in non-oil and gas sector (Institute of export and international trade 2015).

According to the Ministry of Energy and Water the country's power generation mix will consist of 64% hydropower (4 GW), 12% natural gas (750 MW) and 24% other fossil fuels (1.5 GW) by the end of 2018 (Export.gov. 2018a). The Angolan government has planned to modernize the infrastructure of the city of Luanda (Luanda 2030 project) and make a huge push towards renewable energies (Institute of export and international trade 2015). By the end of this decade, The Angolan Ministry of Energy and Water (MINEA) announced plans to build three major power stations of five thousand megawatts, and exploit natural gas in three major power stations with a combined cycle power plant in the north of the country of approximately 750 megawatts (MW). Under a general plan of integrated exploitation of hydro resources of the Kubango river basin, the Angolan Government has also planned to construct 30 new electricity generating units during 2015–2030. There are also restructuring plans for ENE, the national electricity company, with the possibility of selling a majority stake to a private investor. In terms of bioenergy, the government aims to reach 500 MW of energy production through biomass from forestry, agriculture, livestock and solid waste sources in the 2025 Energy Strategy. However, outside of the major Biocom sugar production project that would contribute 100 MW toward this goal, there has not been much progress in other areas of biomass project development (Export.gov. 2018e).

Angola plans to expand the national grid. Photo: Pixabay.

The water potential of the country, distributed by 47 hydrographical basins, is enough to produce 18 thousand megawatts. Nevertheless, according to data provided by MINEA, Angola currently exploits only 5% of this potential. In terms of renewable energy, the country is still very much in its infancy (Institute of export and international trade 2015). Plans to build new power stations and generating units offer major opportunities for companies with know-how in generation infrastructure, mainly based on water resources and natural gas, renewable energy technologies, with focus on wind, solar and small hydroelectric plants, economically and environmentally sustainable management of local resources (solid waste and forest residue), infusion of private capital and know-how to build and operate the sector, implementation of energy metering and monitoring systems (export.gov. 2018e).

MINEA lists the following as the key challenges: rehabilitation and expansion of the electrical power infrastructure, improving the quality and reliability of power supply, improving the financial performance of the power and water utilities, reducing the state subsidies to the power utilities, increasing the access of the population throughout the country to electricity supply, increasing the supply-side to meet the demand, interconnecting the country's three main power systems (northern, central, southern), interconnecting the country to its neighbors SAPP and Central Africa Countries (CAPP), concluding the process of unbundling the power sector, improving services to customers (customer-orientated approach) and attracting private investors to the country's power industry. In addition, there is a need for energy, power and renewable energy, vocational skills, construction and infrastructure (maintenance) (Institute of export and international trade 2015).

**Important actors in energy sector:** MINEA, SONANGOL, IRSEA (Instituto Regulador dos serviços de Electricidade e de Água), Empresa de Electricidade de Luanda (EDEL) (parastatal), the national production company (PRODEL - Empresa Pública de Produção de Electricidade), the national transmission company (RNT-Empresa Rede Nacional de Transporte de Electricidade) and the national distribution company (ENDE - Empresa Nacional de Distribuição de Electricidade), GAMEK (Gabinete de Aproveitamento do Médio Kwanza).

## INFRASTRUCTURE

The Angolan government has declared its intentions to minimize imports to assure self-sufficiency of its economy, by offering greater investment incentives with agriculture and the development of the industrial sector. The construction of roads, airports, ports, hospitals, schools, and most importantly affordable housing, tops the government's agenda. Although the oil sector is highly competitive and developed, there are still many opportunities to be explored in the supply chain, for example onshore and offshore medical care, catering, health and safety provision and specific training courses (Institute of export and international trade 2015).

Oil and gas sector is significant for the country's economy and this creates opportunities for SME's. Other possible areas of opportunity are infrastructure, water treatment, agriculture, and education and training (Institute of export and international trade 2015). Poor road infrastructure and transport logistics is a hindrance to Angola's economic development. For example, the World Bank and AICD estimate that paved roads range between 10.4% and 17% and four-wheel drive is generally necessary for travel outside of major towns. The poor condition of the road network is inherited from the civil war, when much of the network was destroyed, and the impact of periodic torrential flooding. Still, the main transport routes are traversable. Specifically, the main links in the western half of the country appear to be in reasonable condition, while roads on the eastern side are more run-down. Safety is a big issue on Angola's roads and landmines remain a problem outside major urban areas. In addition, roads and bridges are often washed away by sudden floods during the rainy season (PWC 2013).

Angola is part of two major trans African corridors. The first runs from North to South, linking Tripoli in Libya with Cape Town in South Africa. The second one, running from East to West, links Beira in Mozambique with Lobito in Angola. However, the quality of both these trans African corridors and Angola's regional roads is inferior, which makes it more difficult for Angola to develop regional trade with surrounding countries. In addition to the major 100 locomotives provided by GE (General Electric Angola) underway through 2019, the Ministry of Transportation requires passenger, freight and tank carriages as well as operations and maintenance support to build the railroad cargo network (export.gov. 2018f). The railroad infrastructure, which was completed by the Chinese Railway Construction Company, will require maintenance of the 2,600 kilometres of tracks and accompanying railroad automation controls and signalization (PWC 2013). The Angolan government plans include linking the three railroad lines through the construction of three additional lines, which makes over 10,000 km of railroad, but financing has not yet been identified for this project. A project to connect the Beneguela and Mocamedes lines was announced in March 2017 through an agreement with Russian Rail. One of the main pillars of the Luanda

2030 Masterplan is the transportation sector with the planned installation of an above ground urban rail that would include a connection to the new international airport that is under construction (Export.gov. 2018f).

The government is expecting significant increase in water consumption of anadditional 70 litres/per capita/day in urban areas and an additional 30 litres/per capita/day for rural areas and improvement of operations and quality services: a decrease of around 25% in water losses in the network, the rehabilitation and expansion of water supply systems and waste water treatment practices (Trade and investment 2015). However, supplying safe drinking water to the population is still a major challenge, especially in rural areas that make up 41% of the country's total. This translates to malaria being endemic for example, making it the main health problem and the principal cause of death in Angola. Other communicable diseases common in Angola are tuberculosis, leprosy, diarrhea (main cause of death for the under-fives) and respiratory conditions (UK trade and investment 2013).

**Important actors in infrastructure sector:** The Ministry of Energy and Water (MINEA), The Ministry of Transportation's National Institute of Civil Aviation, The National Company of Airport Development and Air Navigation (ENANA), The Angola National Institute of Railroad (INFCA), The Ministry of Transportation.

## MANUFACTURING

Industries in Angola produce construction materials, refined petroleum and equipment for the petroleum industry, processed food, textiles, and electrical goods. Manufacturing had expanded rapidly prior to independence, but it was severely disrupted after 1975. Nationalization and the loss of skilled labor hit the manufacturing sector especially hard. Output declined severely during the quarter century after independence because of the continuing threat of warfare, raw material shortages, and disruptions of power and the transportation infrastructure. In the 1990s Angola attempted to counteract these problems by privatizing many businesses and industries and by introducing a new foreign investment code (Britannica 2018a). Currently, the industry sector contributes 4% to GDP. Before independence, the share of this sector reached 20% (ANGOP 2018).

Angola has a very small manufacturing base and because of that, around 85% of all products are imported. Valves, consumables and steel are all in particular demand. The government has committed to supporting this sector, and there are increasing calls for the introduction of tax incentives to attract investment (Trade and investment 2013). Also, projects and innovations in agricultural manufacturing, such as juice and mills and poultry and fish farming are welcomed in the sector (Trade and investment 2013).

Even though the country relies heavily on imports of the industrial goods, there are indicators of surplus in the beverage and cement sectors. As an example, in the cement sector, the country needs six million tons, whereas the installed capacity of the country's cement plants already exceeds eight million tons. The beverage industry, on the other hand, has been growing 3% a year, because of the investments, leading to about 14,000 direct and 45,000 indirect jobs. The country has more than 40 beverage companies, such as water, soft drinks and beer. This year, the country's manufacturing sector is expected to grow 1,8 % and the start-up in 2017 of 18 new manufacturing plants is expected to support this growth (ANGOP 2018).

**Important actors in the manufacturing sector:** Sociedade Nacional de Combustíveis de Angola (Sonangol), Ministry of Industry, industrial development hubs of Viana and Bom Jesus (Luanda), Lucala (Cuanza Norte), Negage (Uíge), Caála (Huambo), Catumbela (Benguela) e Futila (Cabinda).

### ICT

Angola is well placed geographically and geopolitically to become an ICT hub. It can capitalize on both the existing submarine cable connectivity, but also on planned future investments, with the development of the South Atlantic Cable System (SACS), also known as the Angola-Brazil Cable. SACS will link Luanda with Fortaleza in northern Brazil, with a leg connecting to the Brazilian archipelago of Fernando de Noronha and to Miami in the US (Xu 2016). The ICT sector has been highly concentrated in the past and is only now showing signs of opening up for market actors.

The mobile sector has been very centralized in the past and under the governance of the former President Jose Eduardo Dos Santos and his family. Recently, in 2017, to distance Angola from the influence of the president's family, Angola planned to sell a minority stake in a state-owned telecommunications provider and to hold an auction for a fourth industry operator (Bloomberg 2016). The mobile sector is an addressable market, but it is currently underachieving its potential. This is due to the current business model and SIM registration system, and an expensive revenue base, which dampen market growth. However, mobile broadband and its development process is a bright spot in the system.

The Angolan market is the third largest economy, and the fourth largest telecoms market in sub-Saharan Africa in terms of revenue. The B2B segment is one of the largest in sub-Saharan Africa, largely due to the presence of a relatively dynamic financial sector, and an active ecosystem of foreign companies in the mining and oil and gas sectors. While not immune from the challenges that have affected negatively

to the broader ICT sector, the B2B segment has performed better than the broader market (Cision PR Newswire 2018). Moreover, there is an upside in the previous development of the sector and its liberation for new business opportunities. For example, mobile penetration is low, and half of Angola's mobile addressable market is underserved. The very nature of the Angolan mobile market creates substantial room for differentiation for a new entrant.

A critical characteristic of the Angolan ICT market is its remarkable interlocking of interests. These will be difficult to break, and success in the Angolan market would require challenging the existing market structure, along with tangible regulatory action to foster true competition. However, competition underpins a strongly positive outlook due to Angola's economic crisis and the advent of a new president, which provide the momentum for action that the country's policymakers and stakeholders have long resisted (Cision PR Newswire 2018).

**Important actors in ICT sector:** The National Commission for Information Technology (CNTI), Ministry of Telecommunications, Angola Telecom (Movicel), Angola Telecom, UNITEL.

## EDUCATION AND VOCATIONAL TRAINING

The education sector shows various business opportunities especially in the Angolan context as the past conflict in the country has caused social challenges. For example, it has left approximately 80% of the population totally illiterate and 5% functionally illiterate. Thus, Angola faces a huge capability deficit (Institute of export and international trade 2015). With about 50% of the population 21 or under, the demand for education is exceeding supply (Institute of export and international trade 2015).

The reform of the Angolan education system has been under implementation since 2004 through the approved Basic Law of the Education System 13/01 of December 2001, which includes new divisions of education levels, changes in the student evaluation system and reformulation of curricular content. Angola now has a unified system consisting of seven sub-systems (pre-school education, general education, technical and vocational education, teacher training, adult education, higher education) and is structured under three levels (primary, secondary and higher education). Primary education lasts for six years and its gratuity and compulsory status are stipulated in law. In practice, however, there are neither enough schools nor teachers to enforce the law. The secondary education system is divided into two cycles of three years each. There is a parallel technical education system divided into three years of vocational education and four years of middle technical education (Institute of export and international trade 2015).

Opportunities for companies include the need for recognized and certified vocational and practical training in a variety of sectors, qualitative training by certification, especially in technical areas, health and safety, accounting, economics and architecture. There is also a need for setting up English schools and an increasing demand for English language providers for secondary education and at professional level, particularly for the oil and gas, aviation, tourism and hospitality industries. The emerging agriculture sector is in need of agri-business skills, distance learning products, collaboration with local universities, behavioral and social training and tourism (Institute of export and international trade 2015).

**Important actors in educational sector:** Ministry of education, public universities: Agostinho Neto University, Luanda Instituto Superior de Relaçoes Internacionais, Luanda, backed by MIREX, Universidade 11 de Novembro, Cabinda, Universidade José Eduardo dos Santos, Huambo, Universidade Katyavala Bwila, Benguela, Universidade Kimpa Vita, Uíge, Universidade Lueij A'Nkonda, Malanje, Lubango, in addition, numerous private universities which have emerged in the 2000's.

## BUSINESS OPPORTUNITIES IN ANGOLA

- **Maritime**: solutions related to coastal patrolling, search and rescue, and related communications, monitoring technologies, equipment and technology providers in the areas of aquaculture cultivation, small scale fishing equipment, fish processing, cold chain equipment and logistics services, local shipbuilding (OSVs, tugs, cargo, ferries) and training.
- **Energy**: renewable energy solutions (solar, hydro, bio), vocational skills, construction and infrastructure (maintenance).
- **Infrastructure**: onshore and offshore medical care, catering, health and safety provision and specific training courses, Oil and gas sector, infrastructure, water treatment, agriculture, and education and training.
- **Manufacturing**: valves, consumables and steel are all in particular demand, projects and innovations in agricultural manufacturing, such as juice and mills and poultry and fish farming.
- **ICT**: the mobile market is opening up, which creates business opportunities for new SME's.
- **Education and vocational training**: recognized and certified vocational and practical training in a variety of sectors, qualitative training by certification, especially in technical areas, health and safety, accounting, economics and architecture, increasing demand for English language providers for secondary education and at professional level, particularly for the oil and gas, aviation, tourism and hospitality industries, education on agri-business skills, distance learning products, collaboration with local universities, behavioral and social training and tourism.

## 3.4. MOZAMBIQUE

Mozambique is situated in Southeastern Africa and according to a 2014 estimation, the population is currently 25 million. Mozambique gained independence from Portugal in 1975 and is still suffering from the effects from the effects of a 16-year civil war that ended in 1992. There are tensions between the ruling Frelimo party and the opposition former rebel movement, a militant organization and political movement, the Mozambican National Resistance (Renamo). Corruption has become a major concern. However, the discovery of gas fields off Mozambique's coast in 2011 seems to have transformed the economy of one of Africa's poorest nations. Despite the recent economic growth, still more than half of the population lives below the poverty line (BBC 2018d).

Strengths of the Mozambique business environment are a high GDP growth rate, low inflation, a relatively stable currency, vast mineral and hydrocarbon deposits (which attract large amounts of Foreign Direct Investment (FDI), and an advantageous geographical position to export to Asian markets. Challenges include bureaucracy, pervasive influence of the political elites, corruption, poor infrastructure resulting in higher logistical costs, shortage of skills and education coupled with a tightening work permit regime, Portuguese as the official language and a legal system based upon Portuguese civil law (Gov.UK 2015).

The most dynamic economic sectors are extractives, financial services, construction and transport and communication (Gov.UK 2015). However, macroeconomic instability, including debt default, will persist in the near term. The ruling party, Frelimo, is expected to remain in control despite internal division, but long-standing tensions with Renamo, the main opposition party, will create political uncertainty. These tensions are complicated by the death of Renamo's veteran leader, Alfonso Dhlakama, on May 3rd, 2018 (The Economist 2018).

Economic growth is projected to gradually rise to 8% over the next decade. Mozambique's economic growth is mainly caused by FDI and government spending in major infrastructure projects. In 2017, the amount of FDI obtained by Mozambique was 2,319.07 million US dollars (The World Bank Group 2018). The GDP growth has traditionally been driven by the agriculture, construction, and financial sectors while growth in the next decade is presumed to be driven by the oil and gas industry due to the discovery of vast natural gas deposits (Export.gov. 2018g).

Table 4. Mozambique: Doing business rankings 2018.

| **Mozambique: Doing business rankings 2018** | |
|---|---|
| The ease of doing business | 138/190 |
| The ease of starting a business | 137/190 |
| **Dealing with construction permits** | **107/190** |
| The ease of getting electricity | 150/190 |
| The ease of registering property | 104/190 |
| The ease of getting credit | 159/190 |
| Protecting minority investors | 138/190 |
| The ease of paying taxes | 117/190 |
| The ease of trading across borders | 109/190 |
| The ease of enforcing contracts | 184/190 |
| **The ease of solving insolvency** | **75/190** |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on the data of 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## PORTS AND MARITIME

The transport sector in Mozambique will be driven overall by the need to bring natural gas to global markets. All major ports need to be expanded or upgraded, new roads and rail lines are required, the local airline needs to expand its fleet, and new airline operators are expected to enter the market in the next few years. Mozambique is divided into three development corridors that link ports to inland countries: Maputo corridor (south), Beira corridor (center) and Nacala Corridor (north). These corridors include the multiple transport logistic subsector and industrial developments (Export.gov. 2018e). Especially the Beira Corridor is noteworthy because it connects Mozambique to major regional and international markets and facilitates access from inland to the coast to serve a variety of situations, destinations and type of cargo (GIZ 2015).

The major commercial ports are located in Maputo/Matola, Beira, Nacala and Pemba. Port operators are allocated long-term operating concessions. Portos e Caminhos de Ferro de Moçambique (CFM), the state-owned port and rail company, has a stake in all port concessions. Local ports are connected by rail and road to inland countries and mining regions. Malawi, South Africa, Zambia and Zimbabwe all use Mozambican ports for part of their exports and imports (Export.gov. 2018h).

The Port of Maputo is the largest and most developed port and was conceded to the Maputo Port Development Company (MPDC), a consortium led by South African logistics firm Grindrod and Dubai-based port operator DP World. MPDC announced plans to invest 750 million US dollars to boost handling capacity to an annual 48 million tons a year by 2033. Most of the cargo that passes through the Ports of Maputo and Matola is coal, iron-chromium, containerized cargo, vehicles, sugar, and fruit. A major dredging operation will be completed in July 2016, when the port channel will have a depth of 14.2 meters. The second largest port, Beira, completed significant upgrades over the past decade and is Zimbabwe's main port of entry to the world market. Cornelder de Moçambique is the port operator.

The third largest port is Nacala, which was conceded to Portos do Norte (PN). It has recently been renovated and is due to expand its operations to accommodate more containers and refrigerated cargo. Nacala Port could also become a logistics port to the oil and gas industry and it also services Zambia's and Malawi's exports and imports. The adjacent Nacala A Velha Port is a large coal terminal operated by Vale Moçambique. The ports of Pemba and Palma are expected to become the servicing and logistics ports for the oil industry. The Minister of Transport and Communications announced plans in 2010 for the construction of a deep-water port in the Techobanine region in Maputo Province to reduce congestion at the Port of Maputo and support the export of coal from Botswana. This project has an estimated value of 7 billion US dollars (Export.gov. 2018h).

In shipbuilding and repair industry, business opportunities exist in port security and safety equipment and training and port servicing vessels, such as cabotage vessels and tugboats (Export.gov. 2018h).

Given that all marine ports are either expanding or being built, there are opportunities for port-related exports. The Ministry of Transport and Communications has called on the private sector to invest in cabotage services and equipment. Cargo scanning technologies are also needed (Export.gov. 2018h).

**Important actors in ports:** The Minister of Transport and Communications, the Ministry of Finance, National Maritime Administration and Safety Authority (SAFMAR), CFM the National Institute for Hydrography and Navigation (INAHINA), the Ministry for Coordination of Environment Action.

## ENERGY

Mozambique's natural resources remained largely underdeveloped during the 1980s, but, with greater political stability after the peace accord of 1992, investment increased dramatically in a wide range of resource-development projects. The Tete highlands in the west-central region have large bituminous coal reserves at Moatize. Although exploration for oil has been disappointing, the development of large commercially viable natural gas fields at Pande and Temane in Inhambane province has been successful (Encyclopedia Britannica 2018b).

Mozambique could be considered as the most important energy producer and exporter in Southern Africa based on the strength of its resources. In recent years, Mozambique has undertaken significant efforts in electrifying the country. As a result, the electrification rate has increased from 5% in 2001 to 26% in 2016. However, access to electricity remains low and is mainly focused on urban areas. Many district capitals depend on expensive and often unreliable power generation with diesel generators. Outside these towns, the situation is even worse. The clear majority (70%) of Mozambique's population lives in rural areas of which only 5.7% use electricity for lighting. Forest resources satisfy more than 85% of total domestic energy requirements, and in most rural areas rendering over 95%. Although used in some cases for lighting, biomass is mainly used for cooking. The great majority of households uses inefficient cooking technologies such as three-stone fire and traditional stoves.

The entire national electrical grid was targeted by Renamo during the years of political conflict and the government attempted to achieve the best use of the country's hydroelectric potential. At the time, cities built and improved self-contained facilities.

Zambezi river flows through Mozambique. Photo: Rieke Homeyer.

The country was able to repair much of the national electrical grid in the years after the conflict, and at the beginning of the 21st century, almost all of Mozambique's electricity was generated by hydroelectric power. In addition to the Cahora Bassa installation, there are two privately run dams on the Revuè River that produce hydroelectric power (Encyclopedia Britannica 2018b).

The government has identified 100 possible locations for hydropower. The centerpiece of Mozambique's energy potential is the Cahora Bassa Dam on the upper Zambezi (Encyclopedia Britannica 2018b). Mozambique has also a huge and virtually unexploited solar potential. Annual incident solar radiation, distributed evenly in the country, is about 1,49 million GWh, thousands of times more than the current demand in the country (Muhai 2015). Wind power potential is identified in the Ponta de Ouro, the District of Matutuine, the Maputo Providence, Tofino and in the city of Inhambane. Other locations are to be discovered (Muhai 2015). The liberalization of the power sector initiated in 1997 allowed for third parties from the private sector to enter the power generation, transmission and distribution markets (Energypedia 2018). Thus, for example, the use of biomass electricity is seen as a potential factor to generate jobs, as SME's in Mozambique can be involved in all stages of the supply and production. Bagasse wastes from the sugar and coconut industries and other sources could enable Mozambique to build up an industrial base (Muhai 2015).

The oil and gas sector offers opportunities such as subsea Engineering, Procurement, Installation and Commissioning (EPIC), Original Equipment Manufacturers (OEM) of drilling and subsea systems and Offshore Support and manpower services. Education and training offer opportunities in technical and vocational education and training (TVET), and higher education institutions provide specialized training services. Training is in particularly high demand for the oil and gas sector. In Power generation and transmission sector opportunities include provision of diesel, coal and gas-fired generation equipment, and services. In addition, Mozambique has approved 'feed in tariffs' designed to promote the uptake of a range of small-scale renewable and low-carbon electricity generation technologies. These may offer further opportunities for wind, solar, mini-hydro and biomass power generation (Gov.UK 2015).

**Important actors in energy sector:** Ministry of Mineral Resources and Energy MIREME, Electricidade de Moçambique (EdM), Petromoc, The Fundo Nacional de Energia (FUNAE), The Conselho Nacional de Electricidade (CNELEC).

## INFRASTRUCTURE

Mozambique's transportation sector reflects the country's historical development in relation to its neighbors. The national road, railway, and port sectors were originally developed by the state and chartered companies primarily to service the trade and transport needs of western neighbors South Africa, Zimbabwe, and Malawi. Because of this, the country has well-developed east-to-west rail and road systems that link its ports with the key industrial and mining regions of these countries. By contrast, there are few hard-surfaced roads and virtually no railroads oriented north-south. The rail network in Mozambique covers east to west routes from South Africa to Maputo Port, Zimbabwe to Beira Port and from Zambia/Malawi to Nacala Port (Export.gov. 2018h).

There has been major rehabilitation done to the Sena line from the coal area of Moatize to Beira. There is also a newly built line from Tete Province to Nacala, which was mainly built to handle coal exports. New investment in rail lines will be directly linked to the price of coal or other major export commodities (Export.gov. 2018h).

Mozambique has been seen to have potential as a transport center due to its energy capabilities as the international ports at Maputo, Beira, and Nacala are considered to be among the best on the continent. There are also smaller, less developed ports from Pemba in the north to Inhambane in the south. The port and railway complex at Maputo was established at the end of the 19th century in response to the developing gold- and coal-mining industries of Johannesburg and northeastern South Africa. Subsequent rail lines linked Maputo with Swaziland and, in 1955, with the Gweru mining area of Rhodesia (now Zimbabwe) (Export.gov. 2018h).

Mozambique has several domestic airports and international airports at Beira, Vilanculos, and Maputo. Most of the existing network of internal connecting roads and airstrips in the northern and central areas was developed during the 1960s and 70's as part of Portugal's counterinsurgency strategy that emphasized air transportation as an alternate to the less-safe rural roadways. Airline passenger traffic developed increasingly steadily from the late 1970s as road and railway passage declined in response to the threat of ambush. North-south domestic travel in the country is therefore better served by the airlines than by the more east-west-oriented road or rail system (Export.gov. 2018h).

The Ports and Railways Company of Mozambique CFM is under pressure to modernize rail lines to improve safety and cargo capacity but is struggling to satisfy this demand due to a lack of finance and technological know-how. This creates business opportunities for the private sector (Export.gov 2018h).

**Important actors in infrastructure sector:** Transportes Lalgy, The Ports and Railways Company of Mozambique - Caminhos de Ferro de Moçambique (CFM), Ministry of Transport and Communication, by Mozambique Airlines (Linhas Aéreas de Moçambique; LAM).

## MANUFACTURING

With its current 5-year program, the Government plans to double the manufacturing sector's share of the country's GDP to 21% in 2019. The target is to increase the modernization of the country's economy and exports in the framework of promotion of employment, productivity and competitiveness. The production of aluminum, agro-processing and cement plants have been highlighted as the key drivers of the continuous growth in the manufacturing sector in recent years. Mozambique combines large availability of natural resources, an affordable labor force and high demand of certain manufactured products (like pharmaceutical drugs). Mozambican markets are also close to large sources of demand in South Africa, the SADC and COMESA regional hubs and have a direct sea link to the Indian sub-continent (Deloitte 2017). Significant subsectors are metals, chemicals, construction, industrial products and services, forestry, paper and packaging sectors, textiles, paint, soap, food and drink products, furniture and wood products, leather and shoes (Deloitte 2017).

The agriculture sector suffers considerably from high interest rates in lending. The share of lending to agriculture has fallen from 6% in 2010 to 3% of total credit in 2015. Apart from foreign direct investment in mega-projects, investments in Mozambique have historically been through the development sector. Mozambique is one of the highest beneficiaries of overseas development assistance in Southern and Central Africa. Development Finance Institutions (DFIs) are defined as government funded institutions that provide finance to the private sector for investments that promote development and can therefore be considered as "the first active impact investors". They have been one of the largest sources of investment in the country investing mainly in manufacturing and infrastructure. Non-DFI investors have tended to invest more in the agriculture sector (of the 15 active non-DFI investors in Mozambique, over 80% of investments have been in agriculture). SMEs, therefore, are still mainly being bypassed by this type of financing (Deloitte 2017).

The manufacturing sector in Mozambique is fairly in its infancy due to past conflicts. The manufacturing sector currently contributes about 9% to GDP and 0.8% to employment. It has shown stronger growth in the last few years, for example, its average growth rate has been 5.1% between 2013 and 2015 with a high growth of 8.5% in 2015, higher than the GDP growth rate of 6.6%. The sector is mainly comprised of micro companies, with few small and medium sized firms that are

not technologically very advanced. Large firms are mostly dominated by foreign companies and are generally more capital intensive (Deloitte 2017).

Manufacturing faces several challenges such as competition with South African imports, unreliable electricity and a bureaucratic business environment. Much of the production in the sector involves imports, which means that most manufacturing companies process imported goods (such as by processing imported steel coil to make roof sheets) or require imported complementary goods such as packaging. Hence, products processed domestically are often more expensive than imports. Interest rates on loans are prohibitively high and financial products that are offered are often inflexible. SME's often quote lack of access to financing as a key barrier to their development. By contrast, private equity, which often results in value addition to businesses, offers strategic management support, productivity improvements, identification of growth opportunities and promotion of business sustainability and offers a more flexible financing tool that could help in mitigating the current financing gap as well as providing technical support to businesses (Deloitte 2017).

Although the manufacturing sector is still underdeveloped, Mozambique has several advantages that give the sector a favorable outlook. Mozambique has good transport linkages to South Africa (the Maputo Corridor), Malawi and Zambia (the Nacala Corridor), Zimbabwe, and the DRC (the Beira Corridor), competitively priced supply of labor and a wealth of natural resources that present opportunities for processing. In addition, there is little domestic competition in most manufacturing sub-sectors, and the country benefits from close proximity to the higher income African countries of South Africa, Tanzania, Zimbabwe, Zambia, Malawi and Swaziland. The future development of the gas and other extractive industries also offers many opportunities for the manufacturing sector, such as a guaranteed source of demand for large quantity orders of goods and services. (Deloitte 2017). A key factor in Mozambique's economic growth has been the opening of an aluminum smelter near Maputo in 2000. It is one of the world's largest smelters of aluminum, which has become an important export for Mozambique (Encyclopedia Britannica 2018b).

Key metallic resources include high-quality iron ore and the rare and important mineral tantalite (the principal ore of tantalum), of which it is said that Mozambique has the world's largest reserves. Gold, bauxite (the principal ore of aluminum), graphite, marble, bentonite, and limestone are mined and quarried, and sea salt is extracted from coastal areas. Other development efforts have focused on the production of heavy mineral sands in Zambézia province and on a project to mine ilmenite (a major source of titanium) at Moma in Nampula province. Mozambique's other mineral deposits include manganese, graphite, fluorite, platinum, nickel, uranium, asbestos, and diamonds. Foreign investors have expressed interest in expanding the development of these deposits, especially since the Mozambique

government has made foreign investment more attractive (Encyclopedia Britannica 2018b). In the mining and infrastructure sector opportunities include engineering, procurement and construction.

**Important actors in manufacturing sector:** The Confederation of Economic Associations of Mozambique, Investment Promotion Centre, Ministry of Economy and Finance (Directorate of Economic and Financial Studies), Ministry of Trade (National Directorate of Industry), Institute for the Promotion of Small and Medium Enterprises, AgDevCo Mozambique, Standard Bank Mozambique, Agrarian Development Fund, ACIS, Mozambique Revenue Authority (Planning, Studies and International Cooperation department), GAPI, Office of Economic Zones of Accelerated Development and Ministry of Agriculture and Food Security.

## ICT

The demand for telecommunications services in Mozambique has been growing rapidly both at the corporate and individual levels. This situation offers excellent business opportunities for telecommunications operators in terms of both network infrastructure development and service deployment in poorly served regions of the country. Following global trends, internet access in Mozambique is shifting from PC to mobile connections. This is the result of technological advances enabling the provision of cheaper mobile handsets and other mobile devices that run internet applications, coupled with improved operator access to international bandwidth (through the SEACOM and EASSy submarine cables) (Mabila 2013). Partly in response to long waits for installation of land phone service, the use of cellular telephones expanded rapidly in the early 21st century. However, the access to internet and its use were limited and increased at a far slower pace (Encyclopedia Britannica 2018b).

However, the price of broadband internet continues to be high-priced for individual users and therefore, fixed-line ADSL broadband is only used by corporate entities. Prepaid mobile internet, for 1GB and 5GB bundles of data, is cheaper than both prepaid and postpaid ADSL packages of the same size. The 2012 RIA Mozambique Household and Individual ICT Access and Use Survey and the data based on this survey indicates that in Mozambique, 68.7% of individual users rely on mobile phone handsets to access the internet, 56.8% rely on 3G dongle modems, 10.6% use wireless broadband (TDM's WiMAX) and only 3.9% use ADSL connections. The number of households with a working telephone line is extremely small. Despite the relatively fast growth of TV broadcasting in Mozambique, radio continues to be the most-used ICT resource for mass communication. Radio is an attractive choice in rural areas, because of its wide geographical coverage, its low-cost receivers (compared to TV sets), its provision of content in numerous languages,

the relevance of its content and its low power requirements as the national electricity grid coverage is considered limited. Mobile money is still in its embryonic stage, with only 0.2% of the population having used mobile money in 2012. Both Mcel and Vodacom offer mobile money, via their mKesh and M-Pesa products respectively. Meanwhile, mobile banking is provided by Banco Internacional de Moçambique (BIM) and Banco Comercial e de Investimentos (BCI). Other banks are offering basic online operations while positioning themselves to implement mobile banking platforms (Mabila 2013). In terms of ICT development, there have been some visible improvements as a result of public and private investment in telecommunications network infrastructure and services. Policy and regulation have helped to improve the ICT business environment in the country. However, despite market liberalization, there is still no competition in the fixed market (Mabila 2013).

**Important actors in ICT sector:** Mcel, Vodacom, Banco Internacional de Moçambique (BIM), Banco Comercial e de Investimentos (BCI), Ministry of Transport and Communication.

## BUSINESS OPPORTUNITIES IN MOZAMBIQUE

- **Ports and Maritime**: all major ports need to be expanded or upgraded (port related exports), port security and safety equipment and training and port servicing vessels, such as cabotage vessels and tugboats, cabotage services and equipment and cargo scanning technologies.
- **Energy**: hydropower technologies, biomass electricity (supply and production), wind power, Bagasse wastes from the sugar and coconut industries, subsea Engineering, Procurement, Installation and Commissioning (EPIC), Original Equipment Manufacturers (OEM) of drilling and subsea systems and Offshore Support and manpower services, technical and vocational education and training (TVET) especially in the oil and gas sector.
- **Infrastructure**: modernization of rail lines, technological know-how.
- **Manufacturing**: the development of mineral deposits such as manganese, graphite, fluorite, platinum, nickel, uranium, asbestos, and diamonds, in the mining and infrastructure sector opportunities include engineering, procurement and construction .
- **ICT**: both network infrastructure development and service deployment in poorly served regions of the country.

## 3.5. BOTSWANA

Botswana is considered to be one of the most stable countries in Africa due to its long tradition of multi-party democracy. It is comparatively free from corruption and has a good human rights record. Safari-based tourism is an important source of income and thus tightly controlled and often appealing to upmarket customers. Botswana is also the world's largest producer of diamonds and the trade has transformed it into a middle-income country. Challenges include a high rate of HIV-AIDS infection, although Botswana has one of the most advanced treatment programs in Africa and medicine is readily available (BBC 2018e). The top reasons to do business in Botswana include its political stability, comparable safety and security among African countries, low level of corruption, top sovereign credit rating, non-restricted foreign exchange, stable inflation rates, comparatively low level of taxation, rapid growth of the ICT sector, infrastructure, reliable institutions, high net worth market, literate population, skilled population, and positive labor relations (Go Botswana 2018).

Table 5. Botswana: Doing business rankings 2018.

| **Botswana: Doing business rankings 2018** | |
|---|---|
| The ease of doing business | 81/190 |
| The ease of starting a business | 153/190 |
| **Dealing with construction permits** | **59/190** |
| The ease of getting electricity | 124/190 |
| **The ease of registering property** | **81/190** |
| **The ease of getting credit** | **77/190** |
| **Protecting minority investors** | **76/190** |
| **The ease of paying taxes** | **47/190** |
| **The ease of trading across borders** | **50/190** |
| The ease of enforcing contracts | 133/190 |
| **The ease of solving insolvency** | **79/190** |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on the data of 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## ENERGY

Botswana has limited exploitable energy resources and it is currently relying on imports of electricity and all petroleum products. Botswana's available energy resources include coal, solar and bio-energy (biomass and bio-fuels). Botswana has indicated reserves of some 212 billion tons of coal. Currently, Morupule mine is the only deposit being mined, supplying Morupule Power Station, BCL Smelter and Botswana Ash. The vast majority of Botswana's coal resources remain undeveloped. (Go Botswana 2018). Botswana has installed several solar PV off-grid mini-grids during the past 10 years, in most instances hybrid systems with diesel generator sets, providing a total capacity of 50 kW (REN21 2015).

The deficit in power supply currently being experienced in Southern Africa provides a good opportunity for IPPs to use coal to generate power for domestic use and export. One such project in Botswana is the Mmamabula IPP. It is a coal-to-power project, which was originally structured to produce 2400 MW of power. However, due to difficulties in arranging turnkey contracts and power sales of this size, the design capacity was reduced to 1200 MW. The Mmamabula project includes transmission lines connecting with the ESKOM grid and a new sub-station at Morupule. It is indicated that Botswana has the opportunity to diversify its economy and contribute to regional energy security by substituting for ESKOM imports through, among other potential energy sources, coal resources. Thus, this creates business opportunities in addition to the view that domestic coal is one of the least costly options and creates relatively short construction periods for small and standard sized projects (Go Botswana 2018).

However, there have been some challenges in the implementation of previous IPP projects due to regulatory framework challenges. However, production in Botswana for export by an IPP is permitted by the 2007 Amendment to the Electricity Supply Act. To create a more enabling environment, the government of Botswana passed a law to establish an energy regulator in 2016 and is currently working to establish the agency. The government instituted electricity rationing systems for residences and businesses. All these acts are considered important, as rationing and additional unplanned power cuts were severe for parts of 2015 (though infrequent in 2016). In addition, the Bank of Botswana report forecasts a strong consistent supply of electricity needs for 2017 (Export.gov. 2018i).

Botswana has tremendous potential for solar energy utilization, with an annual Direct Normal Irradiation equivalent of 3,000 kWh/m$^2$/a in most parts of the country with an average insolation on a horizontal surface of 21MJ/M2. In September 2016 the government renamed its energy department as The Ministry of Mineral Resources, Green Technology and Energy Security to signal new commitment to

introducing renewable energy as part of its mandate. A medium-scale (1.3MW) project was developed outside of Gaborone, but solar applications in Botswana are primarily used for solar water heating and small-scale electricity generation using PV technology, the latter mainly used for rural applications (Export.gov. 2018i). Although Botswana is ideally suited for being powered through solar energy since it enjoys over 300 days of sunshine per year, the contribution of solar energy to the national energy balance is still insignificant. Solar energy is currently used mostly in rural areas where access to conventional energy is difficult (Go Botswana 2018).

However, the Ministry officials of Botswana are discussing the development of up to 300MW in solar power over the next 15 years. Two new solar expressions of interest (EOIs) were released in June of 2017; one for a 100-megawatt solar plant to service Gaborone and a second solar-hybrid project to service 20 Botswana villages (Export.gov. 2018i). The government's newfound openness to IPP and solar projects as well as investment in grid infrastructure provides opportunities to develop energy projects for domestic use and export. SAPP is also facing an electricity shortage and Botswana has export potential given its central geographic location in the region. The government of Botswana is investing in national and regional grid infrastructure to facilitate this (Export.gov. 2018i).

Substantial natural gas reserves exist in Northeast Botswana. Once fully developed, the natural gas deposits could generate substantial downstream opportunities for new natural gas-intensive equipment and services (Export.gov. 2018f). Significant business opportunities exist in the production of solar energy and the manufacturing or assembly of solar energy equipment (Go Botswana 2017). Other investment opportunities include Coal Bed Methane (CBM), uranium, solar energy, biogas and biodiesel.

**Important actors in energy sector:** Ministry of Investment, Trade, and Industry, Botswana Investment and Trade Centre, Botswana Power Corporation (BPC), BPC Tenders, Department of Customs and Excise, Ministry of Mineral Resources, Green Technology and Energy Security, ESKOM.

## INFRASTRUCTURE

As Botswana is centrally located in the SADC, it offers land-linked access to seven fast-growing markets and serves as the perfect location to leverage regional trade growth, with intraregional transport volumes expected to more than double within the next two decades. According to the World Economic Forum, Botswana has the best landlocked infrastructure in Africa and the third best logistics operating environment in the region. It provides an alternative route to the SADC's other highly congested corridors, such as the route from South Africa through Zimbabwe and further north to Zambia and the DRC, and can leverage favorable port, rail and road infrastructure in neighboring South Africa and Namibia. Botswana has committed significant investment to develop to develop new and improve existing transport corridors making use of road, rail, airports, dry ports and one-stop border posts. One example of the investment is the 1.4 billion Kazungula Bridge Project linking Botswana and Zambia and opening possibilities of accessing the SADC region (Go Botswana 2018).

Although major roads are generally in good condition, the combination of long, unpleasant two-lane highways, high speed limits, and the occasional presence of large animals on the roads create dangerous driving conditions. Driving at night on rural highways should be avoided. Taxis are available in towns but are infrequent, are not always reliable and are often not present at the airport. The rental agencies will provide a driver for an additional charge, an option some may wish to consider as traffic moves on the left in Botswana (Export gov. 2018).

Botswana's water sources consist primarily of surface water (in rivers, pans and dams of various sizes) and underground water in aquifers. Some of these aquifers are fossil by nature and do not recharge. Of the eight dams, Dikgatlhong is the largest with a capacity of 400 $Mm^3$. All of Botswana's perennial rivers are shared with neighboring countries. In 2001 Botswana's access to drinking water reached 99.5% for urban areas and 83.5% for rural areas. However, especially in urban centers, the demand is on rise. Most rural areas are supplied with borehole water while nearly all the urban centers, except Gantsi Township in the western part of the country, are supplied with surface water. Wastewater recycling has also added to the national water resource-base (The UN 2012).

Analysis of wastewater infrastructure shows that several systems have exceeded their design limits while some are near to exceed this limit. This creates a risk for the depletion fresh water resources especially in Gantsi, Kasane and Gumare (The UN 2012). Anecdotal data on income poverty in Gantsi suggests that the use of water-borne sanitation may not be affordable to many residents though it would be essential. This may lead to a high number of pit latrines and soak-away toilets

therefore presenting a pollution risk of scarce underground water resources (The UN 2012). Mainly, the western part of the country depends on underground water for both human consumption and livestock. The mining sector also depends largely on underground water. Current extraction rates exceed sustainable levels for the aquifers. This represents a challenge of exceeding the ecological limits (The UN 2012). Waste water/effluent constitutes 16% of all the water resources of which only 20% is re-used. This represents an opportunity in agricultural production through irrigation. Moreover, despite the government's initiatives to promote conservation of scarce water resources, water losses and wastage continue with limited reduction. An estimated 46% of purified water is not accounted for (Ministry of Finance and Development Planning 2010). At such a rate of water-losses, water efficiency levels need to be increased drastically. A 46% increase in water availability may be achieved by either developing more water resources or reducing water losses (The UN 2012).

As part of embracing a Green Economy, Botswana's water sector has opportunities to become more efficient and generate more jobs in various industries. This is due to the increase in profitability through water efficiency, and the concomitant contribution to societal and ecological well-being, especially in terms of food security. Taking advantage of these opportunities may require initial capital investments. However, these tend to pay-off after 3 years. Some of the opportunities will require institutional reform for Botswana to benefit fully from them (The UN 2012).

**Important actors in infrastructure sector:** The Water Utilities Corporation (WUC), Ministry of Agriculture, the Ministry of Transport and Communications, the Ministry of Minerals, Energy and Water Resources and the Civil Aviation Authority of Botswana.

## MANUFACTURING

The manufacturing sector is characterized by the beneficiation of raw materials (beef, leather, minerals, glass manufacturing), the textile industry strategy (that has been developed to upgrade the garments industry), special economic zones, production of goods and services for export, and abundant raw materials (Go Botswana 2018). Despite Botswana's relatively limited market size, its central location in the SADC and the availability of raw material inputs, presents multiple opportunities for investors (Go Botswana 2017). In 2016, Botswana's export commodities were highly concentrated in the mineral sector, as diamonds constituted 88%, copper and nickel 3%, and salt and soda ash 1% of exports. In the non-mining sector machinery and electrical equipment constituted 3%, meat and meat products 2% and other goods 1%. Other exports such as hides and skins, iron steel products, plastic and plastics products, textiles and vehicles transport Equipment's contribution was negligible around 2.3% (Go Botswana 2017).

The need to develop a diversified and robust manufacturing sector is a key agenda in government efforts to identify potential growth areas beyond the exploitation of its mineral wealth, which has been central to its transformation into a middle-income country, but which at the same time makes it vulnerable to the fluctuations of the global economic order. Opportunities presented by the manufacturing sector covers a wide array of sectors such as food and beverages, textiles and garments, jewelry making, metal and metal products amongst others. At a national level, these opportunities are presented through the country's high import bill, which has led the government to develop complementary policies (Economic Diversification Drive) to promote the sector (Go Botswana 2018).

To address the growth of manufacturing sector, the government of Botswana has offered duty-free import of machinery and equipment for manufacturing purposes. Areas of opportunities include automotive and component manufacturing and the leather industry. Moreover, significant business opportunities exist in the manufacturing or assembly of solar energy equipment industry (Go Botswana 2017).

**Important actors in manufacturing sector:** Ministry of Investment, Trade and Industry (MITI), FSG manufacturing (PTY) ltd, Leather products Botswana (PTY) ltd, the Botswana Diamond Hub.

### ICT

According to the 2011 ICT Statistics Report, the ICT industry is growing in Botswana, particularly in mobile cellular services, which is expected to bypass the development of fixed telephone lines and internet service provision. The number of mobile subscribers has increased from 106,029 in 2000 to 2,900,263 in 2011. The ICT sector in Botswana also includes postal services, print media and radio and television (Export.gov. 2018k).

Botswana has a reasonably developed telecommunications system, although slow internet and high data costs remain a constrain for businesses. The Botswana Telecommunications Corporation (BTC) provides landline services and competes with cellular consortia Mascom Wireless (an affiliate of South Africa's MTN), and Orange for cellular service. The cellular market is performing well with especially strong penetration and coverage. Botswana has one of the highest cell phone penetration rates in Africa (Export.gov. 2018k).

Botswana has invested heavily in the national fiber network, and in international connectivity. Moreover, it has invested in the East Africa Submarine Cable System (EASSy), greatly expanding connectivity capacity of the region. The Botswana Government is also pursuing access to a West African submarine cable system.

The expectation in the next 2 to 3 years is expanded, rapid, reliable and cost-effective connectivity (Export.gov. 2018k).

The Botswana Innovation Hub (BIH) is developing a “cyber city”, a central hub to connect ICT enterprise and research and development institutes with Botswana’s public and private sectors. In addition, ICT investment in Botswana presents an opportunity for growth in research and development and global competitiveness in ICT. An objective of National ICT Policy is to utilize ICT to facilitate economic diversification and foreign direct investment (FDI). Also, Infrastructure development provides opportunities for businesses, such as a widespread fiber-optic network and e-government services, communications and security, e-health, e-education, e-tourism, including mobile access to e-government (Go Botswana 2018).

Internet usage is on the rise and is now used by some 15% of the population according to the Global Information Technology Report, which has ranked Botswana 101 out of 139 in its Networked Readiness Index. This will change in the medium term as internet access via mobile devices expands. To open markets for competition, the government has agreed to support another state-owned company, Botswana Fiber Network (BoFinet). In 2016 the government also sold 49% of BTC to the public. The government hopes that this strategy will ultimately lower prices. Botswana Communications Regulatory Authority (BOCRA) has been engaging the major public operators to reduce tariffs of telecommunications and internet services at both the wholesale and retail level to reflect the underlying costs of providing the services, and so far, the wholesale internet bandwidth tariffs have been declining (Go Botswana 2018).

DSL service provided by BTC is expensive, though reasonably reliable. There are no restrictions on the provision of voice over internet protocol by value-added network service providers. The Ministry of Information, Science, and Technology has the authority to issue licenses for telecom services including mobile telephones, data communications, payphones, sale of telecommunications equipment, and internet services. No restrictions apply to foreign partnerships in mobile services. The government has invested 38 million US dollars into the development of the West Africa Cable System, an undersea cable connecting southern and western African countries to the United Kingdom via Portugal. BoFiNet also continues to extend their fiber backbone to cover other areas in the country (Export. gov. 2018k).

**Important actors in ICT:** Botswana Telecommunications Authority, Botswana Telecommunications Corporation, Ministry of Infrastructure, Science, and Technology, Ministry of Investment, Trade, and Industry, BTC, Botswana Fiber Network (BoFinet), BOCRA, BIH.

## EDUCATION AND VOCATIONAL TRAINING

The policy framework for the implementation of the education sector is based on the National Policy on Education, the Revised National Policy on Education, the new Tertiary Education Policy, the National Vocational Training Policy, the National Credit and Qualification Framework, the Maitlamo ICT Policy, Vision 2016, and the Science and Technology Policy, together with other government policies.

Expanding vocational and technical training is one of the key objectives in education sector. The education sector receives the largest share of total government expenditure. Investment in education continues to be a priority even in the current planning period, NDP 10, to achieve the aspirations of Botswana's Vision 2016. The government of Botswana has also shown interest in investing in student sponsorships to meet the increasing demands of the rapidly growing economy: over the past 10 years, 2000–2010, almost 110 500 students were sponsored by government, nearly 20% of whom were placed in foreign institutions, although since then, the global economic recession has impacted the government's ability to maintain sponsorship volumes. However, the interest of the government is to attract leading tertiary institutions, scholars, researchers and students into the country (Go Botswana 2018).

**Important actors in education sector:** Post Harvest Technology and Food Quality Research Institute, Technical School of Mining and Energy, Botswana Academy of Medical and Health Sciences, Democracy, Governance and Economic Management Institute, Photographic Safari Tourism Training Lodge, Centre for Peace and Justice, Centre for Advancing Sustainable Development.

## TOURISM

Botswana's unique natural resources and their advances in the tourism sector have been noted by various industry participants both in Botswana and abroad. Tourism is a notable contributor in the national economy and an enabler of future economic growth. The government estimates that travel and tourism accounts for 16,3% of GDP, though some analysists consider this percentage to be 5%. As a part of its economic diversification strategy however, the government is committed to growing the sector. For example, Botswana seeks to broaden the tourism base by adding more product components and increasing the geographic spread of tourism. As Botswana tourism is focused on high-end tourism, the government is now interested in expanding into mid-range tourism. The main challenge includes the provision of quality service and the occasional shortage of hotel rooms in proportion to demand especially in the capital (Export.gov. 2018l).

Opportunities in the sector include joint ventures for hotel expansions and start-ups along the Trans-Kalahari Highway, joining Botswana and Namibia, and development of lodges in Kgalagadi Transfrontier Park, Central Kalahari Game reserve, Makgadikgadi Pans National Park, and forest reserves surrounding Chobe National Park. Eco-tourism is also a growing potential in the sector.

**Important actors in tourism sector:** Botswana Tourism Organization, Hospitality and Tourism Association of Botswana, Ministry of Environment, Wildlife, and Tourism, Ministry of Investment, Trade, and Industry, The Tourist (Botswana Tourism Magazine).

## BUSINESS OPPORTUNITIES IN BOTSWANA

- **Energy**: tremendous potential for solar energy utilization, the manufacturing or assembly of solar energy equipment, natural gas (once deposits are fully developed), Coal Bed Methane (CBM), uranium, biogas and biodiesel.
- **Infrastructure**: technologies to improve water utilization.
- **Manufacturing**: food and beverages, textiles and garments, jewelry making, metal and metal products, automotive and component manufacturing and the leather industry.
- **ICT**: a “cyber city”, widespread fiber-optic network and e-government services, communications and security, e-health, e-education, e-tourism, including mobile access to e-government, research and development.
- **Education and vocational training**: vocational and technical training, exchange programs.
- **Tourism**: mid-range tourism, joint ventures for hotel expansions and start-ups along the Trans-Kalahari Highway, development of lodges in Kgalagadi Transfrontier Park, Central Kalahari Game reserve, Makgadikgadi Pans National Park, and forest reserves surrounding Chobe National Park, eco-tourism.

Gaborone, capital city of Botswana. Photo: Pixabay.

## 3.6. ZAMBIA

Zambia is a former colony of Great Britain and attained political independence on the of 24th October 1964 and has managed to avoid political upheavals and conflicts that have marked much of Africa's post-colonial history, earning itself a reputation for political stability.

The landlocked country has experienced rapid economic growth over the last decade as Africa's second largest copper producer after the Democratic Republic of the Congo (BBC 2018f). In addition to the mineral-rich Copperbelt, the most important commercial centers and biggest concentration of population include the capital Lusaka, the tourist hub Livingstone. Privatization of the mining sector has attributed greatly to Zambia's economic growth as it has attracted foreign investment to the country in recent years. Another important sector in business is agriculture and other mentionable exports include fresh flowers, tobacco and sugar (Expat Arrivals 2018). The country also has some non-traditional exports including, sugar and sugar confectionaries, dairy products, bird's eggs and natural honey. Zambia has significant world class tourism attractions including the Victoria Falls to the South and 19 national game parks strewn around the country (Deloitte 2013).

Zambia also has one of the world's fastest growing populations with the UN projecting that its population will triple by 2050. Even though being one of the most sparsely inhabited countries in Africa, Zambia is also the most urbanized (BBC 2018f). Still, although being accepted for debt relief under the Highly Indebted Poor Country Initiative in 2005 (approximately 6 billion US dollars in debt relief), poverty remains a significant problem in Zambia. Approximately 60% of the population lives below the poverty line, despite a stronger economy (Deloitte 2013). In addition, Zambia's over-reliance on copper has made it vulnerable to falling commodity prices and challenges remain in the country such as corruption and nepotism, poor service delivery and infrastructure and rising AIDS/HIV infection rates (BBC 2018f). However, the medium-term economic outlook seems positive, with inflation projected to remain in the single digits. The current inflation rate is estimated at 6% (Deloitte 2013).

The population comprises approximately 72 Bantu-speaking ethnic groups. Almost 90% of Zambians belong to one of nine main ethno-linguistic groups namely; Nyanja-Chewa, Bemba, Tonga, Tumbuka, Lunda, Luvale, Kaonda, Nkoya and Lozi. From the population of an estimated 13.6 million approximately 46% is considered as an active and productive workforce, aged between 15 and 64. English remains the official business language in the country (Deloitte 2013).

Table 6. Zambia: Doing business rankings 2018.

| **Zambia: Doing business rankings 2018** | |
|---|---|
| The ease of doing business | 85/190 |
| The ease of starting a business | 101/190 |
| **Dealing with construction permits** | **69/190** |
| The ease of getting electricity | 155/190 |
| The ease of registering property | 149/190 |
| **The ease of getting credit** | **2/190** |
| **Protecting minority investors** | **89/190** |
| **The ease of paying taxes** | **15/190** |
| The ease of trading across borders | 150/190 |
| The ease of enforcing contracts | 128/190 |
| **The ease of solving insolvency** | **89/190** |

The bolded parts of the table are the areas in which the country is performing relatively well (ranking less than 100th). The survey is based on data from 190 countries. Data is available in: http://www.doingbusiness.org/rankings.

## ENERGY

Zambia has abundant hydroelectric resources and has traditionally been able to meet almost all of its energy needs from its own hydroelectric stations operated by the state-owned ZESCO Limited. Zambia's installed capacity stands at 2,347 Megawatts (MW). The main hydro power stations include Kariba North Bank Power Station, Kafue Gorge Power Station, Victoria Falls Power Station, and Itezhi Tezhi Hydro Power Station. One coal-fired plant, Maamba Collieries, was commissioned towards the end of 2016 and is currently generating 300 MW of power purchased by ZESCO for distribution (Export.gov. 2018m). In addition, ZESCO generates limited amounts of power from mini hydro power stations including Chishimba, Lusiwasi and Shiwang'andu (Deloitte 2013).

Currently, ZESCO is the largest electricity company in the country, running and operating power stations, transmission lines, and distribution networks. ZESCO currently accounts for 99% of the country's electricity generation capacity. Another actor is CEC, a LuSE (The Lusaka Stock Exchange) listed company that was created following the privatization of ZCCM power division in 1997. Currently, CEC's principal assets comprise transmission and distribution assets in the Copper belt region of Zambia. It is estimated that the company purchases 55% of the power generated by ZESCO, which it supplies to the mines. As part of its growth strategy, CEC has recently announced that it would be partnering with a Nigerian investment bank to develop the Kabompo gorge hydro-power project in northwestern Zambia (34MW) and five Luapula river hydro power projects with an estimated combined capacity of

800MW. LHPC is a privately owned independent power producer created following the privatization of ZCCM. The Company has an installed capacity of 55MW and currently sells all its power to ZESCO under a power purchase agreement. LHPC's vision is to grow generation capacity to more than 300MW by 2018. The Energy Regulation Board of Zambia (ERB) is the regulating body of Zambia's energy sector (Deloitte 2013). Apart from electricity, Zambia's other key energy sources comprise petroleum and coal (Deloitte 2013). Some estimations indicate that approximately 40% of water resources in Central and Southern Africa are found in Zambia, which adds to its irrigation and hydropower potential (Deloitte 2013).

Zambia's mining sector is the single largest consumer of power taking up over 50% of Zambia's total power output. Zambia was a large regional electricity exporter. However, in November 2005 ZESCO was forced to suspend exports, as generation capacity fell due to the start of rehabilitation work on the country's ageing main hydroelectric power stations. Energy was then imported from South Africa and the DR Congo. Matters got worse in 2007, when South Africa suspended its own power exports and Zambia was exposed to widespread power shortages (Deloitte 2013). Demand for power in the various sectors of the economy has grown rapidly over the years and continues to grow. The Zambia Development Agency (ZDA) states that the demand for electricity in Zambia has been growing at an average of 3% or between 150MW-200MW each year. Zambia is a member of the SAPP and is therefore able to sell or buy excess electricity generated in the region (Export.gov. 2018m).

Zambia has abundant renewable energy resources available throughout the country. Zambia enjoys long and intense hours of annual sunlight to support solar energy generations. It averages about 2,000-3,000 hours of sunshine per year. The solar power or photovoltaic (PV) market remains dominated by government, NGO and donor-funded projects. Zambia is implementing the Second Scaling Solar project by the Industrial Development Corporation (IDC), and in close coordination with the Ministry of Energy. This second mandate for Scaling Solar was signed in February 2017 with the World Bank under the IFC program that is helping developing countries low cost and privately financed solar power. The First Scaling Solar project was auctioned in May 2016 for two solar PV plants of 50 MW each and were awarded to international energy resource developers. The government intends to generate 600 MW through solar by 2020. As with many developing countries, the establishment of REFIT has spurred the on-boarding of new, small, private-sector driven renewable energy power generation partners (Export.gov., 2018m).

There are opportunities in electricity generation and transmission, refineries, storage facilities and pipelines for petroleum and gas, renewable energy facilities and transport facilities for coal distribution and exports. Opportunities exist also for

solar energy including residences, schools, hospitals, health centers, commercial premises, utilities, off-grid facilities and the agricultural sector (Export.gov. 2018m).

**Important actors in energy sector:** the state-owned Zambia Electricity Supply Corporation (ZESCO) Limited, Copperbelt Energy Corporation (CEC); North-Western Energy Corporation (NWEC), Lusemfwa Hydro Power Company (LHPC), and Maamba Collieries Limited, The Zambia Development Agency (ZDA), the Ministry of Energy.

## INFRASTRUCTURE

Infrastructure development remains a major challenge to growth, economic diversification, and human development in Zambia. The underdeveloped infrastructure is seen especially in the power and transport sectors (Deloitte 2013). Moreover, there is a need for improvement and expansion of the rail network to reduce the burden placed on road infrastructure. The construction of additional inter provincial and inter district roads will serve to open up the country. Also, it is estimated that the backlog of housing units in Zambia is about 1.3 million and that 110,000 units per year will be required to clear the housing backlog for the next ten years. Major areas of investment in this sector include investment in health, education, water, and sanitation. Additional investments are being made to increase power generation capacity through the upgrading and construction of new hydropower stations and the implementation of alternative energy sources (Export.gov. 2018n). The government has already taken initiatives in the transport sector. For example, in 2012, the government issued a 750 million US dollar bond from the international capital market and allocated 57% of the bond to investment in the transport sector. Furthermore, customs duties were eliminated for importation of locomotives, carriages, rail traffic control equipment, canoes, cruise and ferry boats, dredgers, pontoons, motor cycles and new motor vehicles for certain tourism enterprises (Deloitte 2013).

Viktoria Falls bridge between Zambia and Zimbabwe. Photo: Rieke Homeyer.

Zambia is implementing the Link Zambia 8000 project which is aimed at transforming the country from land-locked to land- linked. This project involves upgrading roads to bituminous standards of 8,201 km at an estimated cost of 5.6 billion US dollars. National Road Tolling also aims to keep the core road network in maintainable condition and broaden financing options for road infrastructure development. For example, the Pave Zambia 2000 is aimed at the rehabilitation of 2000 km of urban roads and the L400 project involves construction of 400 km of Lusaka Urban roads at 348 million US dollars (Export.gov. 2018n). Zambia is a country with several natural lakes and rivers. Zambia's lakes, rivers and canals present significant potential for the development of transport infrastructure that can boost and facilitate trade with neighboring countries (Deloitte 2013).

Providing financing for housing and other infrastructure projects is an opportunity for investors. As said, Zambia has a critical shortage of housing estimated to be about 1.3 million units countrywide and government recommends an annual delivery rate of 110,000 units per year to meet demand in the next 10 years. Other areas include the mining industry, shopping centers, real estate development and offices and transport networks including rail transport (Export.gov. 2018n).

In 2017, the national urban coverage of water was 83,5% whereas the national urban sanitation coverage was 63,3% (NWASCO 2017). Even though the country's water reserves are considered more than adequate, at least when compared to many other Southern African countries, some access to water challenges may be recognized. For example, in many cases there are problems with the maintenance and inadequate infrastructure (NWASCO 2017).

**Important actors in infrastructure sector:** Zambia Consolidated Copper Mines Limited ("ZCCM"), Ministry of Local Government and Housing, The National Water Supply and Sanitation Council (NWASCO), the Ministry the Department of Housing and infrastructure development (DHID).

## MANUFACTURING

Zambia possesses the world's highest-grade deposits of copper and is ranked the 7th largest copper producer in the world. Copper contributes over 70% of the country's national foreign earnings. Moreover, Zambia produces about 20% of the world's emeralds. The mining sector is governed and regulated by the Mines and Minerals Development Act No. 7 of 2008 which covers types of mining rights, acquisition of mining rights, rights/obligations conferred on the mining right holder, transferability of mining rights, safety, health and environment and provides for the environmental protection fund, mineral royalties, fees and charges, and export of minerals. The future prospects in the mining sector cover uranium, coal mining,

and gas exploration. Opportunities exist in exploration, mine services, water management, engineering, construction, and environmental services (Export. gov. 2018o).

Agriculture employs about 70% of the population and the sector accounts for 21% of GDP. Due to large areas of arable land and easily accessible water supplies, the sector has potential to drive economic growth, even though currently only 15% of arable land is used for farming. Zambia's primary agricultural output crop is maize, which is considered to bea main staple of the country. Opportunities exist in large-scale farming, farm input and agro-processing, equipment supply, and commodity storage and trading (Export.gov. 2018o).

Zambia's economy has experienced strong growth in recent years. The real growth of GDP has been more than 6% per year for the past five years. For example, privatization of government-owned copper mines in the late 90's helped the government to avoid mammoth losses generated by the industry. These mines have traditionally been under the ownership of state-controlled Zambia Consolidated Copper Mines Limited (ZCCM), but by the early 2000s, the Government had privatized the state-owned copper mines to return the industry to profitability and to boost economic growth. Zambia's mining sector is currently dominated by entities owned by multina-tionals (Deloitte 2013). This has increased copper mining output and has spurred economic growth.

Even though the economy has traditionally focused on the copper mining industry, the Zambian Government has taken steps towards economic diversification to avoid dependency on the industry and to exploit other possibilities in Zambia's rich resource base, such as in the fields of agriculture, tourism, gemstone mining and hydro-power. The government has also made substantial investments to infrastructure. (Deloitte 2013). Zambia's vast amount of resources consist of metals, gemstones, industrial minerals and potential energy resources including coal, hydrocarbons, and more recently, uranium (Deloitte 2013).

Moreover, Zambia, along with all neighboring countries except for South Africa, do not have hospital centers of excellence to treat cases requiring specialized treatment, and lack specialist diagnostic and treatment centers to treat cardio-vascular, liver, renal, and cancer diseases (Export. gov. 2018p).

**Important actors in manufacturing sector:** Ministry of Mines and Mineral Development, Ministry of Health, Ministry of Works and Supply, Zambia Medicines Regulatory Authority, Zambia Consolidated Copper Mines Limited (ZCCM).

## ICT

The Zambia Information and Communications Technology Authority (ZICTA) is an ICT Regulatory body responsible for regulating the ICT sector in Zambia. The mobile phone sector has boomed in recent years, with competition between three providers including the state-owned ZAMTEL, the privately owned MTN, and Airtel Zambia. This has resulted in major improvements in coverage and quality of the network together with significantly lower prices. The country's telecommunications market is dominated by mobile network operator Bharti Airtel which has a market share around 52%, with MTN and ZAMTEL in second and third places. All operators have intensified efforts to cover rural areas, and nearly all ten provinces can now be reached by mobile phones on one of the networks (Deloitte 2013). New mobile operator UZI Mobile Zambia received a mobile license this year (Lusaka times 2018).

Still, the number of fixed lines in the country has been relatively low, with the number of lines at less than 100,000 and penetration levels have been less than 1%. In the internet sector, Zambia gained access to international submarine fiber optic cables for the first time, which has already led to some significant retail price reduction for broadband services. Third generation (3G) mobile broadband services were launched in early 2011 and national fiber networks have been rolled out by many different companies. Several Internet Services Providers have rolled out W/MAX wireless broadband networks (Deloitte 2013). Opportunities include the provision of retail fiber optics, mobile and internet service providers, software development, and ICT parks (Export.gov. 2018o).

**Important actors in ICT sector:** The Zambia Information and Communications Technology Authority (ZICTA), ZAMTEL, MTN and Airtel Zambia, UZI Mobile Zambia.

## TOURISM

Tourism is becoming an increasingly important foreign exchange earner, although it currently contributes only around 5% of Zambia's GDP. This sector also holds potential due to the government's aim to diversify the Zambian economy. For example, Victoria Falls is a tourist attraction, which is located on the border between Zambia and Zimbabwe. New hotels in Zambia are successful, which is raising revenue collection and creating new jobs. In addition to the Victoria Falls, Zambia inherits 19 national game parks and 34 game management areas covering 22.4m hectares (Deloitte 2013).

The principal challenges limiting Zambia's tourism potential have been relatively underdeveloped infrastructure and inadequate supply of competitive accommodation. However, this creates opportunities for businesses. Opportunities

include tourism services and infrastructure, such as increasing hotel room capacity, tourism operators, and transportation infrastructure in its tourism and copper producing regions (export.gov. 2018o).

**Important actors in tourism sector:** Zambia Tourism Board, The Zambia Development Agency (ZDA), Ministry of Tourism and Arts, Hotels Board of Management, National Heritage Conservation Commission, Hotels Managers Registration Council, National Museum Board, National Arts Council, Zambia Institute for Tourism and Hospitality Studies former HTTI.

## BUSINESS OPPORTUNITIES IN ZAMBIA

- **Energy**: generation and transmission, refineries, storage facilities and pipelines for petroleum and gas, renewable energy facilities and transport facilities for coal distribution and exports, solar energy for residences, schools, hospitals, health centers, commercial premises, utilities, off-grid facilities and the agricultural sector.
- **Infrastructure**: the maintenance and construction of water and sanitation infrastructure, housing and other infrastructure projects, development of transport infrastructure, hydropower.
- **Manufacturing**: exploration, mine services, water management, engineering, construction, and environmental services in the mining sector, large-scale farming, farm input and agro-processing, equipment supply, and commodity storage and trading, specialist diagnostic and treatment centers to treat cardio-vascular, liver, renal, and cancer diseases.
- **ICT**: the provision of retail fiber optics, mobile and internet service providers, software development, and ICT parks.
- **Tourism**: tourism services and infrastructure, such as increasing hotel room capacity, tourism operators, and transportation infrastructure in its tourism and copper producing regions.

# 4. CONCLUSION

This report has analyzed some aspects of the SADC business environment. As an overall view, the SADC shows a lot of potential for SME's despite some of the challenges investors might encounter when doing business in the region. However, in some cases like in Angola and Mozambique, these countries have a history of conflicts which have both hindered their infrastructure development and maintenance, as well are further affecting their manufacturing sector and overall economic development. Still, what is common in these countries is the willingness for the local governments to lure foreign direct investment in their economies. In practice, this recognition is shown in the provision and development of accessible online portals and guides for the purpose of giving general guidelines for companies willing to start their businesses in the SADC region. Moreover, many SADC countries provide an abundant amount of resources and in many cases offer a young population eager to be educated in numerous sectors. The countries are also starting to recognize the future threats in their economic development, which include the lack of energy and water, infrastructure and ICT. Port development in many countries, such as in Namibia, South Africa, Angola and Mozambique will increase the need for automation and energy solutions remarkably.

Although this report has aimed to provide a comprehensive view of the SADC business environment, it should be noted that information is prone to constant changes. For example, countries tend to update their policies to keep up with new international practices and modernization. This is especially in the case of energy and maritime, first because of the global development, and the second due to the realization of the importance of ports in economic development including the huge ongoing port projects. More detailed technical requirements may be needed to be obtained as in some cases online sources where not from recent years, which was the case in automation.

On the other hand, detailed information on the renewable energy sector was easily available, mostly due to raising global awareness of future energy security.

Of course, the aim of the report has been to represent a general view of the market. Thus, more specific information is possible to obtain depending on companies' needs including useful examples of the business cases in the selected countries in order for the companies to learn "do's" and "don'ts" of the business environments. In many cases companies are advised to connect with local contacts for more insight into good practices. Moreover, the companies are advised to follow the websites given in this report as the data is being updated on regular basis.

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*Note: a proposal to build a new capital city in Ngabwe was announced in May 2017

**Note: Dodoma was designated the national capital in 1996 and serves as the meeting place for the National Assembly; Dar es Salaam remains the de facto capital, the country's largest city and commercial center, and the site of the executive branch offices and diplomatic representation; the government contends that it will complete the transfer of the executive branch to Dodoma by 2020.

***Note: Zimbabwe applies the United States dollar (USD) as its primary transacting and reserve currency. Zimbabwe introduced bond notes in 2016 in an effort to supplement shortages of USD cash.

# APPENDIX 1

| SADC Profiles | **Namibia** | **South Africa** | **Angola** | **Botswana** |
|---|---|---|---|---|
| **Capital** | Windhoek [4] | Pretoria (Tshwane) - administrative/executive, Cape Town - legislative, Bloemfontein -Judicial [4] | Luanda [4] | Gaborone [4] |
| **Area** | 824,292 km² [1] | 1,219,090 km² [1] | 1,246,700 km² [1] | 581,730 km² [1] |
| **Population** | 2,484,780 [3] | 54,841,552 [3] | 29,310,273 [3] | 2,214,858 [3] |
| **Population density (Number of people per square kilometer)** | 3.01/km² [2] | 42.4/km² [2] | 23.51/km² [2] | 3.81/km² [2] |
| **Urban population** | 33% [23] | 57% [23] | 36% [23] | 52% [23] |
| **Currency** | EUR 1 = NAD 14.59 (March 2018), ZAR 1 = NAD 1.00 (March 2018) [7] | South African Rand (ZAR), EUR 1 = ZAR 14.59 (March 2018) [7] | The Angolan Kwanaba (AOA) EUR 1 = AOA 263.70 (March 2018) [7] | Botswana Pula (BWP), EUR 1 = BWP 10.81 (March 2018) [7] |
| **GDP (per capita)** | $11,500 [8] | $13,400 [8] | $6,800 [8] | $18,100 [8] |
| **GDP (total, Purchasing Power Parity)** | $27.02 billion [9] | $757.3 billion [9] | $192 billion [9] | $39.55 billion [9] |
| **Income category** | Upper middle income | Upper middle income | Lower-middle-Income | Upper middle income |
| **Main industries** | Meatpacking, fish processing, dairy products, pasta, beverages; mining (diamonds, lead, zinc, tin, silver, tungsten, uranium, copper) [10] | Mining (world's largest producer of platinum, gold, chromium), automobile assembly, metalworking, machinery, textiles, iron and steel, chemicals, fertilizer, foodstuffs, commercial ship repair [10] | Petroleum; diamonds, iron ore, phosphates, feldspar, bauxite, uranium, and gold; cement; basic metal products; fish processing; food processing, brewing, tobacco products, sugar; textiles; ship repair [10] | Diamonds, copper, nickel, salt, soda ash, potash, coal, iron ore, silver; beef processing; textiles [10] |
| **Unemployment** | 28.1% (2016 est.) [11] | 27.6% (2017 est.) [11] | 6.6% (2016 est.) [11] | 20% (2013 est.) [11] |
| **Relevant harbors and ports** | Port of Walvis Bay, Port of Swakopmund, Sandwich Harbour, Port of Luderitz [12] | Port of Durban, Port of East London, Port of Mossel Bay, Port of Cape Town, Port of Saldanha, Naval Base Simon's Town, Richards Bay, Port of Nolloth, Port of Niggura, Port of Richard's Bay, Port Elizabeth [12] | Port of Lobito, Port of Saco, Kuito Oil Field, Port of Cabinda, Palanca Terminal, Xikomba Terminal, Malongo Terminal, Takula Terminal, Futila Terminal, Estrela Oil Field, Port of Soyo, Porto Amboim, Port of Luanda, Essungo Marine Terminal, Port of Mocamedes, Port of Ambriz, Port of Namibe, Port of Sumbe, Girassol Terminal [12] | Landlocked |
| **Top export products** | Zinc, live animals, fish and crustaceans, inorganic chemicals, meat, pearls, precious stones, copper, edible fruits, nuts, ores, mineral fuels, oils [16] | Vehicles, iron and steel, machinery and nuclear reactors, edible fruits, nuts, beverages, spirits, ores, electrical machinery, aluminium, pearls, precious stones, mineral fuels, oils [16] | Mineral fuels, oils, pearls, precious stones, fish and crustaceans, salt; sulphur, wood, coffee, tea [16] | Nickel, pearls, precious stones, meat, salt; sulphur, ores, inorganic chemicals, electrical machinery, plastics, vehicles, machinery and nuclear reactors [16] |
| **Head of state** | H.E. Dr. Hage Geingob [6] | H.E. Cyril Ramaphosa (President) [6] | H.E. Joao Lourenço [6] | H.E. Mr. Mokgweetsi Eric Keabetswe Masisi [6] |
| **Governance** | Semi-presidential republic [14] | Parliamentary republic [14] | Presidential republic [14] | Parliamentary republic [14] |
| **Legal system** | Mixed legal system of Roman-Dutch civil law, English common law and customary law | Mixed legal system of Roman-Dutch civil law, English common law and customary law | Civil legal system based on Portugese civil law; no judicial review of legislation | A mix of Roman–Dutch and customary law |

| | | | | |
|---|---|---|---|---|
| **Some important legislative aspects (national)** | Harambee prosperity plan, NDP's (1-5), White Paper on Energy Policy (1998); Off-grid Energisation Master Plan; Electricity Act of 2007 (Act No. 4 of 2007), REFIT Guidelines, drafted in 2014 | New Companies Act of 2011, Broad-Based Black Economic Empowerment (B-BBEE), 1998 White Paper on Energy Policy; 2003 White Paper on Renewable Energy; Integrated Electricity Resource Plan (2010 update); Renewable Energy Independent Power Producer Procurement Programme (2011) | The Angolan Government enacted the New Angolan Private Investment Law ("NPIL"), Luanda 2030, National Development Plan (PND) 2018-2022, Angola energy 2025, General Electricity Law 1997, the Hague rules, | Draft Botswana National Energy Policy (2015), Biomass Energy Strategy, REFIT (2010, under review) |
| **Important legislative aspects, such as memberships (international)** | EPA, SACU, SADC, PMAESA, G77, ACP, AfDB, AU, CPLP (associate observer), FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO [22] | SACU, EPA, SADC FTA, EU/SA TDCA, EFTA, PTA, Bilateral agreements with Mozambique and Zimbabwe, AGOA, NEPAD, BRICS, AU, ACP, G20, G22, G77, SAPP, PMAESA, ACP, AfDB, AU, BIS, BRICS, C, CD, FAO, FATF, G-20, G-24, G-5, G-77, IAEA, IBRD, ICAO, ICC (national committees), ICRM, IDA, IFAD, IFC, IFRCS, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, NSG, OECD (enhanced engagement), OPCW, Paris Club (associate), PCA, SACU, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNITAR, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | Cotonou Agreement, AGOA, EPA, SADC, SAPP (non-operating member), PMAESA, ACP, AfDB, AU, CEMAC, CPLP, FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, NAM, OAS (observer), OPEC, SADC, UN, UNCTAD, UNESCO, UNIDO, Union Latina, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | Cotonou Agreement, SACU, EPA, AGOA, SADC, ACP, AfDB, AU, FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, SACU, SADC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] |
| **Languages** | Official language is English. Others include: Oshiwambo dialects, Khoekhoe, RuKwangali, Herero, Tswana, Gciriku, Fwe, Kuhane, Mbukushu, Yeyi and Khoisan Naro [7] | English, Afrikaans, Ndebele, Pedi, Sotho, Swati, Tsonga, Tswana, Venda, Xhosa and Zulu [7] | Portuguese, Umbundu, Kimbundu, Kikongo, Tchokwe, Ovambo [7] | Setswana, English [7] |
| **Technologies** | Good mobile phone system; core fiber-optic network links most centers with digital connections [15] | The SAT-3/WASC and SAFE fiber-optic submarine cable systems connect South Africa to Europe and Asia, the system is the best-developed and most modern in Africa [15] | Limited system; state-owned telecom had monopoly for fixed lines until 2005 [15] | Botswana is participating in regional development efforts; expanding fully digital system with fiber-optic cables linking the major population centers in the east as well as a system of open-wire lines, microwave radio relays links, and radiotelephone communication stations [15] |
| **Natural resources** | Diamonds, copper, uranium, gold, silver, lead, tin, lithium, cadmium, tungsten, zinc, salt, hydropower, fish [6] | Gold, chromium, antimony, manganese, nickel, phospates, tin, rare earth elements, uranium, gem diamonds, vanadium, salt, natural gas, coal, platinum, iron ore, copper, timber, sugar, fish, sea and marine resources, wildlife [18] [6] | Petroleum, diamonds, iron ore, phosphates, bauxite, uranium, gold, copper, oil products, gas, fish, wildlife, agricultural products, sea and marine sources [6][17] | Diamonds, copper, nickel, cattle and wildlife [6] |

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| **Current issues (environment)** | Limited natural freshwater resources; desertification; wildlife poaching; land degradation has led to few conservation areas [5] | Lack of important arterial rivers or lakes requires extensive water conservation and control measures; growth in water usage outpacing supply; pollution of rivers from agricultural runoff and urban discharge; air pollution resulting in acid rain; soil erosion; desertification [5] | Overuse of pastures and subsequent soil erosion attributable to population pressures; desertification; deforestation of tropical rain forest, in response to both international demand for tropical timber and to domestic use as fuel, resulting in loss of biodiversity; soil erosion contributing to water pollution and siltation of rivers and dams; inadequate supplies of potable water [5] | Overgrazing; desertification; limited freshwater resources; air pollution [5] |
| **Imports (commodities)** | Foodstuffs; petroleum products and fuel, machinery and equipment, chemicals [21] | Machinery and equipment, chemicals, petroleum products, scientific instruments, foodstuffs | Machinery and electrical equipment, vehicles and spare parts; medicines, food, textiles, military goods | Foodstuffs, machinery, electrical goods, transport equipment, textiles, fuel and petroleum products, wood and paper products, metal and metal products |
| SADC Profiles | **Zimbabwe** | **Mosambique** | **Zambia** | **United Republic of Tanzania** |
| **Capital** | Harare [4] | Maputo [4] | Lusaka* [4] | Dodoma (legislative capital), Dar es Salaam (administrative capital)** [4] |
| **Area** | 390,757 km² [1] | 799,380 km² [1] | 752,618 km² [1] | 947,300 km² [1] |
| **Population** | 13,805,084 [3] | 26,573,706 [3] | 15,972,000 [3] | 53,950,935 [3] |
| **Population density (Number of people per square kilometer)** | 35.33/km² [2] | 33.24/km² [2] | 21.81/km² [2] | 56.95/km² [2] |
| **Urban population** | 35% [23] | 37% [23] | 36% [23] | 36% [23] |
| **Currency** | ZAR 1 = USD 0.08 (March 2018), EUR 1 = USD 1.23 (March 2018)*** [7] | EUR 1 = MZN 75.69 (March 2018) [7] | EUR 1 = ZMW 11.84 (March 2018) [7] | EUR 1 = TZS 2 770.96 (March 2018) [7] |
| **GDP (per capita)** | $2,300 [8] | $1,300 [8] | $4,000 [8] | $3,300 [8] |
| **GDP (total, Purchasing Power Parity)** | $33.87 billion [9] | $37.39 billion [9] | $68.9 billion [9] | $162.8 billion [9] |
| **Income category** | Low-income | Low-income | Lower-middle-income | Low income |
| **Main industries** | Mining (coal, gold, platinum, copper, nickel, tin, diamonds, clay, numerous metallic and nonmetallic ores), steel; wood products, cement, chemicals, fertilizer, clothing and footwear, foodstuffs, beverages [10] | Aluminum, petroleum products, chemicals (fertilizer, soap, paints), textiles, cement, glass, asbestos, tobacco, food, beverages [10] | Copper mining and processing, emerald mining, construction, foodstuffs, beverages, chemicals, textiles, fertilizer, horticulture [10] | Agricultural processing (sugar, beer, cigarettes, sisal twine); mining (diamonds, gold, and iron), salt, soda ash; cement, oil refining, shoes, apparel, wood products, fertilizer [10] |
| **Unemployment** | 95% (2014 est.) note: data include both unemployment and underemployment; true unemployment is unknown and, under current economic conditions, unknowable. [11] | 22.4% (2014 est.) [11] | 15% (2008 est.), 50% (2000 est.) [11] | 10.3% (2014 est.) [11] |

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| **Relevant harbors and ports** | Chalala Harbor, Ringa Harbour, Port of chiredzi, Kariba Harbour [12] | Port of Matola, Port of Beira, Port of Mocambique, Port Inhambane, Port of Quelimane, Port of Nacala, Port of Maputo, Porto Belo, Port of Pemba, Port of Chinde, Port of Pebane, Port Ibo [12] | Landlocked | Port of Mtwara, Port of Bukoba, Port of Wete, Port of Mkoani, Port of Kyela, Port of Mikindani, Port of Kigoma, Port of Tanga, Port of Chake Chake, Port of Dar Es Salaam, Zanzibar Harbours, Port of Lindi, Mjimwema Terminal, Port of Kilwa Masoko, Nansio Port, Kemondo Bay Port, Musoma Port, Kasanga Port, Mbamba Bay port, Liuli Port, Manda Port, Port of Mwanza, Itungi port, Port of Kilwa Kivinje, Port of Pangani [12] |
| **Top export products** | Tobacco, cotton, salt; sulphur, sugars, wood, pearls, precious stones, iron and steel, coffee, tea, ores, mineral fuels [16] | Aluminium, tobacco, cotton, sugars, wood, mineral fuels, oils, ores, edible fruits, nuts, machinery and nuclear reactors, pearls, precious stones [16] | Copper, colbart, cereals, salt; sulphur, sugars, other base metals, inorganic chemicals, tobacco, machinery and nuclear reactors, pearls, precious stones, mineral fuels, oils [16] | Edible vegetables, animal or vegetable fats, residues food industries, coffee, tea, fish and crustaceans, electrical machinery, tobacco, edible fruit and nuts, pearls, precious stones, ores [16] |
| **Head of state** | H.E. Emmerson Mnangagwa [6] | H.E. Filipe Nyusi [6] | H.E. Edgar Lungu [6] | H.E. Dr. John Pombe Joseph Magufuli [6] |
| **Governance** | Semi-presidential republic [14] | Presidential republic [14] | Presidential republic [14] | Presidential republic [14] |
| **Legal system** | Legal system consists of the Common law (non statutory or unwritten Anglo Roman Dutch Law) Legislation Case Law (Precedent) and Customary Law. With the exception of Criminal Law, which has recently been reformed and codified, Zimbabwe's law is not codified | A mix of Portuguese civil law and customary law. | English common law and customary law principles [20] | the English Common Law system |
| **Some important legislative aspects (national)** | Rural Electrification Master Plan; Alternative Energy Strategy; Biomass Energy Strategy; Renewable Energy Strategy (in process) | The energy strategy (2009), the policy for the development of new and renewable energies 2011-2025 (2011), the strategy of the conversation and sustainable use of biomass energy (2013), the strategy of biofuels (2009), the regulation of biofuels and their mixture and the regulation that established the feed in tariff for new and renewable energies - REFIT (2014), The Environmental Law (Law 20/97, of 1 October 1997), Hague rules, Master Plan for Off-Grid Energy (2008) | The Postal Services Act No. 22 of 2009, Electronic Communications and Transactions Act No. 21 and the Information and Communications Technologies (ICT) Act No. 15 of 2009 to regulate ICTs, postal and courier services in Zambia, National Energy Policy 1994 | Small Power Producer (SPP) Framework for facilities up to 10 MW. No REFIT yet. Biomass Energy Strategy (2014) |

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| **Important legislative aspects, such as memberships (international)** | SADC, PMAESA, ACP, AfDB, AU, COMESA, FAO, G-15, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, PCA, SADC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | EPA, African Growth and Opportunity Act beneficiary country, Cotonou Agreement, SADC, PMAESA, ACP, AfDB, AU, CPLP, EITI (compliant country), FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IDB, IFAD, IFC, IFRCS, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, IPU, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, NAM, OIC, OIF (observer), OPCW, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, Union Latina, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | SADC, PMAESA, ACP, AfDB, AU, COMESA, EITI (compliant country), FAO, G-77, IAEA, IBRD, ICAO, OIF, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, Interpol, IOC, IOM, IPU, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, PCA, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO [22] | SADC, PMAESA, ACP, AfDB, AU, EAC, EADB, EITI, FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] |
| **Languages** | English, Shona, Sindebele [7] | Portuguese [7] | English, Bemba, Nyanja,Tonga, Lozi [7] | kiSwahili, English [7] |
| **Technologies** | Competition has driven rapid expansion of telecommunications, particularly cellular voice and mobile broadband, in recent years; continued economic instability and infrastructure limitations, such as reliable power, hinder progress [15] | The mobile segment has shown strong growth since the introduction of competition in 2003; poor fixed-line infrastructure means most Internet access is through mobile accounts [15] | Satellite earth stations - 2 Intelsat (1 Indian Ocean and 1 Atlantic Ocean), 3 owned by Zamtel (2015), among the best in sub-Saharan Africa [15] | Telecommunications services are marginal; system operating below capacity and being modernized for better service [15] |
| **Natural resources** | Asbestos, gold, copper, nickel, tobacco, platinum, chrome [6] | Prawns and other sea food, coal, gems, beaches, fauna, flora, gas, wood, precious stones, marble, heavy sands [6] | Minerals, wildlife, timber and natural vegetation, water [6] | Cotton, coffee, cloves, cisal, cashew nuts, tea, tobacco, minerals, wildlife [6] |
| **Current issues (environment)** | Deforestation; soil erosion; land degradation; air and water pollution; the black rhinoceros herd - once the largest concentration of the species in the world - has been significantly reduced by poaching; poor mining practices have led to toxic waste and heavy metal pollution [5] | Increased migration of the population to urban and coastal areas with adverse environmental consequences; desertification; pollution of surface and coastal waters; elephant poaching for ivory is a problem [5] | Air pollution and resulting acid rain in the mineral extraction and refining region; chemical runoff into watersheds; poaching seriously threatens rhinoceros, elephant, antelope, and large cat populations; deforestation; soil erosion; desertification; lack of adequate water treatment presents human health risks [5] | Soil degradation; deforestation; desertification; destruction of coral reefs threatens marine habitats; recent droughts affected marginal agriculture; wildlife threatened by illegal hunting and trade, especially for ivory [5] |
| **Imports (commodities)** | Machinery and transport equipment, other manufactures, chemicals, fuels, food products | Machinery and equipment, vehicles, fuel, chemicals, metal products, foodstuffs, textiles | Machinery, transportation equipment, petroleum products, electricity, fertilizer, foodstuffs, clothing | Consumer goods, machinery and transportation equipment, industrial raw materials, crude oil |
| SADC Profiles | **Lesotho** | **Madagascar** | **Mauritius** | **Seychelles** |
| **Capital** | Maseru [4] | Antananarivo [4] | Port Louis [4] | Victoria [4] |
| **Area** | 30,355 km² [1] | 587,041 km² [1] | 2040 km² [1] | 455 km² [1] |
| **Population** | 1,958,042 [3] | 25,054,161 [3] | 1,356,388 [3] | 93920 [3] |
| **Population density (Number of people per square kilometer)** | 64.5/km² [2] | 42.68/km² [2] | 664.9/km² [2] | 206.42/km² [2] |
| **Urban population** | 18% [23] | 36.4% (2014 est.) | 44% {23] | 54.2% [23] |
| **Currency** | Maloti (LSL), EUR 1 = LSL 14.59 (March 2018) | Malagasy ariary (MGA ), EUR 1 = MGA 3 837.83 (March 2018) | Mauritian Rupee (MUR), EUR 1 = MUR 39.87 (March 2018) | Seychellois Rupee, EUR 1 = SCR 16.20 (March 2018) |
| **GDP (per capita)** | $3,900 [8] | $1,600 [8] | $21,600 [8] | $28,900 [8] |
| **GDP (total, Purchasing Power Parity)** | $7.448 billion [9] | $39.81 billion [9] | $27.44 billion [9] | $2.712 billion [9] |
| **Income category** | Lower-middle-income | Low-income | Upper-middle-income | High-income economy |

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| **Main industries** | Food, beverages, textiles, apparel assembly, handicrafts, construction, tourism [10] | Meat processing, seafood, soap, beer, leather, sugar, textiles, glassware, cement, automobile assembly plant, paper, petroleum, tourism, mining [10] | Food processing (largely sugar milling), textiles, clothing, mining, chemicals, metal products, transport equipment, nonelectrical machinery, tourism [10] | Fishing, tourism, beverages [10] |
| **Unemployment** | 28.1% (2014 est.) [11] | 2.1% (2016 est.) [11] | 6.9% (2017 est.) [11] | 3% (2017 est.)[11] |
| **Relevant harbors and ports** | Landlocked | Port of Morondava, Port of Mananjary, Port of Antisranana, Port of Diego Suarez, Port of Mahajanga, Port of Andoany, Port of Tolagnaro, Port of Antalaha, Port of Manakara, Port Saint Louis, Port of Iharana, Port of Maintirano, Port of Nosy Be, Port of Maroantsetra, Port of Toamasina, Port of Tulear, Port of Antsohim Bondrona [12] | Port Louis Harbor, Port Mathurin [12] | Port of Victoria, Port of Mahe [12] |
| **Top export products** | Wood, apparel and clothing, apparel clothing (not knitted or crocheted), products milling industry, pearls, precious stones, cotton, articles of leather, footwear, furniture; bedding, electrical machinery [16] | Nickel, coffee, tea, apparel and clothing, apparel clothing (not knitted or crocheted), cotton, other base metals, edible vegetables, fish and crustaceans, ores, mineral fuels, oils [16] | Knitted fabrics, prep. of meat, fish, apparel and clothing, apparel clothing (not knitted or crocheted), sugars, cotton, electrical machinery, fish and crustaceans, machinery and nuclear reactors, pearls, precious stones [16] | Preparations meat, fish, commodities (not elsewhere specified), aircraft, spacecraft, residures food industries, ships, boats, tobacco, optical, photographic, animal or vegetable fats and oils, fish and crustaceans, mineral fuels, oils [16] |
| **Head of state** | His Royal Highness King Letsie III [13] | H. E. Rajaonarimampianina Hery Martial [13] | Ameenah Gurib-Fakim, GCSK, CSK, PhD [13] | H.E. Danny Faure [13] |
| **Governance** | Parliamentary constitutional monarchy [14] | Semi-presidential republic [14] | Parliamentary republic [14] | Presidential republic [14] |
| **Legal system** | Mixed legal system of English common law and Roman-Dutch law; judicial review of legislative acts in High Court and Court of Appeal | Civil law system based on the old French civil code and customary law in matters of marriage, family, and obligation | Civil legal system based on French civil law with some elements of English common law | Mixed legal system of English common law, French civil law, and customary law |
| **Some important legislative aspects (national)** | Energy Policy Framework, 2002; Energy Action Plan, 2003 | Madagascar Action Plan; National Program promoting development of renewable energy sources for the period 2014-2019 | Long-term Energy Strategy 2009-2025; Action Plan for the Energy Strategy 2011-2025 | Sustainable Development Strategy 2010-2030; Seychelles Energy Act 2012 |
| **Important legislative aspects, such as memberships (international)** | SACU, EPA, AGOA, SADC, The Generalised System of Preferences; gives access to North American, Japanese, Nordic and other developed markets, with preferential access to 18 markets in the Preferential Trade Area for Eastern and Southern Africa, bilateral trade agreements, ACP, AfDB, AU, FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, Interpol, IOC, IOM, IPU, ISO (correspondent), ITU, MIGA, NAM, OPCW, SACU, SADC, UN, UNAMID, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | COMESA, SADC, PMAESA, ACP, AfDB, AU, EITI (candidate country), FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, NAM, OIF, OPCW, PCA, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | Cotonou Agreement, SADC, COMESA, IOL, IOR-ARC, AGOA, EPA, PMAESA, ACP, AfDB, AOSIS, AU, C, CD, COMESA, CPLP (associate), FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICCt, ICRM, IDA, IFAD, IFC, IFRCS, IHO, ILO, IMF, IMO, IMSO, InOC, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OIF, OPCW, PCA, SAARC (observer), SADC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | SADC, COMESA, PMAESA, ACP, AfDB, AOSIS, AU, EITI (candidate country), FAO, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO (correspondent), ITU, MIGA, NAM, OIF, OPCW, SADC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO (observer) [22] |
| **Languages** | SeSotho, English [7] | Malagasy and French [7] | English and French [7] | French, English, Seychellois Creole (Kreol) [7] |

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| **Technologies** | Rudimentary system consisting of a modest number of landlines, a small microwave radio relay system, and a small radiotelephone communication system; mobile-cellular telephone system is expanding [15] | System is above average for the region; competition among the three mobile service providers has spurred recent growth in the mobile market [15] | Small telecommunication system with good service [15] | Effective system; combined fixed-line and mobile-cellular teledensity is approximately 185 telephones per 100 persons; radiotelephone communications between islands in the archipelago [15] |
| **Natural resources** | Diamonds, wildlife, mohair, wool and water [6] | Graphite, chromites, mica, bauxite, quartz, semi-precious stones, coffee, textiles [6] | Sugar cane, beaches, sea, flora, fauna and other marine resources | Fish (mostly tuna), cinnamon, copra [6] |
| **Current issues (environment)** | Population pressure forcing settlement in marginal areas results in overgrazing, severe soil erosion, and soil exhaustion; desertification; Highlands Water Project controls, stores, and redirects water to South Africa [5] | Soil erosion results from deforestation and overgrazing; desertification; surface water contaminated with raw sewage and other organic wastes; several endangered species of flora and fauna unique to the island [5] | Water pollution, degradation of coral reefs [5] | Water supply depends on catchments to collect rainwater [5] |
| **Imports (commodities)** | Food; building materials, vehicles, machinery, medicines, petroleum products | Capital goods, petroleum, consumer goods, food | Manufactured goods, capital equipment, foodstuffs, petroleum products, chemicals | Machinery and equipment, foodstuffs, petroleum products, chemicals, other manufactured goods |
| SADC Profiles | **Swaziland/Eswatini** | **Democratic Republic of Congo** | **Malawi** | **Comoros** |
| **Capital** | Mbabane [4] | Kinshasa [4] | Lilongwe [4] | Moroni [4] |
| **Area** | 17,364 $km^2$ | 2,344,858 $km^2$ [1] | 118,484 $km^2$ [1] | 2235 $km^2$ [1] |
| **Population** | 1,467,152 [3] | 83,301,151 [3] | 19,196,246 [3] | 808080 [3] |
| **Population density** | 84.49/$km^2$ [2] | 35.53/$km^2$ [2] | 162.02/$km^2$ [2] | 361.56/$km^2$ [2] |
| **Urban population** | 24% [23] | 32% [23] | 17% [23] | |
| **Currency** | Lilangeni (SZL), EUR 1 = SZL 14.59 (March 2018) | Congolese Franc (CDF), EUR 1 = CDF 1 939.47 (March 2018) | Malawi Kwacha (MWK), EUR 1 = MWK 881.35 (March 2018) | The Comorian Franc (KMF), EUR1 = KMF 491,968 (August 2018) |
| **GDP (per capita)** | $9,900 [8] | $800 [8] | $1,200 [8] | $1,600 [8] |
| **GDP (total, Purchasing Power Parity)** | $11.34 billion [9] | $67.99 billion [9] | $22.47 billion [9] | $1.323 billion [9] |
| **Income category** | Lower-middle-income | Low-income | Low-income | Low-income |
| **Main industries** | Soft drink concentrates, coal, forestry, sugar processing, textiles, and apparel [10] | Mining (copper, cobalt, gold, diamonds, coltan, zinc, tin, tungsten), mineral processing, consumer products (textiles, plastics, footwear, cigarettes), metal products, processed foods and beverages, timber, cement, commercial ship repair [10] | Tobacco, tea, sugar, sawmill products, cement, consumer goods [10] | Fishing, tourism, perfume distillation [10] |
| **Unemployment** | 28% (2014 est.) [11] | 46.1% (2013 est.) | 20.4% (2013 est.) [11] | 6.5% (2014 est.) [11] |
| **Relevant harbors and ports** | Landlocked | Moanda Oil Terminal, Port of Matadi, Port of Banana, Port of Boma, Port of Ango-Ango [12] | Landlocked | Port of Mamoudzou, Pamanzi Bay, Port of Longoni, Port of Mamoudzou, Port of Mutsamudu, Port of Moroni, Port of Dzaoudzi, Port of Mayotte [12] |
| **Top export products** | Essential oils, sugars, printed books, newspapers, other chemical products, wood, apparel and clothing (not knitted or crocheted) [16] | Other base metals, copper, ores, inorganic chemicals, wood, pearls, precious stones, coffee, tea, cocoa and cocoa preparations, mineral fuels, oils, commodities (not elsewhere specified) [16] | Tobacco, dairy produce, edible vegetables, coffee, tea, sugars, cotton, residures food indust., fertilisers, plastics, machinery and nuclear reactors [16] | Cloves, vanilla, essential oils, wood charcoal and scrap aluminium |
| **Head of state** | His Majesty, King Mswati III [13] | H.E. Joseph Kabila [13] | His Excellency Prof. Arthur Peter Mutharika [6] | Azali Assoumani [13] |

| **Governance** | Absolute monarchy [14] | Semi-presidential republic [14] | Presidential republic [14] | Federal presidential republic [14] |
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| **Legal system** | Mixed legal system of civil, common, and customary law | Based on both Belgian and tribal law. | Mixed legal system of English common law and customary law; judicial review of legislative acts in the Supreme Court of Appeal | Mixed legal system of Islamic religious law, the French civil code of 1975, and customary law |
| **Some important legislative aspects (national)** | National Energy Policy (2002); National Energy Plan (NEP, 2003) and the related National Energy Implementation Strategy (NEPIS, 2009); Renewable Energy Action Plan, 2007 | Electricity law of 2014, the Framework Law 013/2002 on Telecommunications, The United Nations Convention on the Law of the Sea | National Energy Policy (2003); Biomass Energy Strategy (2009); Draft Renewable Energy Strategy (2014); Rural Electrification Fund (REF) (2004); rural electrification regulations (2008); Rural Electrification Act (2004); Energy Act (2004); Electricity Act (2004) | National Energy Strategy, Comoros Maritime Shipping Act 2001 |
| **Important legislative aspects, such as memberships (international)** | SACU, EPA, SADC, WTO, WCO, Common Market for Eastern and Southern Africa, ACP, ACP, AfDB, AU, COMESA, FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, NAM, OPCW, PCA, SACU, SADC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WHO, WIPO, WMO, WTO [22] | SADC, ACP, AfDB, AU, CEMAC, CEPGL, COMESA, EITI (compliant country), FAO, G-24, G-77, IAEA, IBRD, ICAO, ICC (NGOs), ICRM, IDA, IFAD, IFC, IFRCS, IHO, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), MIGA, NAM, OIF, OPCW, PCA, SADC, UN, UNCTAD, UNESCO, UNHCR, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | Cotonou Agreement, COMESA, SADC, African Growth and Opportunity Act beneficiary country, bilateral trade agreement with South Africa, preferential trade agreement with Mozambique, PMAESA, ACP, AfDB, AU, FAO, G-77, IAEA, IBRD, ICAO, ICRM, IDA, IFAD, IFC, IFRCS, ILO, IMF, IMO, Interpol, IOC, IOM, IPU, ISO (correspondent), ITSO, ITU, ITUC (NGOs), MIGA, MINURSO, MONUSCO, NAM, OPCW, SADC, UN, UNCTAD, UNESCO, UNIDO, UNISFA, UNOCI, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO [22] | OAPI, SADC, ACP, AfDB, AOSIS, AU, CAEU (candidates), COMESA, FAO, FZ, G-77, IBRD, ICAO, ICRM, IDA, IDB, IFAD, IFC, IFRCS, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, ITSO, ITU, ITUC (NGOs), LAS, MIGA, NAM, OIC, OIF, OPCW, UN, UNCTAD, UNESCO, UNIDO, UPU, WCO, WHO, WIPO, WMO, WTO (observer) [22] |
| **Languages** | siSwati, English [7] | French, Lingala, Kikongo, Swahili, Tshiluba [7] | English, Chichewa [7] | Comorian, Arabic, French [7] |
| **Technologies** | A somewhat modern but not an advanced system; Eswatini recently awarded a second mobile-cellular service; communication infrastructure has a geographic coverage of about 90% and a rising subscriber base [15] | Barely adequate wire and microwave radio relay service in and between urban areas; domestic satellite system with 14 earth stations; inadequate fixed-line infrastructure [15] | Rudimentary; one fixed-line and two mobile-cellular operators govern the market, limited fixed-line subscribership of about 1 per 100 households; mobile-cellular services are expanding but network coverage is limited and is based around the main urban areas [15] | Sparse system of microwave radio relay and HF radiotelephone communication stations [15] |
| **Natural resources** | Sugar, food products, wood pulp and wildlife | Gold, diamond, base metals, coal, oil and gas, wildlife, water, uranium, coffee, sugar, rubber, cotton, fish, wood, banana, cocoa, tobacco, electric energy and copper [6] | Tobacco, sugar, tea, cotton, groundnuts, coffee, fish and wildlife [6] | Fish, view natural resources |
| **Current issues (environment)** | Limited supplies of potable water; wildlife populations being depleted because of excessive hunting; overgrazing; soil degradation; soil erosion [5] | Poaching threatens wildlife populations; water pollution; deforestation (forests endangered by fires set to clean the land for agricultural purposes; forests also used as a source of fuel); soil erosion; mining (diamonds, gold, coltan - a mineral used in creating capacitors for electronic devices) causing environmental damage | Deforestation; land degradation; water pollution from agricultural runoff, sewage, industrial wastes; siltation of spawning grounds endangers fish populations | Deforestation; soil degradation and erosion results from crop cultivation on slopes without proper terracing; marine biodiversity affected as soil erosion leads to the silting of coral reefs |
| **Imports (commodities)** | Motor vehicles, machinery, transport equipment, foodstuffs, petroleum products, chemicals | Foodstuffs, mining and other machinery, transport equipment, fuels | Food, petroleum products, semi-manufactures, consumer goods, transportation equipment | Rice and other foodstuffs, consumer goods, petroleum products, cement and construction materials, transport equipment |

The report is a market analysis, which aims to provide basic information of the Southern African Development Community's (SADC) business environment. It is prepared in accordance with the Central Baltic project SME Aisle (duration 2018–2021) project and its core themes, which include shipbuilding, maritime and logistics, renewable energy, automation and ICT. The report pays close attention to the following countries: Namibia, South Africa, Angola, Mozambique, Botswana and Zambia.

ISSN 2323-8356 (pdf) | ISBN 978-951-633-263-8

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