MINISTRY OF INDUSTRIALISATION,
TRADE AND SME DEVELOPMENT

Growth Strategy for Namibia's Swakara Wool Industry and Associated Value Chains

Swakara Wool and Wool Products

Published by: Ministry of Industrialisation, Trade and SME Development (MITSMED)

Supported by: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)

Based on: draft report *"Development of a Sector Growth Strategy for the Namibian Agroprocessing Industry: Swakara Wool Processing – In-depth Value Chain Analysis and Strategy"* by Optimal Agricultural Business Systems (OABS), April 2016

Design & Layout by: Juxtapose Design

Photography by: Shawn van Eeden, Creative Lab

FOREWORD

The Industry Growth Programme is part of the ongoing efforts to reinforce Namibia's economic growth, to reduce income inequality and to increase employment for its citizens. This Industry Growth Strategy forms part of the support to selected manufacturing industries envisaged by the Growth at Home strategy, which promotes Namibia's competitive advantages and opportunities. This is envisaged through the Special Industrialisation Programme whose aim is to provide targeted support for value chain analyses and feasibility studies.

It is through the implementation of this and other strategies that the Ministry of Industrialisation, Trade and SME Development, in close cooperation with other line ministries, will support local value addition, upgrading and economic diversification. The efforts will help to structurally transform Namibia's economy favouring the most productive and efficient economic activities, and local industries will be provided with improved market access at home and abroad.

The Industry Growth Programme is an important element of the war against poverty and a further step on Namibia's path towards becoming a highly competitive, industrialised nation with sustainable economic growth as depicted in Vision 2030. As such, this strategy's implementation through 2020 is geared towards strengthening forward and backward linkages within the Namibian economy as envisaged in the Harambee Prosperity Plan.

Swakara wool is a strategic industry that has, in agreement with the fourth National Development Plan, been selected for a more specific focus on its economic development. Key stakeholders from the business community and public administration who have a vested interest in the Namibian industry's prosperity for the benefit of all have engaged in extensive consultations and substantially contributed to this programme. They are now eager to implement interventions along the value chain effectively. Many of the suggestions and concerns raised by entrepreneurs and civil servants in extensive discussions have been distilled into this document. This interactive process has once more demonstrated that Namibians together can shape an enabling environment in which the manufacturing sector can thrive and the wellbeing of the Namibian people be advanced.

I am sure that the Industry Growth Strategies have the potential to remove challenges and accelerate economic development in the prioritised areas. The interventions planned for 2016 onwards will allow the targeted industries to prosper according to their inherent abilities. This strategy is a living document. As such, additional comments or remarks from stakeholders are welcome and can be addressed to the Ministry of Industrialisation, Trade and SME Development.

I am confident that, in the vein of the Harambee Prosperity Plan, all stakeholders involved will pull in the same direction in the upcoming implementation phase – as they have done in strategy building – for the advantage of a thriving Namibian economy that creates jobs, incomes and sustainable growth.

Hon. Immanuel Ngatjizeko
Minister of Industrialisation, Trade and SME Development

The Industry Growth Programme is an important element of the war against poverty and a further step on Namibia's path towards becoming a highly competitive, industrialised nation with sustainable economic growth as depicted in Vision 2030.

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

CDP	Community development program
COSDEF	Community Skills Development Foundation
CSR	Corporate social responsibility
HS	Harmonized Commodity Description and Coding System
ISIC	International Standard Industrial Classification
MAWF	Ministry of Agriculture, Water and Forestry
MITSMED	Ministry of Industrialisation, Trade and SME Development
NAD	Namibia Dollar
NUST	Namibia University of Science and Technology
SIF	Swakara Industry Forum
SME	Small and medium enterprise
UNAM	University of Namibia
USD	United States Dollar
VC	Value chain

1. NAMIBIA'S SWAKARA WOOL INDUSTRY AND ITS VALUE CHAIN

1. NAMIBIA'S SWAKARA WOOL INDUSTRY AND ITS VALUE CHAIN

Wool production and further processing of Swakara wool was selected as one of the promising agro-processing industries on which to conduct an in-depth analysis of associated value chains for future upgrading. Experience with industrial upgrading processes around the world has shown that value-chain analysis is a useful tool that can help identify constraints to and opportunities for industrial growth and competitiveness. The detected opportunities and constraints within Namibia's Swakara wool industry and its value chains were the departure point for an industry growth strategy, the implementation of which is expected to make a significant contribution to the overall goals and targets of Growth at Home – Namibia's Execution Strategy for Industrialisation.

1.1 Industry Definition

The definition of the Swakara wool industry is based on the International Standard Industrial Classification (ISIC) of All Economic Activities, Revision 4. Whereas the production of raw wool is considered a primary activity and therefore part of Division 1 (Crop and animal production, hunting and related service activities), i.e. the same division as Swakara sheep farming, subsequent processing and manufacturing activities related to wool mainly belong to **Manufacturing Division 13 (Manufacture of textiles)**. All first- and second-stage processing and most current end-product manufacturing activities belong in this division, because it includes:

• Preparatory operations, such as degreasing and carbonising wool, along with basic processing operations related to the production of wool tops, either for trade or for further processing, i.e. carding, combing and spinning, which together make up manufacturing class 1311 and in the following will be referred to as first-stage processing activities;

• The production of woollen-type fabrics, including from yarn; all operations directly related to the **production of wool-based fabrics, including felt,** in terms of intermediate products, either for trade or for manufacturing of consumer end products, will be considered second-stage processing activities;

• **The manufacturing of constructed textile articles** other than wearing apparel from sheep wool, which includes manufacturing of handwoven tapestries (Class 1392), textile floor coverings/carpets and rugs (Class 1393) and all other non-apparel items. All kinds of **wearing apparel**, i.e. wool-based clothing and accessories, are part of a separate division: Manufacture of wearing apparel (Division 14).

It should be noted that both divisions (13 and 14) comprise economic activities related to the production of natural or mixed textile fibres, fabrics and constructed textile articles and wearing apparel, including silk, cotton and all other animal, vegetable or manmade fibres. This makes regional and international comparisons on wool production rather difficult. Such comparisons are easier for **trade with wool and wool products,** since international trade statistics are based on the Harmonized System, which distinguishes at the 2-digit level between silk (HS 50); wool, animal hair and horsehair yarn and fabric thereof (HS 51); cotton (HS 52); and vegetable textile fibres n.e.s. (HS 53), meaning that trade with first- and second-stage wool-processing products is registered under HS 51. However, it should be noted that this HS code also comprises wool products from animals other than sheep. This shortcoming does not change when analyses are based on 4-digit-level codes, because at this level products are split up according to the degree of processing they have undergone, from non-carded and combed wool or fine/coarse animal hair (HS 5101–5102), to yarn from carded or combed wool or coarse hair, either for retail or further processing (HS

5106–5110), to woven fabrics, either from carded or combed wool or coarse hair (HS 5111–5113). Industrial felt is classified in the HS under code 5602. The same applies to consumer end products, as the HS codes at neither the 2-digit nor the 4-digit level distinguish different types of wool but only major product groups, such as carpets and other textile floor coverings (HS 57), special woven or tufted fabric, lace, tapestry etc. (HS 58), and so on, as well as different processing technologies (knitted, crocheted, hand woven, needleworked and quilted textile products, etc.).

Hence, in terms of production, Namibia's current Swakara wool industry fits best in Division 13 (ISIC, Rev. 4); in terms of trade, Swakara wool products are best represented through HS codes 51 (first- and second-stage processing products) and 57 (Swakara wool carpets and wall hangings).

1.2 Global and regional industry performance

Major Trends Regarding Sheep Production

Global sheep production was dominated in 2014 by China (202.2 m heads), Australia (72.6 m heads), India (63 m heads), Iran (50.3 m heads) and Nigeria (40.6 m heads). Namibia registered a total of approximately 3 m heads of sheep, thus accounting for less than 0.9% of the entire African production. As a world region, Africa accounted for 28.1% of global production, which was spearheaded by Asia (45.4%; see Figure 1). Apart from Nigeria, the major regional sheep producing countries are Ethiopia (29.3 m heads), Algeria (27.8 m heads) and South Africa (25.5 m heads).

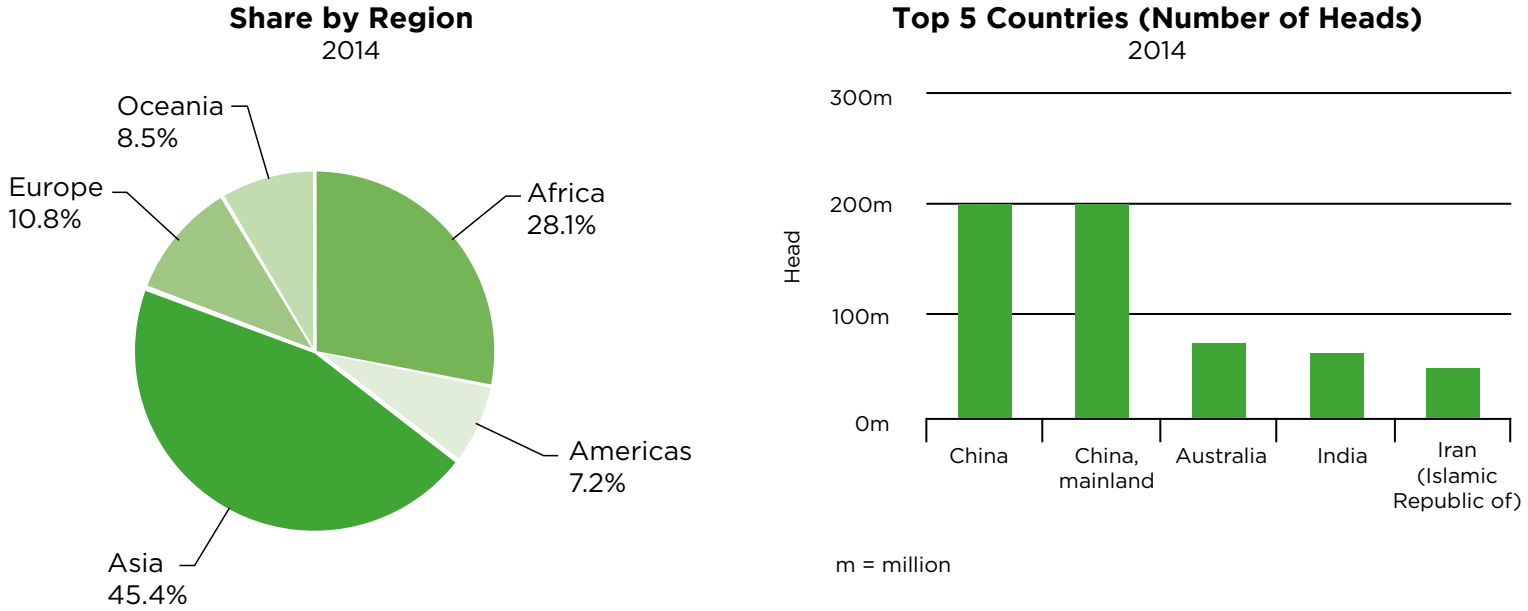


Figure 1: Sheep production: Heads by region and global top-five producer countries (by number of heads; 2014)
Source: FAOSTAT

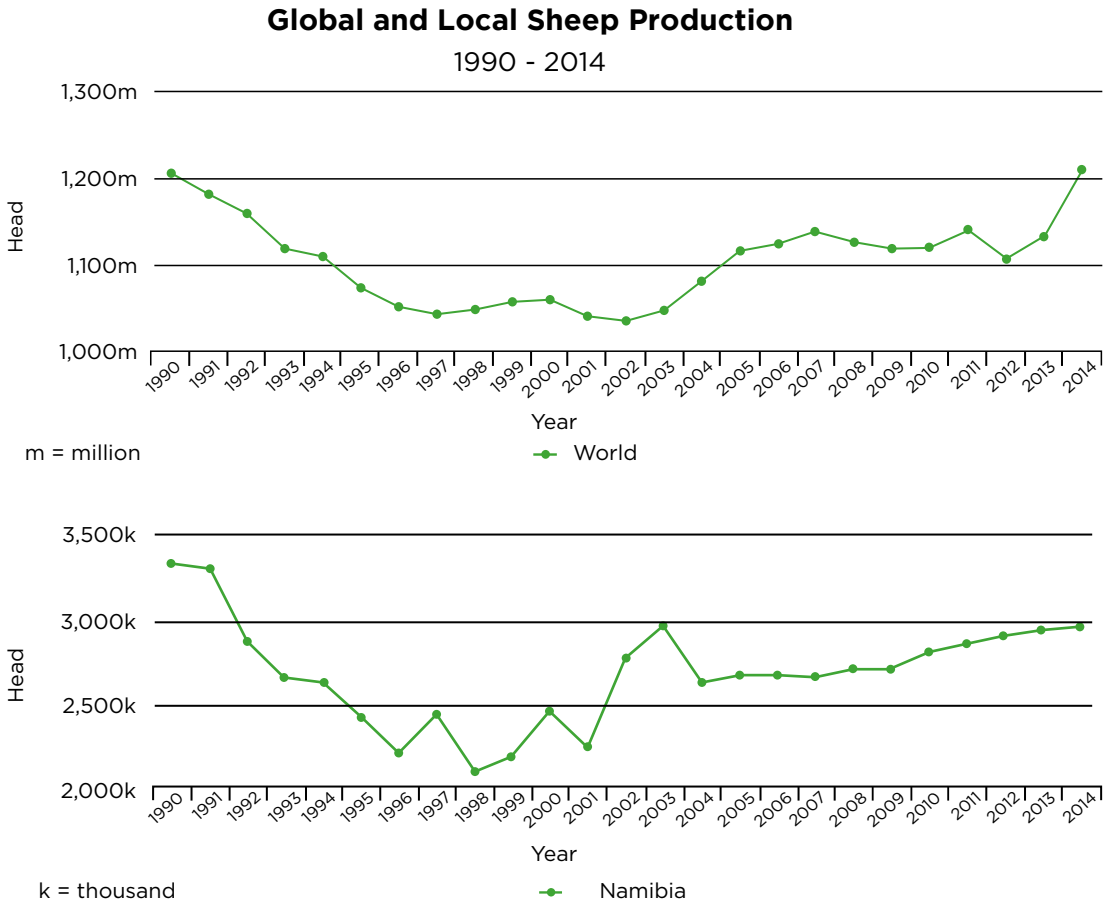


Figure 2: Global and local sheep production (1990–2014)
Source: FAOSTAT

Global sheep production experienced a prolonged decline during the nineties but recovered during the last decade and particularly after 2012. Current total production been different, with steady production growth until 2011 followed by a pronounced slowdown and very fast recovery in recent years. Namibia's production has taken a similar path as global production, with a steep decline in the 1990s followed by a gradual recovery after 2000 and rather stable production figures in recent years (see Figure 2).

The current overall herd size of 3 m is still lower than before independence, especially compared to the production peak during the Swakara pelt boom in the 1970s, when it reached almost 4.5 m. In 1974, more than a third of the 8.3 m karakul pelts traded internationally came from Namibia. It must be pointed out, however, that aside from Swakara, Namibia has a variety of other popular commercial sheep breeds such as the Dorper, Damara, Van Rooy and blackhead Persian. The current size of the Swakara sheep herd is estimated at 250,000, less than 10% of the total stock.

Major Trends Regarding Trade with Wool and Wool Products

Exporting Countries

Product HS Code: 51 Wool, Animal Hair, Horsehair, Yarn and Fabric Thereof - 2014

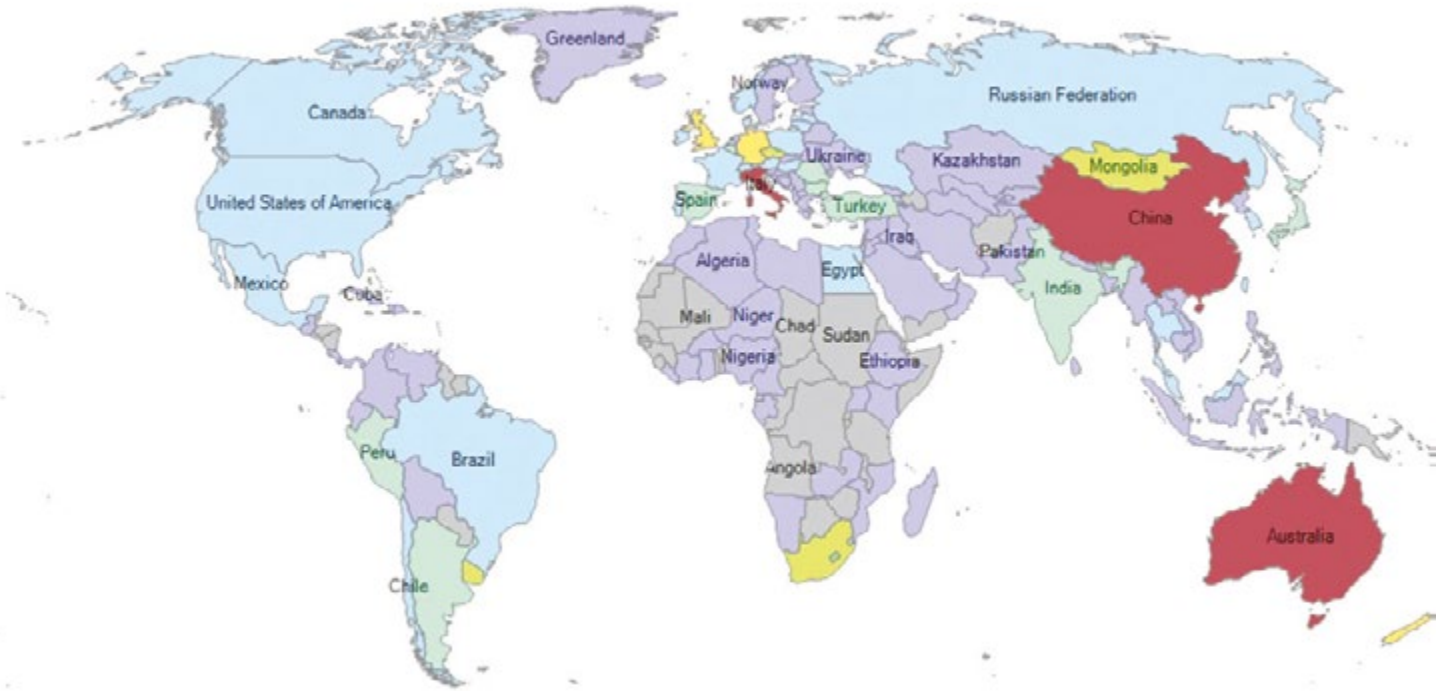


Figure 3: Global exports HS code 51: Wool, animal hair, horsehair yarn and fabric thereof
Source: Intracen, based on UN Comtrade statistics

Wool is a freely traded international commodity, subject to global supply and demand. While wool represents only 3% of world fibre production, it bears importance to the economy and way of life in many countries. The world's largest wool producers are China (400,000 metric tonnes), Australia (362,000 metric tonnes) and New Zealand (165,000). Other relevant producer countries according to FAOSTAT data, with annual production ranging between 60,000 and 45,000 metric tonnes in 2014, are the UK, Iran, Morocco, Sudan, the Russian Federation, Argentina and India. With an estimated total wool production output of only 360 tonnes and estimated raw wool exports of less than 100 tonnes per year, Namibia certainly is a very small player in the international trade of wool and wool products.

China is also the largest exporter of wool, with a 17.6% share in global exports, followed by Australia (15.2%), Italy (7%), Germany (4.8%) and New Zealand (4.6%). South Africa currently ranks ninth and holds a more-or-less stable global market share of 2.5% (see Figure 3).

When it comes to trade with consumer end products, the export leaders for carpets and other textile floor coverings (HS 57) are China, Turkey, Belgium and India; China's world market leadership is even more pronounced in the HS 58 product group (Special woven or tufted fabric, lace, tapestry, etc.), where the world market share of mainland China, Hong Kong and Taiwan combined reaches 50%. Similarly, a small number of Asian countries (China, Bangladesh and Vietnam) dominate world trade of wearing apparel and accessories (HS 61 and 62), although trade figures suggest that Turkey and some EU countries (Italy, Italy, Belgium and Spain) maintain relevant production and export activities for wool-based apparel. With the exception of South African yarn and fabric, there are currently no significant export activities at all from Africa of intermediate and final wool products. Most of the wool-product manufacturing in this region is confined to cottage industries catering mainly to local customers.

Export statistics provide further evidence on the prevalent commercial uses of Namibian sheep production. In 2014, Namibia was the second-most-important African exporter of sheep meat (HS code 0204) after Ethiopia, ranking 17th worldwide (Ethiopia: ninth) in terms of value (almost USD 29 m; Ethiopia: 84 m); at the same time, it was the second-most-important regional exporter of raw skins of sheep and lambs after South Africa (HS code 4102, which includes Swakara pelts); Namibia ranked 13th worldwide in 2015, with a reported raw skins export value of more than USD 7 m (the RSA ranked fifth). Thus, the dominant uses of Namibian sheep are meat, skin and pelt production; still, production and trade of Swakara wool and wool products can be considered at best a minor by-product or marginal commercial usage of sheep breeding in Namibia.

1.3 Industry Background and Evolution in Namibia

The medium-sized karakul sheep is believed to be one of the oldest breeds of domesticated sheep in the world. Internationally, karakul sheep are a multi-purpose breed and kept for the production of milk and dairy products in some countries, along with production of (lean) meat, pelts and wool. As the fibre of karakul wool is relatively coarse, it is mainly used for outer garments, carpets and felting. Originally from the Central Asian steppes, the broad-tailed karakul sheep has been bred in Namibia since 1907, when the first 12 sheep were imported by the German government. This breed adapted very well to the harsh environmental conditions of Southern Namibia, where it was crossed with indigenous breeds and from where it spread to the Northern Cape and surrounding regions.

Throughout the 20th century, Namibian karakul pelts held a favoured status among international fur designers and fashion houses for their exclusive appeal, lustrous sheen and truly distinctive pattern of compact curves and swirls. Both the Namibian karakul sheep and its fur are internationally known as Swakara, an abbreviation of

Throughout the 20th century, Namibian karakul pelts held a favoured status among international fur designers and fashion houses for their exclusive appeal, lustrous sheen and truly distinctive pattern of compact curves and swirls.

International buyers of Swakara fur garments can be assured of a quality product produced in line with international standards.

"Southwest African karakul". Though this trademark was established in 1968, only in 2013 did Namibian authorities grant permission for the local karakul breed name to officially change to Swakara. The fast increase in the Namibian herd size in the second half of the 20th century was intimately linked to the international demand for Swakara pelts. It reached its peak in the late 1970s, with an estimated herd size of more than 5 m in Namibia and South Africa. However, there was a sharp drop in pelt production in the eighties and nineties – output declined from 3.4 m pelts per year to less than 60,000 in the late 1990s. After a slow recovery at the beginning of this century, current pelt output totals approximately 140,000 per year; all pelts are auctioned through the Swakara Board's partnership with Kopenhagen Fur in Denmark twice a year. Namibian sheep breeders and the Namibian government worked with the European Union to formulate and regulate a code of practice ensuring the welfare of the sheep. This code of practice complies not only with European legislation and recommendations but also with recommendations from the US, Canada and New Zealand. Therefore, international buyers of Swakara fur garments can be assured of a quality product produced in line with international standards.

The Swakara sheep is characterised by its coloured fleece, which is due to a dominant black gene. Most lambs are born coal black with lustrous wavy curls, with the face, ears and legs usually showing smooth, sleek hair. As the lambs grow, the curls open and lose their pattern, and the colour generally begins to turn brownish or bluish grey, growing greyer with age. Many adults have a double coat, a fine down undercoat covered by a coat of guard hair. The sheep can also be grey, white or brown sheep. While the natural colours of Swakara sheep are black, grey, white and brown, one can find over 200 different tone variations. A single grey sheep features more than five natural tones.

The Swakara wool value chain is based on the fibre of adult sheep, which is a light-weight, high-volume, strong fibre, ideally long and lustrous with no crimp. The wool requires little preparation and is easily spun, producing a superior carpet yarn that is currently used for the manufacturing of carpets and wall hangings but could also be used for outer garments, saddle blankets and all type of felting products, given its excellent felting suitability.

The shearing and marketing of Swakara wool have been discussed at the Swakara Board meetings over the past five years. Despite attempts to establish shearing teams, courses on electrical shearing, a loan for the acquisition of shearing equipment, a broker to sell wool, felting courses and a national wool campaign, the commercial use of Swakara wool, unlike the marketing of Swakara pelts, remains a major problem.

The National Swakara Wool Innovation Campaign (HERD National Wool Campaign) seeks to promote value addition to the "by-product" Swakara wool by defining and enhancing the contemporary image and quality of Swakara wool; introducing innovations at the process and product levels; and combining heritage and innovation through technology, skill transfer, entrepreneurship development and the establishment of new businesses that uplift women and youth in the Swakara farming regions in Southern Namibia.

1.4 Characterisation of Namibian Producers and Businesses

As shown in the value chain map (see Figure 4), the primary production segment comprises the following activities: sheep breeding and farming, colour sorting prior to shearing; shearing and sorting plus dirt removal after shearing; and finally collection and distribution of raw wool for further processing. As mentioned, primary production is carried out in the arid southern parts of the country, which are to some extent only suitable for small livestock farming. More than 90% of Swakara farmers are located in two regions, Hardap and //Kharas, the main production areas being Keetmanshoop (24.8%), Mariental (18.3%), Karasburg (10%), Bethanie (7.4%) and Gibeon (6.5%). There are approximately 300 Swakara sheep producers, two thirds of which are small-scale (communal

and emerging) farmers resettled on government land; the remaining third are large-scale (commercial) farmers and research stations. However, only about 16% (60 tonnes) of the total harvested wool clip of around 360 tonnes is currently entering the processing and manufacturing segment of the wool value chain, while around 84% of the clip is stored on the farms, used for repairing roads or simply destroyed. Moreover, over 80% of the marketed raw wool, about 50 tonnes, is produced by only 30 farmers. In terms of farm size, the majority of them are large-scale farmers (72%); small-scale and emerging farmers make up the remainder (28%). These figures evidence the low overall integration of Namibian sheep farmers (commercial, communal and emerging) into the wool value chain.

According to industry stakeholders and the findings of a survey conducted by AGRA in 2013, small farmers tend to be more eager to sell their raw wool and they tend to deliver higher quality wool; though the amounts are fairly small, the farmers seem to appreciate the additional cash income from raw wool sales as a contribution to their livelihoods.

There is currently one electric **shearing** team operating in Namibia, with five team members, as well as five or six manual shearing teams with nine members each; these teams are in charge of shearing and sorting raw wool, although not all raw wool is actually sorted. Shearers are operational service providers, informally contracted twice per year by the sheep farmers and paid NAD 3–6 per kilo of raw wool (according to hand shearing/electric shearing, sorted/unsorted wool). Shearing costs for farmers are actually higher due to equipment costs, payments in kind and transport of shearers, which add up to NAD 14 per sheep per year for manual shearing (approximately NAD 9.5 per kilogram of raw wool) or NAD 17 per year for mechanised shearing (approximately NAD 11.5 per kilogram of raw wool).

The second segment of the value chain is **input trade**. There is only one raw wool trader. Based in Keetmanshoop, he mainly operates as a supplier to two wool-processing companies in South Africa (Gubb & Inggs and Jan Paul Barnard Weavers). In 2015, the total amount of raw wool exported from Namibia to the RSA through this wool broker was approximately 45 tonnes, out of a total of 60 tonnes of commercialised raw wool.

The locally processed raw wool does not total more than 15 tonnes per year. The majority is directly sourced from local farmers by the carpet manufactures (about 10 tonnes). Depending on their requirements concerning quality and colours, some carpet manufacturers prefer to purchase raw wool from the wool trader (about 5 tonnes); occasionally, manufacturers purchase pre-carded wool from the two South African processors; manufacturer Gun-gus covers part of his raw wool input with in-house production. As in the rest of the value chain, there are no formalised contractual relationships between the raw wool suppliers, the processors and the trader.

After local first-stage processing, which comprises scouring, willowing and carding, a total of 7.5 tonnes of wool tops enter second-stage processing, which comprises spinning, dyeing and moth treatment in the weaving sub-chain, creating the intermediate product carpet yarn. In the felting sub-chain, which is currently practiced only at an experimental stage in Namibia, the corresponding activities are hand felting (there is no mechanical felting at the moment), dyeing and moth treatment. If there were capacity for mechanised second-stage processing in the felting sub-chain, the main intermediate product would be felt sheets.

Current **manufacturing** activities in the Swakara wool value chain are mostly confined to the weaving sub-chain, specifically traditional hand weaving of carpets and wall hangings, performed by five manufacturers. The total current production between them is about 2,500 m^2 per annum, with two clear lead companies accounting for 80% of output and sales (2,000 m^2 of handwoven carpets and wall hangings): **African Kirikara Art** at Kiripotib, a sheep, cattle and tourist farm on the edge of the Kalahari, about 160 km southeast of Windhoek and 70 km from Dordabis (www.kirikara.com), and Swakop-

mund-based **Karakulia Weavers** (www.karakulia.com.na), both with many years of experience. There are three smaller carpet-manufacturing businesses, with a combined annual output of approximately 500 m^2: **Ibenstein Weavers** in Dordabis (www.ibenstein-weavers.com.na), which are currently considering revamping their traditional weaving business; **Obib Community Trust** at Rosh Pinah, which is supported by the Scorpion Zinc mine and was established as part of their CSR/community development programme – this initiative specialises more in first-stage processing and is less experienced in manufacturing end products; and **Gun-gus** at Beenbreek, between Dordabis and Uhlenhorst, which is the only manufacturer that utilises its own first-stage wool-processing capabilities to cover part of its input needs. All of these manufacturers are also involved in **first- and second-stage processing**. Based on an average sales price of NAD 2,500 per square meter, the total value of end product is estimated at only NAD 6.25 m, which underlines the cottage character of the industry.

The manufacturing segment of the felting sub-chain comprises cutting felt sheets to size and manufacturing felt products. As mentioned, the felting sub-chain is barely developed in Namibia, but the HERD National Wool Campaign was launched in 2014 to pilot alternative methods of Swakara wool processing and manufacturing, with a focus on the felting sub-chain. So far, no relevant production of felting products is taking place in the country.

Due to the high degree of vertical integration, which is quite typical for small local value chains, the weaver businesses are also active in the **distribution and retail** segment, as the majority of products are delivered directly to final clients, either from the workshop (customised products, weaved according to specifications placed by the customer) or from the manufacturers' outlet stores in Windhoek and Swakopmund, with foreign tourists the most important costumer segment (about 80% of total sales). However, some manufacturers have participated successfully in international trade fairs such as Heimtextil, the biggest international trade fair for home and contract textiles and the global benchmark for quality textiles, and export a limited numbers of carpets and wall hangings, mainly to Europe and the RSA (about 10%). Local clients account for the remaining 10% of current product sales.

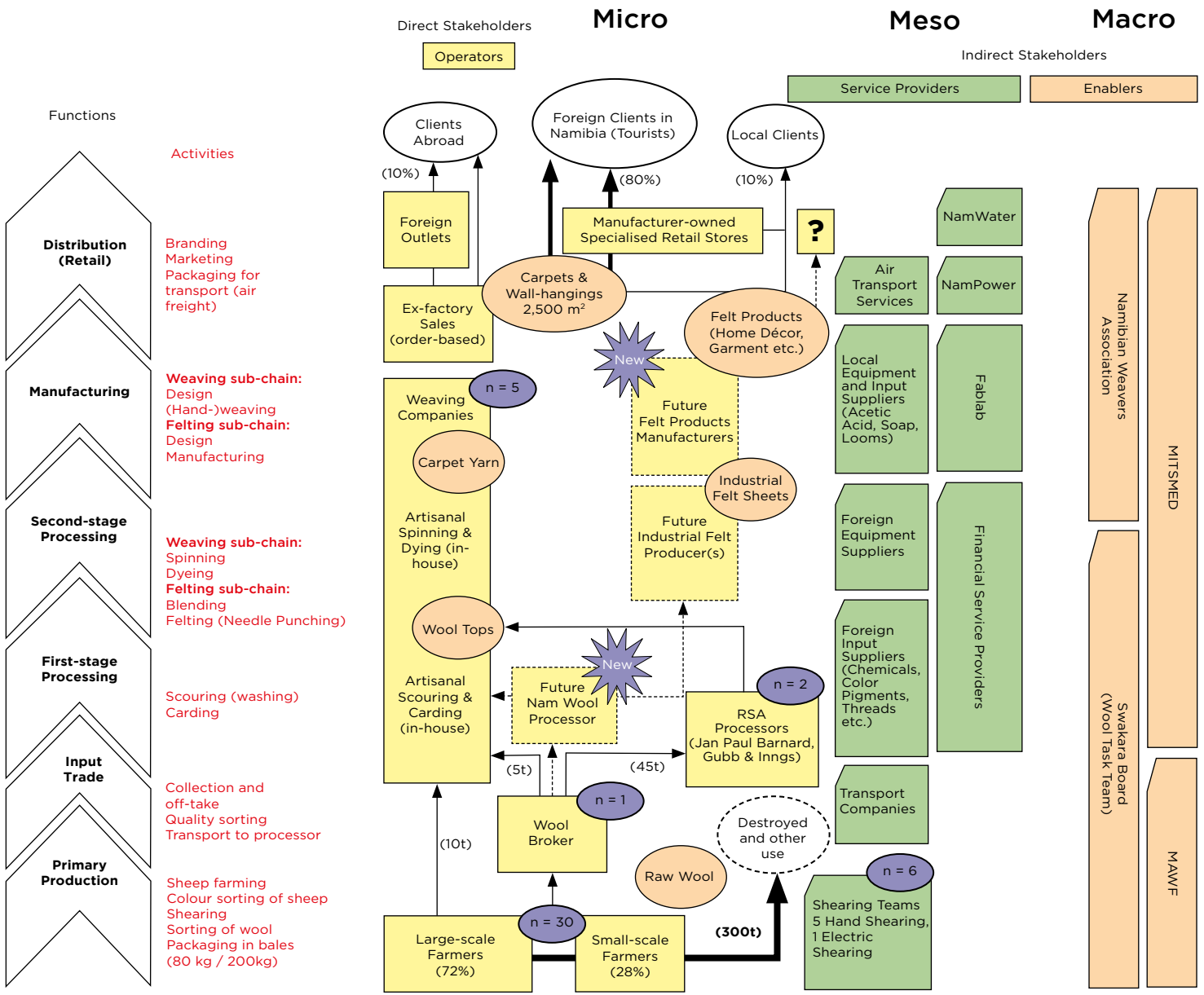


Figure 4: Value chain map Swakara wool
Source: GIZ ProCOM, based on data from OABS 2016

Swakara Wool Industry in Namibia

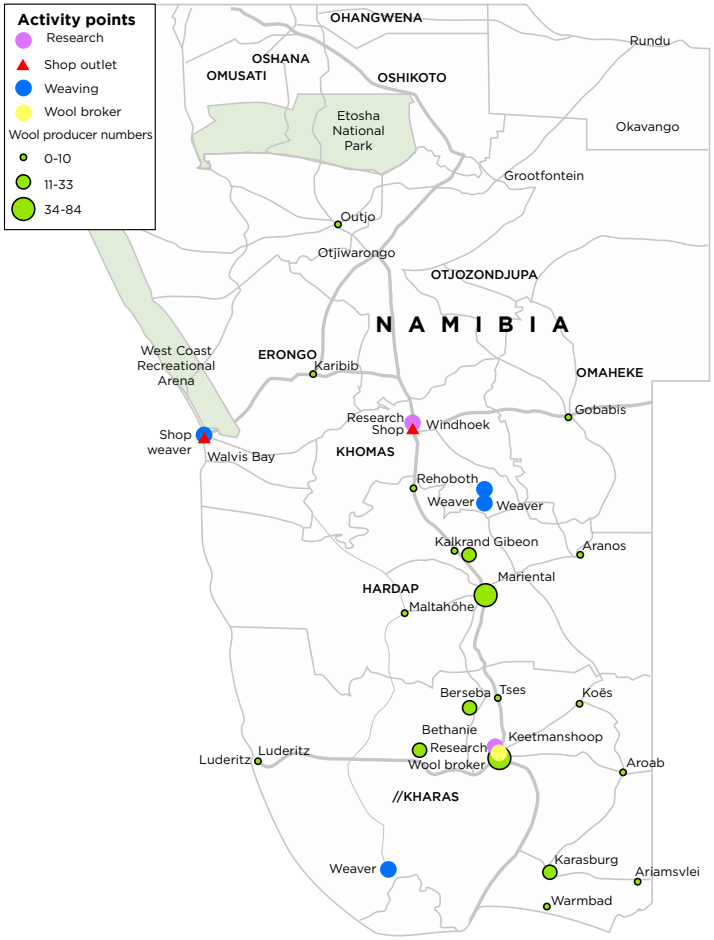


Figure 5: Geographical distribution of the Swakara wool industry and associated value chain
Source: OABS (2015)

1.5 Classification of Namibian Products

As outlined in the previous sub-chapter, the transformation segment of the Swakara wool value chain already comprises first- and second-stage processing activities, albeit very limited in scope, as well as manufacturing activities, which are mostly confined to the weaving sub-chain.

First-stage processing products are **wool tops**, to be used either for spinning or felting. Presently, Namibian weavers prefer to spin the wool themselves, making vertical integration the rule rather than the exception in the value chain. The most relevant second-stage processing (spinning and dyeing) product is **carpet yarn** (weaving sub-chain); as mentioned, there is presently no production of **industrial felt** taking place in the country, nor are there significant volumes of **handmade felt** being produced in the felting sub-chain, as this is very labour intensive and time consuming and therefore barely profitable. There has, however, been some experimenting lately with hand-felted consumer products such as handbags, slippers and interior decoration. A preliminary outcome of the HERD Wool Innovation Project is that handmade felt products cannot compete with industrial felt products in terms of quality, as the latter are more uniform, thinner, stronger, etc. Besides, pure Swakara wool felt is suitable neither for blankets nor clothing, as it is too coarse and therefore unpleasant on the skin. In order to produce commercial volumes of felting articles and eventually move into felt garment manufacturing, industrial felting and wool-blending technologies will have to be introduced. Given its fabric structure, felt can be cut without unravelling or fraying. A literature review has indicated that there is considerable market potential for felting products from natural fibres in a wide range of industries, such as automotive, mechanical engineering, electronics, electrical and optical, office equipment manufacturing, wood processing, manufacturing of grinding and polishing tools, orthopaedics and shoe manufacturing, among others.

In the meantime, products identified at the manufacturing level are confined to **handwoven carpets and wall hangings**, which range in size, texture, thickness, colour and contemporary (African) design. They are unique pieces made by Namibian craft folk, representing the many diverse ethnic Namibian people. Weavers communicate through colours, shapes and imagination, giving way to countless harmonious geometric and graphic designs. As Swakara sheep naturally have a plethora of differing shades, not all designs require dyeing. The individually customised designs are up-market products of quality, beauty and durability. Products are flat woven, making them fully reversible, and they are 100% wool with cotton warp and therefore very hard wearing. Within a future marketing and product-diversification strategy, there might be scope for semi-mechanised production of rugs and wall hangings.

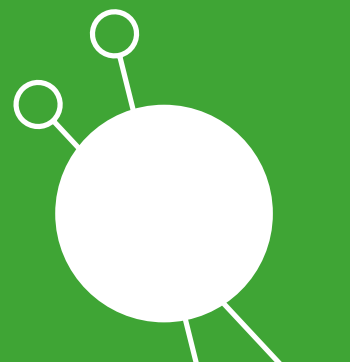
1.6 Local Industry Performance and Growth Potential

In Southern Namibia, where the stony desert and sandy soil limit agricultural activities, sheep breeding is an important source of rural income and livelihoods, and it is estimated that the Swakara industry employs close to 20,000 Namibians in primary production and downstream industries.

Given Namibia's social structure, most people working in the industry are families whose only source of income is sheep breeding. In addition to contributing to the Namibian economy, the sheep help increase and maintain the vegetation in the barren desert, which covers 80% of the country. As they tread on the grass while grazing, the Swakara sheep actually plant the grass seeds – which the wind would otherwise carry away – deeper in the ground.

The Swakara industry, and particularly the Swakara wool value chain, is characterised by its low environmental footprint: Further development of the value chain will contribute to the sustainable use of a local resource that is otherwise wasted (raw wool). Processing and manufacturing activities use very small quantities of harmful chemicals and do not produce significant waste. Due to the predominance of hand-weaving and hand-felting activities, electricity consumption is also low (although likely to increase in the future with further mechanisation), as is current water consumption (with the partial exception of that used in scouring). Although it is certainly a socially and environmentally sustainable industry, present product marketing and promotion efforts make no major use of these characteristics. Swakara wool and felt consumer products support the trend towards organic and natural goods, as they come from a highly sustainable resource. Furthermore, felt products tend to be durable, not discoloured by light, self-extinguishing and heat resistant, and they do not produce toxic fumes when they burn. Three of the wool carpet manufacturers have been operating for many years in the industry, which is a clear indicator of its overall economic sustainability.

The Swakara industry, and particularly the Swakara wool value chain, is characterised by its low environmental footprint: Processing and manufacturing activities use very small quantities of harmful chemicals and do not produce significant waste.



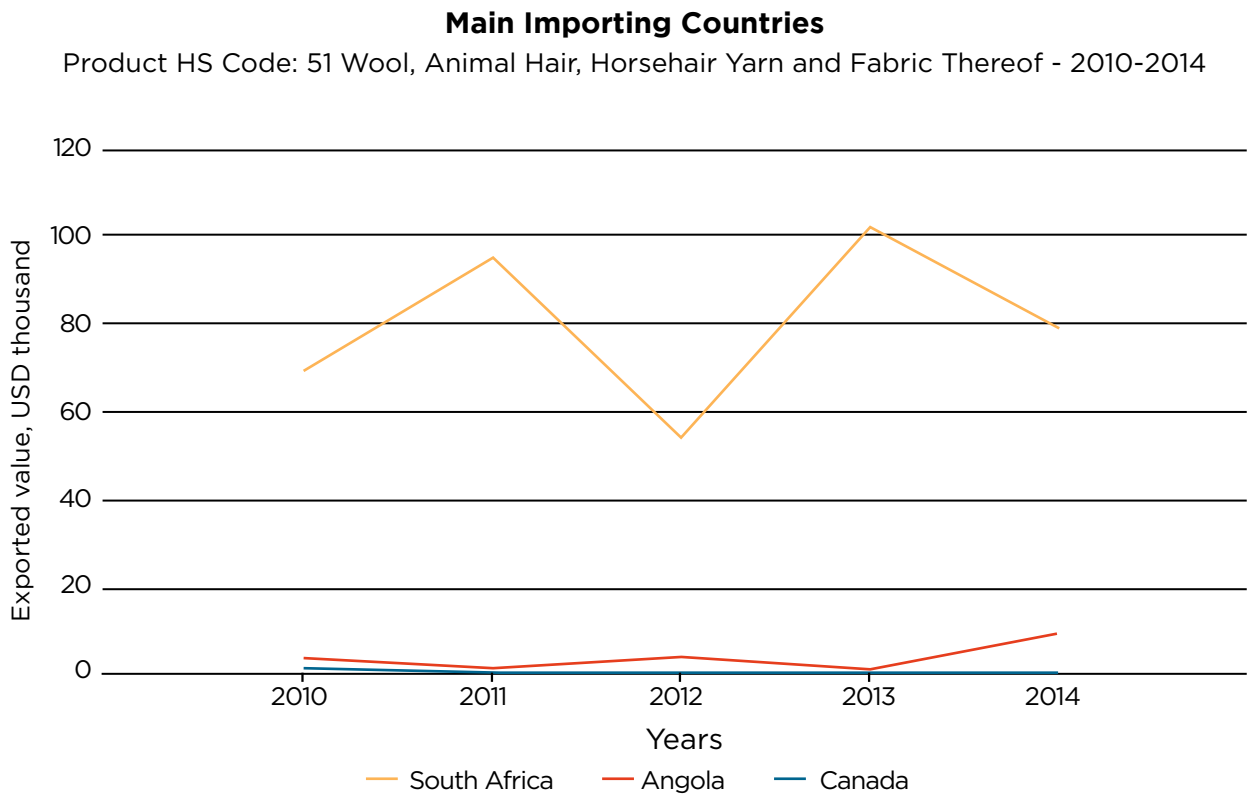
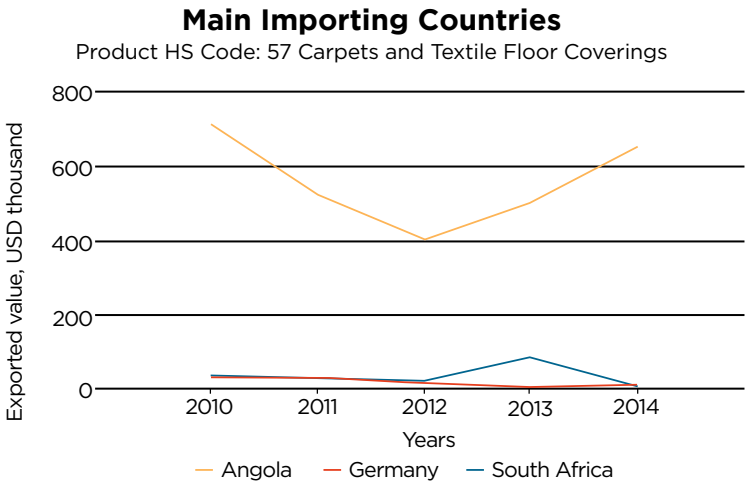


Figure 6: Exports of HS 51 products from Namibia (2010–2014)
Source: Intracen based on UN Comtrade data

As Figure 6 suggests, exports of HS 51 products (Wool, animal hair, horsehair yarn and fabric thereof) – that is, the raw wool as well as first- and second-stage processing products – have largely been confined to neighbouring South Africa and fluctuate in value (between USD 54,000 in 2012 and USD 102,000 in 2013). It can be assumed that this reflects the value of raw wool exports to be further processed in the RSA, as there are currently no exports of wool tops and yarn.

As with other luxury goods, according to stakeholder interviews, exports (and production) of Namibian Swakara wool carpets declined significantly from 2009 (outbreak of the global financial crisis) to 2011 but recovered thereafter and are currently back to approximately pre-crisis levels. Manufacturers expect a conservative production and export increase of about 5% per annum in the coming years. Given that a significant share of the marketed carpets and wall hangings are taken out of the coun-

try by foreign visitors to Namibia, official trade statistics give an incomplete picture of the industry's export performance. Regarding HS code 57 (Carpets and other textile floor coverings), carpets exported from Namibia have been valued at approximately USD 700,000 in recent years, but the fact that official statistics outline Angola as the most important destination country for carpet exports casts serious doubt on the usefulness of official trade statistics for capturing the industry's export performance. Official data on HS 58 (Special woven or tufted fabrics, lace, tapestry, etc.) also fail to convince, as these are highly inconsistent (see Figures 7–8).



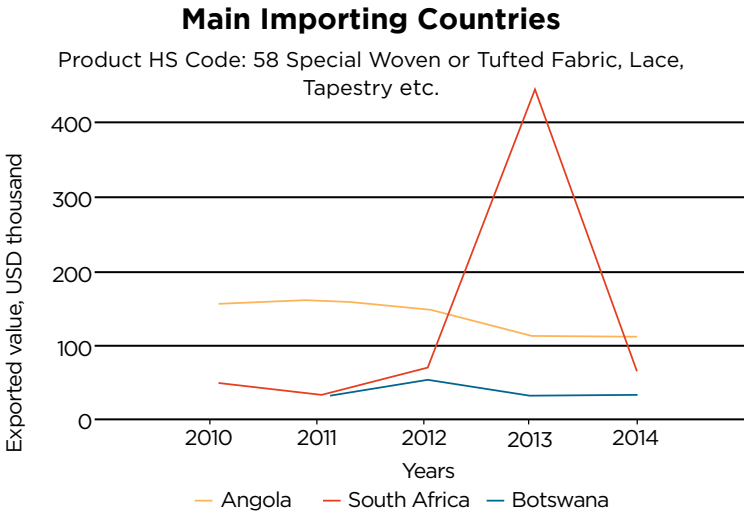


Figure 7–8: Exports of manufactured wool products from Namibia (HS 57 and 58, 2010–2014)
Source: Intracen based on UN Comtrade data

It is very difficult to make an assessment of the **industry's growth potential**, as this will depend on the impact of the many process and product innovations that have been proposed during the stakeholder engagement process. These are likely to change the overall sourcing, production and marketing costs as well as the traded quantities of raw materials, intermediate products and final products, along with the prices and profit margins for stakeholders in the different value-chain segments.

However, it is estimated that the real value of the Swakara wool clip can be doubled in the next 10 years if the traded volumes of higher-quality wool can be increased by 15% per annum. It is further estimated that the value of wool carpet exports can grow to almost NAD 50 m by 2025, assuming that the industry is able to increase the processing rate for the wool clip via mechanised first-stage processing.

In addition, mechanised production of industrial felt sheets could become the catalyst for establishment of new manufacturing SMEs in the felting sub-chain. If 15% of the inferior wool clip could be processed into felt and felt products by 2017, subsequent growth of industrial felt production by 15% per year would lead to an overall output in felt products (intermediate and end products) valued at more than NAD 16 m within 10 years.
If these industry growth projections were achieved, this would raise the total value of value-added Swakara wool and wool products to almost NAD 65 m, only NAD 10 m less than the current value of the more developed value chain for Swakara pelts, resulting in a more diversified (and less vulnerable) Swakara sheep-based processing and manufacturing industry in Namibia.

2. IDENTIFIED OPPORTUNITIES FOR AND CONSTRAINTS TO INDUSTRY GROWTH

2. IDENTIFIED OPPORTUNITIES FOR AND CONSTRAINTS TO INDUSTRY GROWTH

This chapter describes the identified constraints to and opportunities for the industry according to the analytical framework applied during the industry stakeholder engagements:

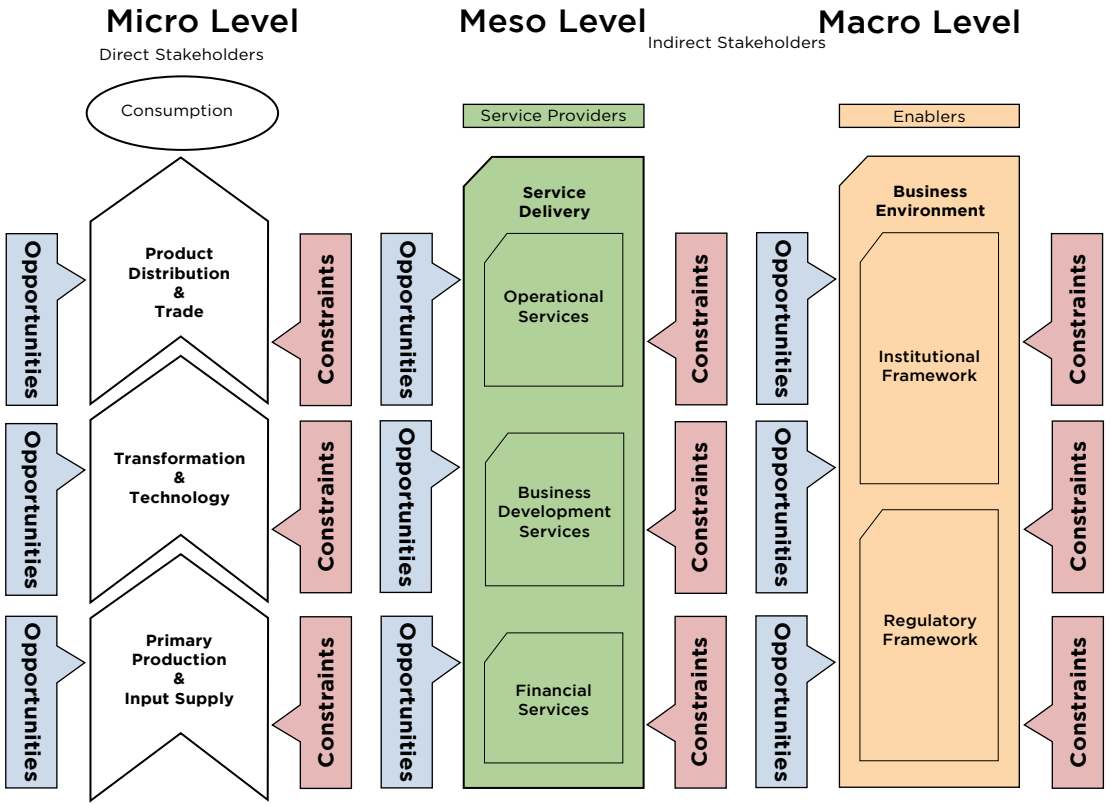


Figure 9: Analytical framework developed for the detection of opportunities and constraints
Source: GIZ ProCOM

2.1 Primary Production and Input Supply

Due to the fact that raw wool is mostly considered a by-product of Swakara sheep farming, the wool value chain is much less developed than those for sheep meat, skins and pelts, from primary production on. As has been mentioned, currently most of the potential raw material (about 360 tonnes p.a.) is not exploited at all because of the generally low prices fetched by sheep farmers for locally commercialised raw wool and the limited overall domestic wool demand; it will remain this way as long as secondary value-addition options in Namibia are confined to the labour-intensive, low-scale production of handwoven carpets and wall hangings. Currently, only about 60 tonnes of the raw wool output (16% of the available wool clip) is processed further; it is produced by a reduced number of small- and large-scale Swakara sheep farmers, most of whom are not specifically trained in good raw-wool-production practices.

The average annual wool yield per Swakara sheep is about 1.5 kg. However, the ex-farm price can be as low as NAD 2 per kg for inferior-quality black wool. The raw wool price is determined to a large extent by colour. Generally fawn, brown and light colours fetch the highest prices (NAD 10–20 per kg). The cost for hand shearing is about NAD 14 per sheep and NAD 17 for electrical shearing (due to higher investment costs for electrical shearing equipment), meaning that current raw wool prices barely cover the shearing costs, making it unattractive for Swakara sheep farmers to venture into commercial wool production.

Moreover, the low remuneration shearers receive for the service they provide, combined with the seasonality of service demand, have limited the impact of previous efforts to establish more stable and better-skilled shearing teams. The seasonality of shearing causes shearers to opt for full-time employment elsewhere. Additionally, there is a lack of young apprentice shearers; most of the shearers are over the age of 60.

Hence, improvements in the quality and sustainability of shearing services require realigning incentives for shearers and primary producers alike, as well as more transparent and effective interactions between farmers, shearers and wool buyers regarding the buyers' quantity and quality requirements. Some farmers are already fetching higher prices for their wool by colour sorting the raw material and removing the majority of dirt. Some of the value-chain stakeholders consider establishing basic quality parameters and implementing a raw wool classification scheme that entails pricing based on colour sorting and dirt removal a necessary step towards higher input quality and primary producer prices. However, stakeholders have voiced the opinion that room for improving the quality of raw wool is actually limited, as wool impurities (namely sand, dirt, seeds and dung) come with the nature of Swakara sheep farming. Furthermore, they argue that in order to grow local demand for quality raw wool, successfully upgrading subsequent value-chain segments is absolutely requisite. Only through combined interventions at various levels will it be possible to break the vicious circle of low demand, minimum effort by primary producers and shearers, low quality and low prices for raw wool. Thus, any proposed intervention faces the challenge of raising the producer price to a level where it becomes profitable for farmers and shearers to pay more attention to quality and to supply higher volumes. According to an AGRA estimate from 2013, an additional 40% of wool could be sourced from farmers if the average producer price for Swakara wool increased to at least NAD 6–8 per kg. At an average farm-gate price of NAD 15 per kilo, industry stakeholders believe that up to 85% (300 tonnes) of the national Swakara wool clip could be sourced for further processing – a four-fold increase on currently traded volumes – as wool sales would become profitable enough for both small- and large-scale Swakara sheep farmers to invest in the process.

As previously mentioned, current manufacturing output is only 2,500 m^2 per year, which requires a raw wool input of barely 15 tonnes (6 kg of raw wool are required for producing one m^2 of handwoven carpet). If carpet production were to climb to 10,000 m^2 per annum, this alone

would lead to an increase in demand for quality raw wool from 15 tonnes to 60 tonnes (out of a sourceable wool clip of roughly 360 tonnes).

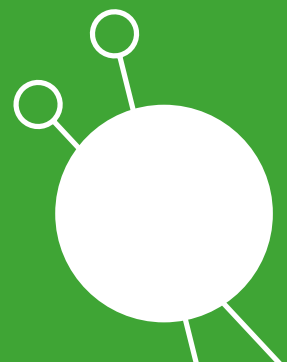
Among the different value-adding options for lower-grade wool, industrial felt production is considered the most promising, but further feasibility and market studies should be conducted on alternative uses for the raw wool that is considered unsuitable for furthering processing within the weaving and felting sub-chains. Such studies should focus on demand and supply conditions for products such as agricultural mulching mats and insulation material against noise and temperature extremes.

An additional cost driver at the sourcing level is the fact that primary production, processing and manufacturing activities take place in different geographical areas. While raw wool production is concentrated in the southern regions, the current local processing and manufacturing capacity is located in the central area of the country (carpet manufacturing) and in the Eastern Cape region (mechanised first-stage processing by Gubb & Inggs and Jan Paul Barnard). As has been outlined, the latter is due to the absence of a modern first-stage processing facility in Namibia, whereas the former is typically explained by the locational advantage of manufacturers' proximity to tourists and their preference to purchase carpets and other articles at the end of their stays in Namibia, which facilitates their transport abroad via airfreight. Aside from the impact of distance on transport costs for inputs, an additional cost driver for input sourcing is the common practice of improper pressing of raw wool, which can double the transport cost (the average transport cost per kg of raw wool from Keetmanshoop to Windhoek is about NAD 1.5 per kg when it is properly pressed), creating further pressure on already low producer prices. For raw wool exports to South Africa for further processing, direct transport to Port Elizabeth tends to be difficult for the Namibian wool broker to arrange and also expensive, affecting the profit margins of input trade. Some of the exported raw wool is reimported after first-stage processing, and this transport from the Eastern Cape processor to manufacturers in Central Namibia is equally costly. On the opportunity side, it is therefore deemed that installing a first-stage wool-processing facility in Southern Namibia would have an overall positive effect on sourcing-related production costs for Namibian manufacturers as well as on local demand conditions for raw wool.

There are also certain constraints regarding the availability of imported inputs and supplies for local processing and manufacturing activities. Chemicals like Perigen are bought in South Africa, but imports are problematic due to the products' erratic availability (however, current annual demand from the carpet weavers is less than 4 kg per annum). This also applies to colour pigments, where required colours are not always available from South African suppliers and the individual order volumes remain low. Since the previous supplier of cotton threads, in Zimbabwe, closed down, Namibian weavers have been buying this input from Standerton Mills, struggling with minimum order requirements (one tonne) in some cases and quality problems in others; if the quality of a batch is not up to standard, it means many months of work with inferior thread quality, affecting productivity levels. Other inputs and supplies such as acetic acid (for fixing colours) and soap are readily available in Namibia. The equipment required for first- and second-stage processing (carding, scouring, etc.), including innovative machinery, must be imported, but there are several suppliers to choose from in countries like New Zealand, Germany, China and India. Less sophisticated equipment like looms is readily available in Namibia.

Some industry stakeholders see an opportunity to secure better input and equipment supply (in terms of availability and quality) and save costs by means of a joint procurement mechanism. This would, however, require closer coordination and cooperation among them through the Weavers Association and the Swakara Board. Although there is informal exchange of information between the carpet manufacturers, so far there is neither formal communication nor working arrangements for sourcing inputs and supplies.

Installing a first-stage wool-processing facility in Southern Namibia would have an overall positive effect on sourcing-related production costs for Namibian manufacturers as well as on local demand conditions for raw wool.



2.2 Transformation and Technology

The entire production process of Swakara wool and wool products in Namibia has very limited mechanisation compared to competitor countries, including South Africa; much of the machinery used is very old – in some cases almost a century – and outdated. Particularly the first- and second-stage processing activities, when carried out in Namibia and not in South Africa, are labour intensive, time consuming and characterised by low productivity levels, while not necessarily considered part of the weavers' core business, which is designing and manufacturing end products. In the future, the local carpet manufacturers would prefer to buy wool tops and carpet yarn and to concentrate on carpet production, assigning their labour force to the core activities related to it. There is an urgent need perceived in the industry to mechanise local first- and second-stage processing, as a precondition to growing the entire Swakara wool industry and thereby gradually increasing the share of the national wool clip being transformed into value-added products. Thus, industry stakeholders consider mechanisation a key requirement for further industry growth and value-chain development.

With additional trained labour, manufacturers indicate that there would also be scope for producing higher volumes of semi-mechanised Swakara wool carpets, which could then be produced at an estimated 50–60% of the cost of a fully handwoven carpet. This could eventually lead to a substantial market expansion for wool carpets, as there are many potential local and foreign buyers that simply cannot afford the customised handwoven products. However, the introduction of a semi-mechanised product line would also require a product branding scheme to distinguish the handwoven carpets from the industrial.

Lack of mechanisation combined with labour and skill shortage is also considered the major bottleneck for strengthening the felting sub-chain, i.e. the production of industrial felt from blended yarns (wool and other materials, mainly silk and cotton) and the manufacturing of felt-based consumer products, including garments. As mentioned, due to quality constraints on hand-felted products and the high production costs of hand felting, the development of a competitive felting sub-chain is even more dependent on mechanisation but would also require parallel skill-development efforts.

A potential business partner in the field of process and product innovations for the felting sub-chain is a Germany-based leading manufacturer of classic wool felt for almost 120 years, today supplemented by needle felts made from natural and synthetic fibres, catering primarily for the fashion and home décor industry but also for a wide range of technical applications. For the weaving sub-chain, a mohair weavers in South-Africa, has been identified as the regional innovation leader for mechanised blending and weaving.

2.3 Product Distribution and Trade

Namibian Swakara wool carpets are known in Germany and some Scandinavian countries, mainly due to tourists purchasing them as souvenirs and, to a lesser extent, foreign buyers being attracted to them by referrals from friends. Currently only one out of 10 carpets manufactured in Namibia stays in the country; about 80% of total production is taken overseas, mainly to Europe but increasingly also to Russia, the USA, Canada and other countries (through direct product purchases made by visitors from these countries). The remaining 10% are exported primarily to South Africa, from which they are also possibly re-exported overseas.

As the impact of the global financial crisis on product sales has evidenced, the industry's strong dependency on tourist sales makes it particularly vulnerable to external shocks, decreasing numbers of foreign visitors and/or exchange rate fluctuations, but also to changing consumer preferences. As with other home décor items, the market demand for carpets and wall hangings is influenced by fashion trends. Only recently have sales volumes recovered from the negative impact of the global

financial crisis. The almost exclusive reliance on direct distribution and marketing, without involving foreign importers and retailers, carries the risk of limited information on changing market and demand conditions being available to manufacturers, as wholesale and retail tend to be important sources of information in the international carpet and rug business.

However, some of the weavers have participated in international trade fairs and confirm that Namibia has a very good reputation for producing quality wool carpets and that the combination of unique raw material (wool from Namibian Swakara sheep), unique indigenous and contemporary designs and underexposure (due to low overall production volumes) allows for an effective differentiation on the international marketplace from the cheaper mass products manufactured in Asian competitor countries like Afghanistan and Nepal. In the past, weavers have also organised smaller sales exhibitions abroad. Given the low level of intermediation in the marketing segment of the value chain, continuous participation in international trade fairs and sales exhibitions would to a certain extent provide strategic information on fashion and other demand trends.

Meanwhile, the interviewed manufacturers consider that they could easily expand their current product output five to tenfold without facing serious demand problems, provided the identified constraints in the previous value-chain segments could be removed.

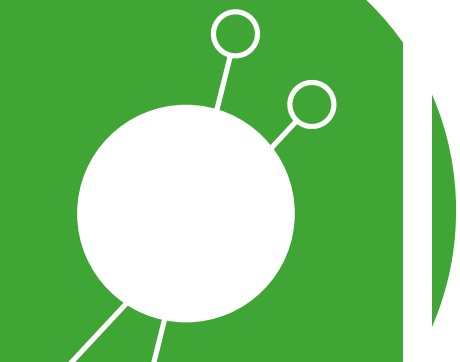
On the local marketplace, handmade Namibian carpets and wall hangings face stiff competition from cheaper mechanised and semi-mechanised imported rugs, even in the top-notch market segment catering to high-income consumers, while most middle- and low-income consumers cannot afford the present product offerings. The introduction of a new semi-mechanised product line could change this situation and contribute to an effective market diversification, reducing the current high market risk (dependency on direct sales to foreign tourists).
To some extent, Swakara wool carpets and wall hangings are promoted at home and abroad by their being on public display in government buildings, tourism businesses (hotels, lodges) and Namibian embassies, although overall promotion efforts tend to be low and carried out on an ad hoc basis and therefore should probably be enhanced, locally and internationally, as the industry increases its output and develops new products in the two sub-chains that will be targeting new customer segments.

As mentioned, Namibian carpets are generally of high quality and excellent, innovative design, offering the possibility for increased exports, especially to Europe and the USA. As early as 1992, a study carried out by Schemel confirmed demand for Swakara wool carpets on the German market and recommended closer cooperation among weavers in the marketing and promotion areas by means of joint collections and common international sales exhibitions, which has happened to some extent. Some companies make minor sales through specialised retail outlets in South Africa and Europe, but an estimated 90% of all products are still marketed directly from the manufacturer to the (foreign) client. The overall profitability of efforts to establish business linkages with foreign importers, wholesalers and retailers might be questioned under the current supply conditions. International companies will usually require larger quantities and regular supply; as output grows and additional manufacturing jobs are created, such a move toward linkages with foreign businesses would take closer cooperation between the five manufacturers, based on a joint production, marketing and promotion strategy, to be formulated and implemented with additional support from the government.

Within the prevalent distribution channel – direct sales to foreign tourists – handling and transport costs, i.e. airfreight for individually packaged carpets, are relatively high. Manufacturers report that current handling and transport costs add 30% to the final sales price of a handwoven carpet (NAD 750 per m^2, based on an average manufacturer sales price of NAD 2,500 per m^2). In most cases, the customer pays for the transport separately but receives logistical assistance from the manufacturer or retailer. As mentioned, due to the current

Namibian carpets are generally of high quality and excellent, innovative design, offering the possibility for increased exports, especially to Europe and the USA.

A key factor to the future growth of the industry is innovative product design that meets the taste and preferences of its customer base.



niche market strategy and the low overall production and sales volumes, bulk exports are not really feasible; the lack of competition resulting from the limited number of international airlines servicing Windhoek adds to the relatively high airfreight costs and reduces the scope for collective bargaining of discounts by the carpet manufacturers, though there might be scope for closer coordination and cooperation among them and with providers of airfreight services within a future joint production and marketing strategy.

2.4 Service Delivery

Given the low degree of mechanisation in the transformation segment of the value chain, labour is the single highest contributor to production costs in the manufacturing of handwoven carpets and wall hangings, accounting for about a third of the average production cost per m^2 of carpet or rug. At the same time, the availability of skilled labour is considered the greatest constraint to output growth: while stakeholders are of the opinion that the current niche production of handwoven carpets could be expanded by unlocking existing market opportunities, shortage of experienced and skilled weavers majorly bottlenecks any expansion plans in the industry. In this sense, the situation in the industrial segment of the value chain is similar to primary production and shearing: as the Namibian spinners and weavers are ageing, the labour and skill shortage is becoming more pronounced.

It is estimated that without this shortage of skilled labour, even with the existing outdated technology, carpet output volumes could be increased from 2,500 m^2 to 4,000 m^2 per annum. On the other hand, even if the processing segment of the Swakara wool value chain were upgraded in terms of technology use, it would take two years to train additional workers before the industry could make use of the new technologies and upscale production accordingly.

A key factor to the future growth of the industry is innovative product design that meets the taste and preferences of its customer base, currently consisting mainly of foreign visitors to Namibia. The importance of continuous new design has been highlighted in interviews with South African competitor Jan Paul Barnard and most of the Namibian weavers. However, there are currently no institutionalised training offers focusing on product development and innovative product design.

By combining the transfer of operational skills related to the use of modern equipment with creative skills related to innovative design, future skill-development processes would not only make the industry more competitive but would also make the weaver profession more attractive to newcomers; this has already been evidenced in the skill transfer workshops conducted within the National Wool Campaign, which combined technical and creative design aspects, involving NUST (FABlab) and UNAM (Department of Visual and Performing Arts) at the national level as well as COSDEF (the Namibian Community Skills Development Foundation) at the local level.

2.5 Business Environment

On a macro level, all stakeholders linked to the resource Swakara sheep are represented in the Swakara Board and the Swakara Industry Forum (SIF). Both have a mandate to promote the interests of the entire Swakara industry and its stakeholders, including the value chain for Swakara wool. However, with the exception of primary production, which is governed by the Swakara Board according to the Karakul Pelts and Wool Act, No. 14 of 1982, there is no formal governance for any element of the industry. There is broad consensus amongst value-chain stakeholders that the largely inactive Namibian Weavers Association, established in 1992, should be reactivated to create a specific platform for the manufacturers to exchange information and collaborate on issues of common interest.

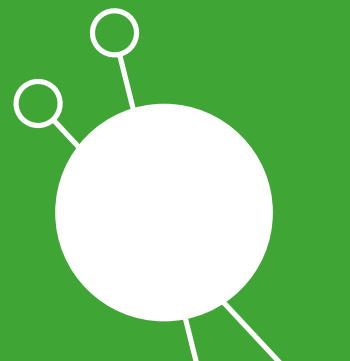
Despite various smaller initiatives that the Swakara Board and SIF have implemented over the last five years, and unlike the pelt value chain, which has been success-

fully reactivated, neither organisation has so far been able to dynamise the Swakara wool and wool products value chain. From informal discussions with value-chain stakeholders on the institutional framework conditions, it seems that a common strategy based on trustful relationships and joint stakeholder commitment to take the wool industry forward is still lacking. Another attempt in this direction has been the launch of the Namibian Wool Task Team. It was established on the 9th of March 2015 to draft a proposal containing costs of wool-processing equipment, aiming to tap into the government's industrial development strategy for the benefit of the wool industry and the rural communities in the South.

The task team comprises direct and indirect value-chain stakeholders: Mrs Kirstin Wiedow from FABlab representing product research and development, Mr Drogbar Basson from Obib Community Trust representing Rosh Pinah's community project, Mrs Claudia von Hase representing weavers and Mr Steyn representing shearers, as well as representatives from various support institutions such as MITSMED and MAWF and from the Swakara Board.

Since the creation of the Namibian Wool Task Team, there is stronger effort from both direct and indirect value-chain stakeholders to improve their coordination and develop a strategy to unlock the growth potential of the wool industry.

IDENTIFIED OPPRTUNITIES FOR AND CONSTRAINTS TO INDUSTRY GROWTH



3. INDUSTRY GROWTH STRATEGY

3. INDUSTRY GROWTH STRATEGY

3.1 Vision of Industry Stakeholders

"By 2020, the Namibian Swakara wool industry and the economic activities in associated value chains will have become more profitable, diversified and sustainable."

3.2 Industry Growth Indicators and Targets

- Grow the number of employees in the Swakara wool-processing and wool-products-manufacturing industry from 25 (2015) to at least 250 (2020);
- Grow the number of businesses in the Swakara wool-processing and wool-products-manufacturing industry from five (2015) to 15 (2020);
- Increase the overall value of Namibian Swakara wool products from NAD 6.25 m (2015) to NAD 30 m (2020).

3.3 Strategic Objectives, Indicators and Proposed Interventions

Four core areas have been identified where interventions are necessary in order to achieve the outlined industry growth vision by 2020. The change each intervention intends is captured in one strategic objective per area, while progress made towards each objective is captured through area-specific indicators and targets. Finally, proposed interventions and projects are listed that, if successfully implemented, should ensure that the four strategic objectives and the industry growth vision are achieved.

Intervention Area 1: Primary Production and Input Supply	**Intervention Area 2:** Industrial Research, Technological Upgrading and Skills	**Intervention Area 3:** Product Distribution and Trade	**Intervention Area 4:** Business Environment

Intervention Area 1: Primary Production and Input Supply

Strategic Objective 1:

"Secure a supply of raw wool and other essential inputs, of appropriate quality, quantity and price, that allows for local industry growth and contributes to sustainable rural livelihoods."

Indicators and Targets:

- Increase the number of Swakara sheep farmers becoming relevant commercial wool suppliers from 30 to 60
  (Base 2015: 30; Target 2018: 45; Target 2020: 60);
- Grow the share of the national wool clip being commercialised from 16% to at least 32% and the overall volume of traded raw wool from 60 to at least 120 tonnes
  (Base 2015: 16%/60 tonnes; Target 2020: 32%/120 tonnes);
- Increase the average farm-gate price for higher-quality sorted raw wool by at least 50%
  (Base 2015: 10 NAD/kg; Target 2020: 15 NAD/kg);
- Increase the number of farmers and shearers applying good wool-production practices to 60
  (Base 2015: 20; Target 2020: 60);
- Reduce the sourcing-related transaction costs incurred by wool processors and manufacturers by 25% until 2020 due to joint sourcing efforts.

Proposed Interventions:

Int. Num.	Intervention	Expected Results	Proposed Champion(s)
1.1	**Technical support to small-scale Swakara farming and shearing, combining research, training and extension activities (application of good sheep-farming and wool-production practices and incentive-based expansion of permanent shearing teams)**	• Higher productivity in small-scale raw wool production • Increase in number of commercial raw wool suppliers (farmers and shearers) • Increase in overall output of quality raw wool and volumes of traded raw wool	MAWF
1.2	**Design and implementation of basic raw wool classification scheme; training of farmers and shearing teams in application of sorting and grading standards**	• Higher average raw wool quality and ex-farm price • Effort- and quality-based remuneration of farmers and shearing teams • Increase in production of quality raw wool and traded volumes of quality raw wool	Swakara Board, traders and processors

Int. Num.	Intervention	Expected Results	Proposed Champion(s)
1.3	**Design and implementation of joint procurement scheme for processing and manufacturing inputs and supplies (including equipment and intermediate products) ("wool trading house")**	• Permanent availability of quality inputs and supplies for local wool processors and manufacturers • Savings on procurement costs through joint procurement schemes (imported inputs and supplies)	Swakara Board; Weavers Association

Intervention Area 2: Industrial Research, Technological Upgrading and Skills Development

The second strategic intervention area addresses the opportunities and constraints that have been identified in the dimensions Production and Technology and Service Delivery.

Strategic Objective 2:

"Establish local capacities for mechanised wool processing as a catalyst for upstream and downstream activities and support the development of new manufacturing products through applied R&D, technological upgrading and skill development."

Indicators and Targets:

- Increase the share of commercialised Swakara raw wool that is locally processed into intermediate goods (wool tops and yarns) from 25% to 50%
  (Base 2015: 25% (15 tonnes out of 60 tonnes); Target 2020: 50% (60 tonnes out of 120 tonnes);
- Successfully introduce process innovations in the Swakara wool industry (processing and manufacturing) with new business partnerships and government support
  (Base 2015: 0; Target 2017: 1; Target 2020: 3);
- Develop and launch new intermediate and final products (product lines) via industry-specific R&D efforts and technological upgrading initiatives in the Swakara wool industry
  (Base: 0; Target 2017: 3; Target 2020: 5);
- Increase the share of the overall industry labour force that is trained in operational and design skills
  (Base: 0%; Target 2017: 25%; Target 2020: 50%).

Proposed Interventions:

Int. Num.	Intervention	Expected Result	Proposed Champion(s)
2.1	**Fostering of business linkages with regional and international innovation partners to technologically upgrade local processing and manufacturing activities**	• Increased productivity through technological intake • Support to development of new products and markets	Swakara Board/ MITSMED
2.2	**Fostering of applied local R&D on process upgrading issues and development of new products and markets**	• Increased productivity through technological intake • Support to product and market development • Established alternative uses for raw wool of inferior, regular and superior quality	Academia
2.3	**Weaving and felting sub-chains: Feasibility establishment and support implementation of local first-stage processing facility (scouring and carding plant)**	• Increased productivity and competitiveness through mechanisation of first-stage processing • Increased local processing of raw wool • Specialisation advantages • Reduction of sourcing costs for manufacturers, etc.	MITSMED
2.4	**Felting sub-chain: Feasibility establishment and support implementation of local second stage processing facility (yarn blending and industrial felting plant)**	• Productivity gains through mechanisation of second-stage processing • Increased local demand for raw wool and intermediate goods • Specialisation advantages, promotion of new manufacturing SMEs (downstream activities), etc.	MITSMED
2.5	**Weaving sub-chain: Feasibility establishment and support implementation of local semi-mechanised carpet-manufacturing facility**	• Product and market diversification • Increased competitiveness • Creation of additional manufacturing jobs • More attractive operator jobs	MITSMED

Int. Num.	Intervention	Expected Result	Proposed Champion(s)
2.6	**Support to entrepreneurs in manufacturing of Swakara wool and felt products**	• Product and market diversification • Creation of new manufacturing businesses and additional jobs	MITSMED
2.7	**Industry labour force training in line with requirements from innovation processes (technological upgrading and product development) of weaving and felting companies**	• Higher labour productivity levels • Better product quality and higher output • More specialised, younger, more stable and more motivated labour force	Wool Task Team/Weavers Association

Intervention Area 3: Product Distribution and Trade

Strategic Objective 3:

"Reduce market-related risks by supporting market research and joint product differentiation, marketing and promotion efforts by Namibian wool-product manufacturers."

Indicators and Targets:

- Increase the number of manufacturing products (product lines) successfully positioned in target markets (local, regional and international) with government support (Base 2015: 0; Target 2017: 2; Target 2020: 4);
- Increase product sales by Namibian wool-product manufacturers attributable to jointly organised marketing, sales and promotion efforts (local, regional and international) (Baseline 2015: 0; Target 2017: 10%; Target 2020: 25%).

Proposed Interventions:

Int. Num.	Intervention	Expected Result	Proposed Champion(s)
3.1	**Support to design of a joint production, marketing and promotion strategy for Namibian (carpet) manufacturers**	• Diversification of markets and distribution channels • Reduction of overall market and investment risks in the industry • Increased product sales	MITSMED
3.2	**Support to market research and product promotion activities (local and international markets) linked to product development efforts by manufacturers and entrepreneurs**	• Support to product and market diversification • Reduction of overall market and investment risks in the industry	MITSMED
3.3	**Support to (joint) participation of wool-product manufacturers in international trade fairs and sales exhibitions in target markets**	• Support to market diversification • Reduction of market risks in the industry • Provision of competitive benchmarking spaces and information on demand/fashion trends	MITSMED
3.4	**Support to joint efforts in the field of product differentiation, product quality and sustainability certifications (e.g. Woolmark)**	• Building of competitive advantage through successful product differentiation • Support to market diversification and reduction of market risks	MITSMED

Intervention Area 4: Business Environment

This area combines proposed interventions to promote information exchange, coordination and cooperation among direct industry players and stakeholders of the associated value chain on the one hand and interventions to promote such exchanges with indirect stakeholders who perform support and regulatory functions on the other. Effective forms of interaction at both levels are considered key success factors to creating an enabling business environment and sustainable growth for the Swakara wool and wool-product industry.

Strategic Objective 4:

"Create an institutional environment conducive to industry growth by means of improved communication, coordination and cooperation between private and public industry stakeholders."

Indicators and Targets:

- Grow the share of direct and indirect industry stakeholders actively participating in at least one industry-specific growth intervention/project per year to 100% by 2020
  (Base: 0; Target 2017: 50%; Target 2020: 100%);
- Increase the level of satisfaction among the different value-chain stakeholder groups (primary producers; processors and manufacturers; innovation partners and support institutions) with the progress and outcomes of the strategy implementation process.

Proposed Interventions:

Int. Num.	Intervention	Expected Result	Proposed Champion(s)
4.1	**Design and implementation of an industry monitoring system (supplying accurate information on industry-related key performance indicators)**	• Support to the decision-making processes of private and public industry stakeholders	Wool Task Team (Strategy Steering Committee)
4.2	**Consolidation of a body which represents the Swakara wool value chain and spearheads the strategy-implementation process**	• Support to the decision-making processes of private and public industry stakeholders	Swakara Board; Weaver Association (Wool Task Team)

BIBLIOGRAPHY

- **African Kirikara Art and Karakulia Wool Carpets and Ornaments. (2015).** Retrieved from www.kirikara.com.
- **AGRA. (2013).** Swakara farmer survey report. Conducted by Q & A Aliexpress (2015). Industrial Felt Price Comparison.
- **Barnard, J.P. (2015).** Personnel interview.
- **Cape Wools SA. (2015).** Wools processed in South Africa.
- **Charleston Rugs. (2012).** "Understanding the Market for Afghan Rugs." Retrieved from http://www.charlestonrugsblog. com/2012/11/07/understanding-the-market-for-afghan-rugs/.
- **Cutting, J. (2001).** Structures, Relationships and Issues. AvoScene, New Zealand Avocado Industry Council.
- **CNN. (2011).** "Nepal Carpet Crisis Pushing Children into Slavery." Retrieved from http://edition.cnn.com/2011/WORLD/asiapcf/06/16/cfp.nepal.carpet.industry.children/index.html.
- **Craig A. G., Ben, D., Bharath, G., & Michelle, D.R. (2015).** "Help wanted: American Manufacturing Competitiveness and the Looming Skills Gap." Deloitte Review Issue (16).
- **De Silver, G., & Kundu. (2012).** Handicraft Products: Identify the Factors that Affecting the Buying Decision of Customers: The Viewpoints of Swedish Shoppers.
- **Erdogan, Z., & Özgen, O. (2006).** "Sustainability of Handwoven Carpets in Turkey: Problems and Solution Proposals in Relation to Standards and Market Issues." Textile Society of America Symposium, Proceedings Textile Society of America.
- **Freedonia. (2013).** "World Flooring & Carpets." Retrieved from http://www.freedoniagroup.com/industry-study/2981/world-flooring-carpets.htm
- **HERD (2015).** National Wool Campaign.
- **Honde, G.J., & Odhiambo, O. 2014.** African Economic Outlook. African Development Bank,OECD, and UNDP; NAMIBIA 2014.
- **Hosseinj, S.E., Sadeghi, T., Zargari, M.J., & Nikanloo, N. (2013).** "Identification of Effective Factors on Sale: Iranian Hand-Made Carpet Scenario." Journal of Basic and Applied Scientific Research, 3(1s).
  McCord, M.T. (2007). "An Analysis of Business Opportunities within Afghanistan's Carpet Sector." The McCord Group.
- **MFW4A. 2015.** "Making Finance Work for Africa." Retrieved from http://www.mfw4a.org/news/news-details/article/2/namibia-credit-and-data-providers-can-now-share-borrowers-information.html.

- **MFW4A. (Not Dated).** "Making Finance Work for Africa." Retrieved from http://www.mfw4a.org/namibia/financial-sector-profile.html.
- **Namibweb. (2015).** "Airlines Flying to Namibia." Retrieved from http://www.namibweb.com/airlines.html
- **OTF. (2006).** "Growth Strategy and Action Plan for the Carpet Cluster of Afghanistan Kabul." Funded by USAID. Retrieved from http://www.trade.gov/static/afghanistan_carpetstrategy.pdf
- **Refima. (2014).** "Which Countries Have Impact on Felt Market?" Retrieved from http://www.refima.eu/news/which-countries-have-impact-on-felt-market/
- **Republic of Namibia. (2011).** Namibia's Fourth National Development Plan 2012/13 to 2016/17. Office of the President, National Planning Commission.
- **Rothkegel, B. (2015a).** Report on the Wool Brainstorming for the Road Ahead. Unpublished report for the Swakara Board.
- **Rothkegel, B. (2015b).** The Swakara Industry: Past and Present Efforts of Value Addition of Pelts and Wool. Unpub lished report for the Swakara Board.
- **RugKnots.com. (2016).** "Oriental Rugs: A Buyers Guide." Retrieved from http://blog.rugknots.com/interior-tips-and-tricks/interior-design/oriental-rugs-a-buyers-guide/.
- **Schemel, H., & Metz M. (1992).** "Processing and Marketing of Karakul Wool in Namibia." For ProTrade/GIZ.
- **Schemel, H. (1993).** Processing of Karakul Wool. Marketing Study in the Federal Republic of Germany.
- **The Namibian. (2015.)** "Credit and Data Providers Can Now Share Borrowers' Information." Retrieved from http://www.namibian.com.na/indexx.php?id=24024&page_type=story_detail&category_id=2.
- **United Nations Industrial Development Organisation (UNIDO). (2011).** Diagnostics for Industrial Value Chain Development: An Integrated Tool.
- **World Bank. (2015).** "Doing Business: Measuring Business Regulations." Retrieved from http://www.doingbusiness.org/rankings.
- **World Economic Forum. (2013).** "Country Economy Profiles: Namibia."
- **Yasmin, B., & Altaf, S. (2014).** "Revealed Comparative Advantage of Carpets and Textile Floor Covering Industries in Pakistan, India and China." Journal of Economic Cooperation and Development, 35(4).

NOTES

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Supported by
giz