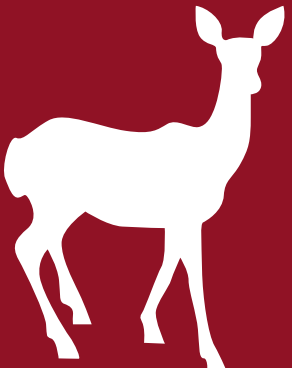




MINISTRY OF INDUSTRIALISATION,  
TRADE AND SME DEVELOPMENT

# Growth Strategy for Namibia's Game Meat Industry and Associated Value Chains





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## 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 strengthen-

ing forward and backward linkages within the Namibian economy as envisaged in the Harambee Prosperity Plan.

Game meat 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.





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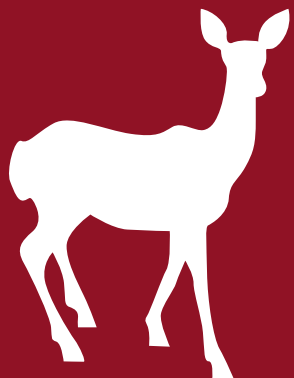
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## ACRONYMS AND ABBREVIATIONS

<b>CAGR</b>	Compound annual growth rate
<b>DRC</b>	Democratic Republic of Congo
<b>DVS</b>	Directorate of Veterinary Services
<b>EU</b>	European Union
<b>GDP</b>	Gross domestic product
<b>HACCP</b>	Hazard analysis and critical control points
<b>HS</b>	Harmonized Commodity Description and Coding System
<b>ISIC</b>	International Standard Industrial Classification
<b>ITC</b>	International Trade Centre
<b>MAWF</b>	Ministry of Agriculture, Water and Forestry
<b>MBD</b>	Meat Board of Namibia
<b>MET</b>	Ministry of Environment and Tourism
<b>MITSMED</b>	Ministry of Industrialisation, Trade and SME Development
<b>MOHSS</b>	Ministry of Health and Social Services
<b>NACSO</b>	Namibian Association of Community Support Organisations
<b>NAD</b>	Namibia Dollar
<b>NAU</b>	Namibia Agricultural Union
<b>NEF</b>	Namibian Employers' Federation
<b>NMA</b>	Namibian Manufacturers Association
<b>NNFU</b>	Namibia National Farmers Union
<b>NSI</b>	Namibian Standards Institution
<b>OABS</b>	Optimal Agricultural Business Systems
<b>R&amp;D</b>	Research and development
<b>RSA</b>	Republic of South Africa
<b>SOPs</b>	Standard operating procedures
<b>STEC</b>	Shiga toxin-producing Escherichia coli
<b>TORs</b>	Terms of reference
<b>UN</b>	United Nations
<b>VC</b>	Value chain/veterinary circulars
<b>VPNs</b>	Veterinary procedural notices
<b>WRN</b>	Wildlife Ranching Namibia



# 1. NAMIBIA'S GAME MEAT INDUSTRY AND ITS VALUE CHAIN



# 1. NAMIBIA'S GAME MEAT INDUSTRY AND ITS VALUE CHAIN

Game meat production was selected as one of the promising agro-processing industries on which to conduct an in-depth analysis of the associated value chain. 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. The detected opportunities and constraints within Namibia's game meat industry and its value chain 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 following definition of the game meat industry and value chain is based on the International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4:

The **primary production** segment of the game meat value chain is composed of two economic activities, **game farming and harvesting**. Game farming is characterised by extensive sustainable raising of a wide range of game species; as a primary production activity, within the ISIC it is part of Division 01 (Crop and animal production, hunting and related service activities), Group 01 (Animal production), Class 0149 (Raising of other animals), which includes raising game animals on ranching operations. Different from game (trophy) hunting, which is considered a sport and recreation activity and is therefore classified under Service Group 9319, **game harvesting** in Namibia is carried out by professional marksmen and is therefore a primary activity classified under hunting, trapping and related service activities (Class 0170). This also

includes all other value chain operations carried out in the field, namely eviscerating and removing heads, feet and red offal in field abattoirs. The Namibian industry uses the term game meat and not venison, as the meat comes from free-ranging game.

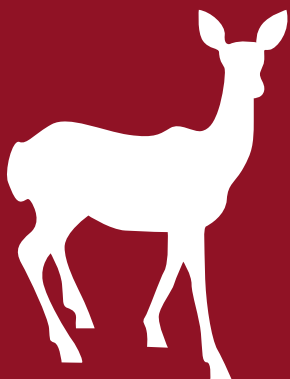
The **industrial segment** of the value chain is captured in ISIC Manufacturing Section C, Division 10 (Manufacture of food products). This comprises all productive activities carried out in registered game-handling facilities, i.e. abattoirs, butcheries and processing plants. Most of these economic activities are part of Class 1010, which comprises basic and advanced meat-processing activities such as dehiding/deskining, deboning and the production of fresh, chilled and frozen game meat, whether as carcasses, cuts or individual portions, as well as the production of dried, salted or smoked game meat and game meat products such as biltong and droëwors. However, manufacturing ready-made prepared meals and dishes in canned or frozen form which also contain ingredients other than game meat and seasonings (e.g. canned game goulash), would fall under Class 1075: Manufacture of prepared meals and dishes. Activities related to packaging game cuts and offal, in vacuum bags and cartons according to buyer requirements, are also part of the industrial segment of the game meat value chain, but these are classified under Section N of ISIC, Rev. 4: Administrative and support service activities.

The **distribution and trade segment** of the value chain falls under Section G, Division 46 (Wholesale; Class 4630) and Division 47 (Retail). Due to demand by health-conscious consumers, game meat has developed from its traditional use – being only eaten in dried form – to use in a large number of dishes in the hospitality industry. As a considerable portion of Namibian game meat products are currently consumed in restaurants and lodges, other relevant econom-

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With the rise of game-farming activities in the second half of the 20th century, game meat production and consumption has become relevant again.



ic activities in the distribution segment of the value chain include accommodation and food service activities (ISIC Section I).

Hides and skins are by-products of the game meat value chain, as they are necessarily produced along with meat by slaughtering game. Since both products – meat and hides/skins – have the same origin in terms of their resource bases and locations in which primary production (game farms) and basic processing (game-handling facilities) are carried out, the production of game hides and skins is also classified under Class 1010 in ISIC, Rev. 4. However, hides and skins are not food products, nor do they belong to the same product value chain. In the game leather value chain, subsequent activities in the transformation segment are (1) second-stage processing of hides and skins into leather and (2) manufacturing of game leather products. This second game-based value chain is also relevant in Namibia and has been analysed in the growth strategy for Namibia's leather industry and associated product value chains (MITSMED 2016).

## 1.2 Global and Regional Industry Performance

Although in prehistoric times game was man's sole source of meat, with the domestication of animals it ceased to be an important food source in most parts of the world. With the rise of game-farming activities in the second half of the 20th century, game meat production and consumption has become relevant again. However, there are serious data gaps in the industry's production and trade statistics. Only countries like Namibia with stringent hunting legislation tend to register the number and species of hunted and harvested game. Since production statistics are lacking for some developing countries and are based only on food consumption surveys in others, international data on game meat should be considered with a lot of caution.

According to the latest available FAOSTAT data, the share of game in global meat production and consumption is small, and even smaller in the global meat trade: Whereas worldwide meat production increased between 2000 and 2013 from 230 million tonnes to more than 310 million tonnes, available aggregate estimates show that during the same period, game meat output grew from less than 1.6 million tonnes to little more than 2 million tonnes (Figure 1). Hence, the compound annual growth rate (CAGR) of game meat production (1.65%) was lower than that of general meat production (2.15%). The niche character of game meat in most parts of the world is also underlined by the fact that its current contribution to the world meat supply is only about 0.6%.

Though Africa accounted for only 7.5% of global meat production in 2013, more than half of the global supply of game meat (56.2%) came from this region (see Figure 2). All told, the share of game in Africa's total meat output (17.35 million tonnes in 2013) is 6.5% (1.13 million tonnes), which is significantly higher than in all other major world regions. In fact, in several African countries, game contributes substantially to the total supply of livestock products and to the population's daily diet. It is also worth noting that in West and Central Africa, wild meat ("bush meat") generally fetches higher prices in urban markets than beef, mutton, pork, goat or other domestic meat.

The world's largest producers of game meat, according to FAOSTAT data, are Papua New Guinea (380,000 tonnes) and the USA (249,000 tonnes), followed by three African countries, namely Nigeria (165,000 tonnes), Côte d'Ivoire (145,000) and the DRC (116,000).

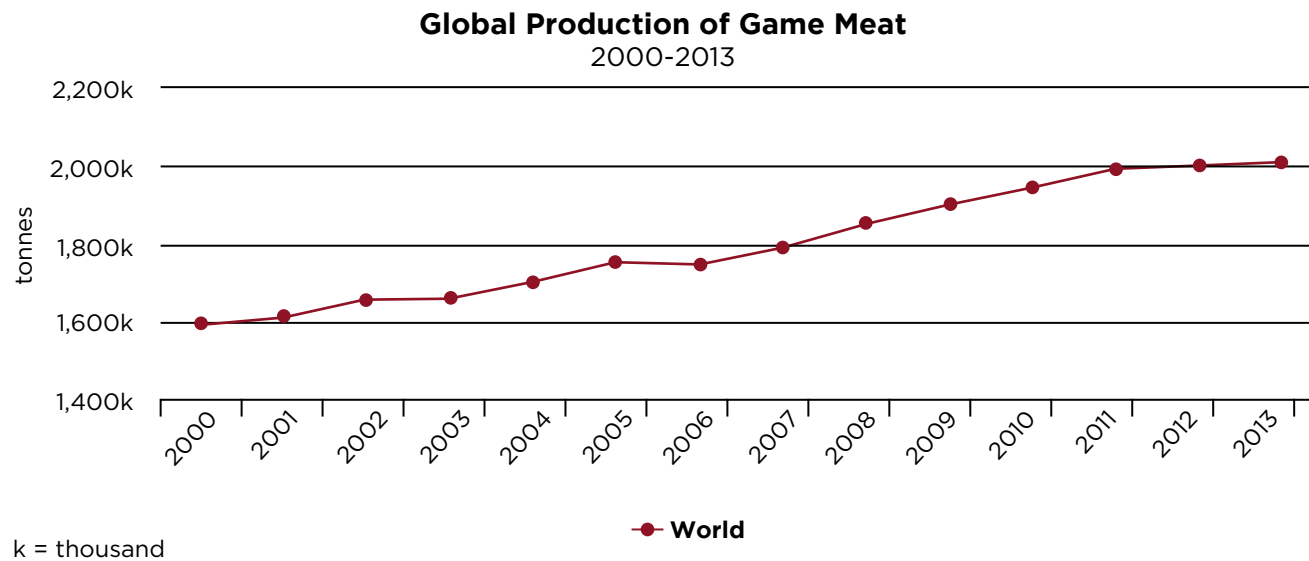


Figure 1: Global production of game meat, 2000–2013  
Source: FAOSTAT

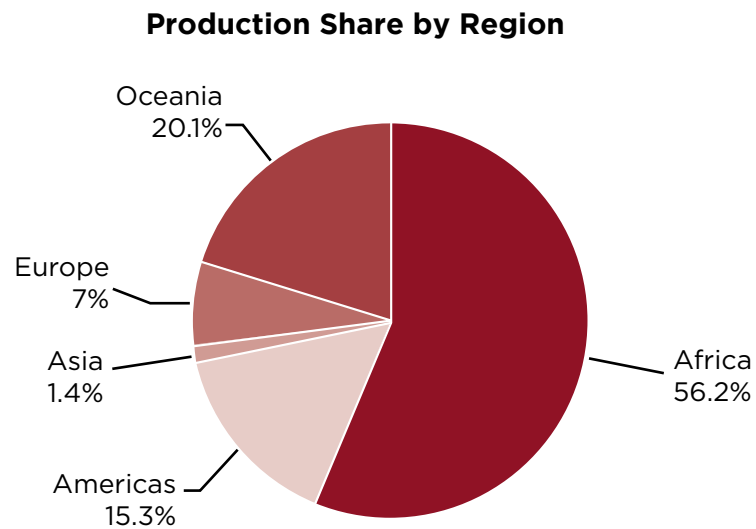


Figure 2: Regional contributions to global production of game meat, 2013  
Source: FAOSTAT

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Only about 5% of worldwide game meat output is traded across borders, whereas 95% is locally consumed.

In international trade statistics, game meat cuts (fresh, chilled and frozen) fall under the Harmonized System (HS) Code 0208: “Meat and edible meat offal not elsewhere specified”. However, at the four-digit level, game is categorised with meats produced from rabbits, reptiles, amphibians (e.g. frog legs), primates, marine mammals (whales, dolphins), camels and camelids – which makes international comparisons on this aggregation level too ambiguous. At the six-digit level, game meat exports and imports are also classified under residual HS Code 020890, but this is much more representative of game meat, as it doesn’t include any of the other above-mentioned meats. Processed (prepared and preserved) game meat products are traded under HS Code 160290(90).

Based on the data submitted by reporting countries to the UN Comtrade database, world exports under HS

020890 (fresh, chilled and frozen game meat) totalled almost 100,000 tonnes (96,243 tonnes) in 2013 and were valued at USD 680 million. With total production estimated at 2 million tonnes, this means that only about 5% of worldwide game meat output is actually traded across borders, whereas 95% is locally consumed. Again, this share is much lower than for meat in general, with traded quantities representing almost half of worldwide production in 2013 and valued at about USD 124 billion. This comparison provides further evidence of the niche character of game meat as a commodity; it also shows that game meat tends to be consumed closer to the place of harvesting and processing than other types of meat. As outlined in Figure 3, despite temporary setbacks, global game meat exports have experienced an overall upward trend in the last 10 years.

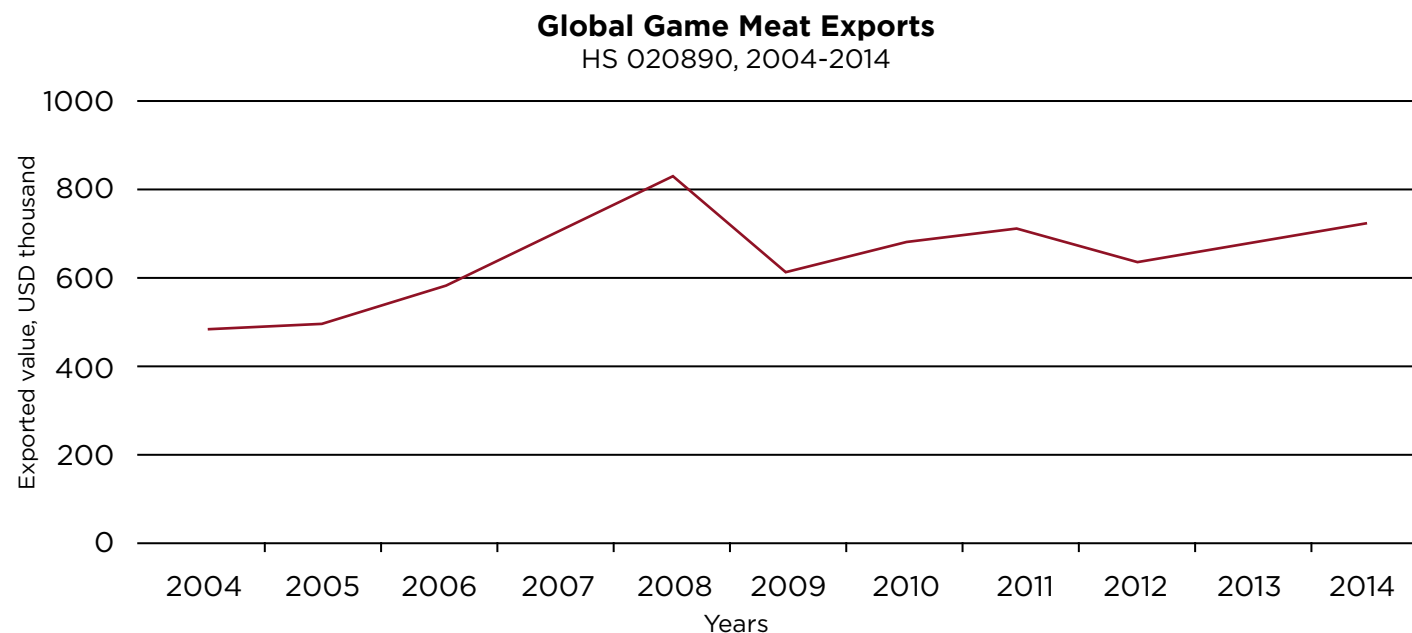


Figure 3: Global game meat exports (HS 020890) by value (million USD), 2004-2014  
Source: Intracen, based on UN Comtrade statistics

Regarding trade with processed game meat products, reported world exports under HS 160290 (Meat prepared and preserved n.e.s.) also totalled approximately 100,000 tonnes (98,431 tonnes) in 2013 and were valued at USD 270 million, i.e. about half the value reported for fresh, chilled and frozen game meat exports.

Africa's huge share in global game meat production stands in sharp contrast to the region's participation in international trade in game meat. Only 2,095 tonnes were exported from African countries in 2013, which represented no more than 2% of global exports. Global trade in game meat is dominated by the EU (Poland, Belgium, Spain, Germany and the Netherlands), New Zealand and Australia, as well as several Asian countries. The world's leading game meat (venison) exporter is Poland, with more than 27,000 tonnes and a 25% share in global exports (2015), followed by New Zealand (16,600 tonnes; 16%). Exports from other EU countries are considerably lower, but the EU28's total share in international game meat exports reaches 66%, while the combined share of New Zealand and Australia accounts for an additional 20%. The three major Asian exporters (Indonesia, China and Vietnam) hold a minor share of 7%.

The African share in international trade in processed game meat products (HS 160290) is low as well: the 2,779 tonnes that were reported in 2013 represented less than 3% of global exports. However, mainly due to the strong export performance of South Africa in this product category, this has been changing lately; in 2015, South Africa ranked sixth worldwide, with 4,590 tonnes of manufactured game meat products exported worth USD 16 million, representing 16% of global exports in this product category.

Generally speaking, important game-meat-exporting countries are those where game is commercially farmed and where conventional meat exports tend to be important as well, as exemplified by world market leaders Poland and New Zealand. The latter country pioneered commercial farming of red and fallow deer but continues to distinguish between wild and farmed venison, as the

former commands a higher price in the targeted export markets due to a reputation for superior flavour.

Rising demand for game meat/venison and by-products such as hides, skins and velvet antlers (used in the Far East in traditional medicine as an aphrodisiac) has acted as the most important driver for commercial game farming and slaughtering. Demand for game meat and venison tends to follow income increases, even in markets with high overall meat consumption levels, given its distinctive flavour and leanness (higher protein and lower fat content than in conventional meats). Like in Namibia and South Africa, in other game-meat-producing countries shooting fees from local and foreign hunters are an important additional income source for free-range game farmers and local conservancies. In the Western European countries, larger socioeconomic and ecological trends have acted as additional supply drivers. For example, for many years game farming has been actively promoted in economically disadvantaged rural areas in Eastern and Western Europe as a commercially attractive alternative to traditional livestock farming. Meanwhile, in Southern Africa, climate change is considered an important indirect supply driver. With the increases in temperature and decreases in precipitation projected for Namibia, adapted species of wildlife are expected to become more important economically than other livestock (cattle, sheep and goats).

As exemplified by South Africa, in countries where game farming has been increasing and where game meat production for domestic consumption and for export has been successfully combined with hunting activities, these trends have tended to push up prices for breeding stock, while the game population increases. Whereas the game population in traditional-livestock-producing countries such as Australia and New Zealand tends to be rather small compared with the cattle and sheep populations, the share of game meat exports in total livestock export earnings has been growing and is expected to continue to do so.

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### 1.3 Industry Background and Evolution in Namibia

Freehold farmers were given commercial rights over wildlife in 1967; farmers in communal areas received the same rights in 1996. Although ownership of game animals is still a contentious issue, as the number that a farmer may take off his land is determined by the Ministry of Environment and Tourism (MET), approximately 90% of Namibia's wildlife is located outside formally proclaimed conservation areas and thus is available for sustainable utilisation. More than 80% of the populations of the larger game species are located on privately owned farms, which comprise about 44% of the surface area of the country.

Namibia counts more than 3 million head of game, a figure roughly similar to those for cattle, sheep and goats. Depending on the species, wildlife population generally increases 15–35% per year (Van Schalkwyk and Hoffman, 2015).

In the past, game meat was seen as an inferior product and given to farm workers as part of their monthly remuneration. The evolution of the health-conscious consumer seeking meat with a low fat content and a more favourable fatty acid composition than beef or lamb has changed the image of game meat, including on the local market. When comparing Namibian game meat and meat products to competitor products from other countries, it is frequently observed that local products tend to be superior in taste and appearance, as Namibian game is free range and grazing contributes to the meat's nutritional and sensory quality. As Namibia is a drought-stricken country with dry climatic conditions, limited diseases and conditions are found amongst game, which has also contributed to the popularity of this type of meat.

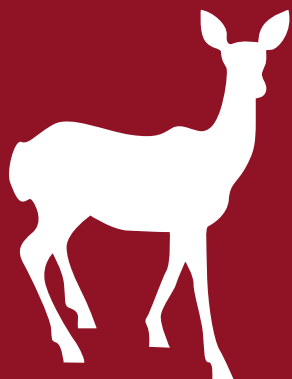
Biltong and droëwors are traditional products that have been homemade in almost every rural household in Southern Africa since the 1900s. As more and more women started to follow professional careers and had little time left to devote to homemade foods, processors and manufacturers seized the opportunity and started to produce game meat products on a small commercial scale and

later on an industrial scale. Today, their products can be found in almost any retail business in Namibia, including convenience shops at fuel stations. The game-product manufacturers adapted to changing consumer demands, as can be seen from changes in the packaging sizes and recipes (e.g. chilli bites for the snack market).

Namibia has a mixed track record of mostly small-scale attempts to commercially export game meat to international markets. During the early 1990s, Windhoek Wild (Pty) Ltd exported kudu, gemsbok and springbok meat to Switzerland. However, their export plant was closed soon after the Chernobyl accident, which resulted in a perception in Europe that all game meat was contaminated with radioactive substances.

Exports of game meat recommenced in 2003 when Farmers Meat Market Mariental Abattoir (Pty) Ltd was approved by the European Union to export deboned springbok meat to the EU and Norway. This facility exported 70 to 85 tonnes of deboned springbok meat to the European markets annually. Another facility in the south of Namibia, Brukarros Meat Processors (Pty) Ltd, received approval for the export of deboned springbok meat to the European Union in 2008. Between 2003 and 2008, the overall value of game meat exports almost tripled, from less than NAD 11 million to NAD 31 million; however, volume-wise, South Africa remained Namibia's principal game meat trading partner. In 2008, from a total export volume of 2,100 tonnes, 1,600 tonnes went to the neighbouring country. After a slowdown between 2009 and 2012, exports spiked in 2013, when Namibia exported over 1,000 tonnes of game meat products worth more than NAD 50 million to the RSA (740 tonnes), Belgium (105 tonnes), Norway (92 tonnes) and Botswana (102 tonnes). Since 2014, there has been no facility exporting meat from game species to overseas markets, and export activities have been largely confined to small amounts of processed products (biltong and droëwors) going to South Africa, with meat export quantities plummeting to 86 tonnes in 2014 and 38 tonnes in 2015 (mirror data). Though Namibian and South African springbok meat has become known to some extent in international markets, the larger game species' meat is still mostly unknown overseas.

When comparing Namibian game meat and meat products to competitor products from other countries, it is frequently observed that local products tend to be superior in taste and appearance.



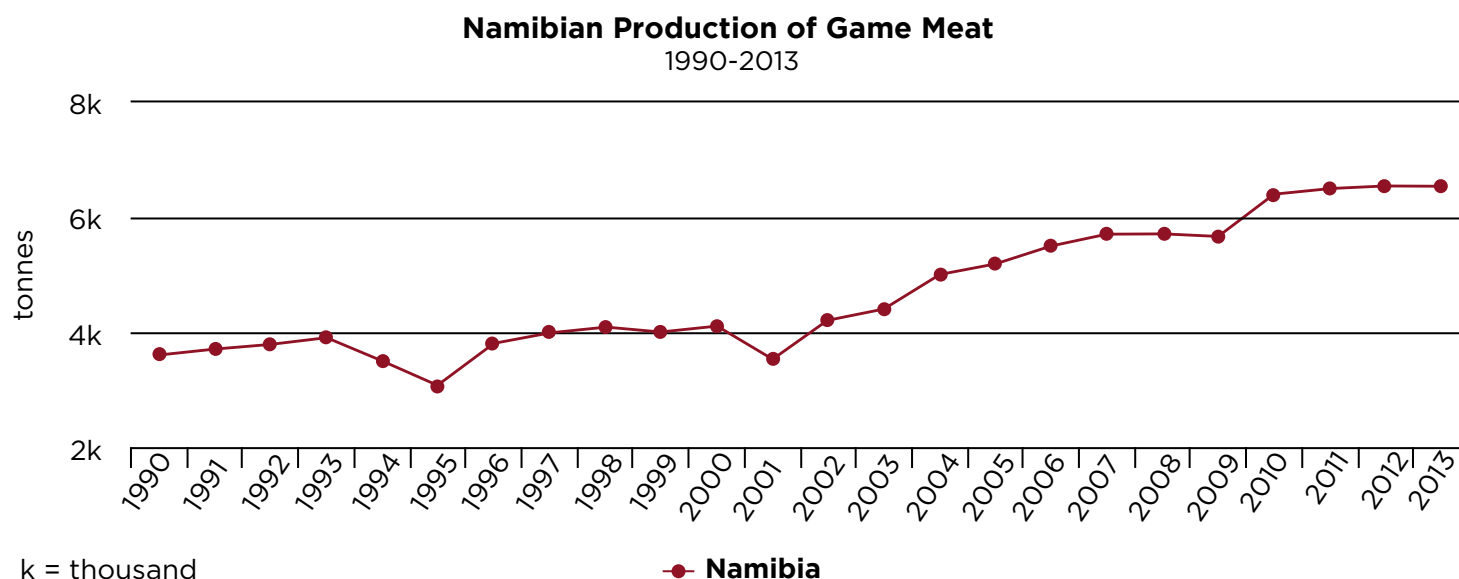
## 1.4 Local Industry Performance

Namibia's Vision 2030 foresees sustainable use of the country's wildlife for its economic benefit. The wildlife sector in Namibia comprises several industries: breeding and live sales of game, safari tourism, trophy hunting and taxidermy works, commercial game harvesting and meat processing, as well as fabrication of game leather and game leather products.

Commercial game farming is still gaining importance, not only in the EU, Australia and some parts of Asia but also in South Africa and Namibia. Given the gradual decline in cattle and sheep production in recent years, game is the only commercial livestock system in Namibia that is currently expanding.

According to FAOSTAT data, there has been a considerable increase in game meat production in Namibia since independence (see Figure 4). However, production was rather stagnant throughout the 1990s. In 2001, annual production was at approximately the same level as in 1990 and totalled around 3,500 tonnes. From then, it grew continuously until 2010, when it reached 6,400 tonnes. There has been no significant production growth since, with output stagnating at about 6,500 tonnes from 2011 to 2013 (latest available figures in the FAOSTAT database).

There has been a considerable increase in game meat production in Namibia since independence.



**Figure 4: Namibian production of game meat, 1990–2013**  
Source: FAOSTAT

Unfortunately, there are no official figures available on the specific contribution of the game meat industry and its value chain to the Namibian economy. It is estimated, however, that around 50,000 game units are slaughtered in Namibia annually for meat production (compared to approximately 140,000 head of cattle and 800,000 sheep) and that direct



There are strong indications that the underutilised wildlife industry has a huge untapped potential for value addition and diversified income opportunities.

employment in the harvesting, processing and manufacturing segment of the value chain is generating approximately 300 jobs (OABS, 2016). The value of game meat product sales is estimated at approximately NAD 200 million<sup>1</sup> annually, i.e. 10% of total revenue earned from local and export meat production and processing, valued at NAD 2 billion (Meat Board, 2015). This would set the industry's contribution to the GDP at about 0.23%, as meat processing accounts for 2.3% of the GDP. On a higher aggregation level, the combined value of wildlife use and tourism contributes 3.5% to the GDP (compared to 3.2% for agriculture and 2.4% for fisheries), according to calculations by the Namibia Statistics Agency (2014).

As mentioned, the industry's contribution to foreign exchange earning has weakened considerably since 2013, when total exports had reached NAD 53 million in the game meat category and NAD 11 million in the category of preserved game meat products, with exports totalling 1,500 tonnes – almost 25% of total game meat output. It is expected that in the medium term, export earnings will return to this level if the present export obstacles are effectively tackled.

Furthermore, game meat is a significant contributor to food security and livelihoods in rural Namibia, as more than 33,000 farm workers and their families profit either directly or indirectly from game farming, harvesting and hunting activities. There are strong indications that the underutilised wildlife industry has a huge untapped potential for value addition and diversified income opportunities, especially for communal conservancies in Namibia as climate change looms (Turpie et al., 2010), provided that current constraints to industry growth can be effectively addressed. Investments in game production, harvesting and processing are welcome, as they will open new opportunities for employment, poverty reduction and wealth creation in Namibia (Van Schalkwyk et al., 2012).

<sup>1</sup>This estimate is based on an average game meat and meat product unit value of NAD 30,000/tonne and a total annual production of 6,500 tonnes.

## 1.5 Demand for the Products of the Industry

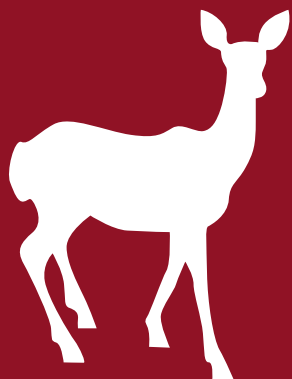
Unlike output figures, which have increased over the last 15 years, Namibian game meat exports have been inconsistent, with reported quantity fluctuations between less than 100 tonnes and more than 2,000 tonnes per year (Figure 5). Even exports to principal debtor countries have been fluctuating strongly.

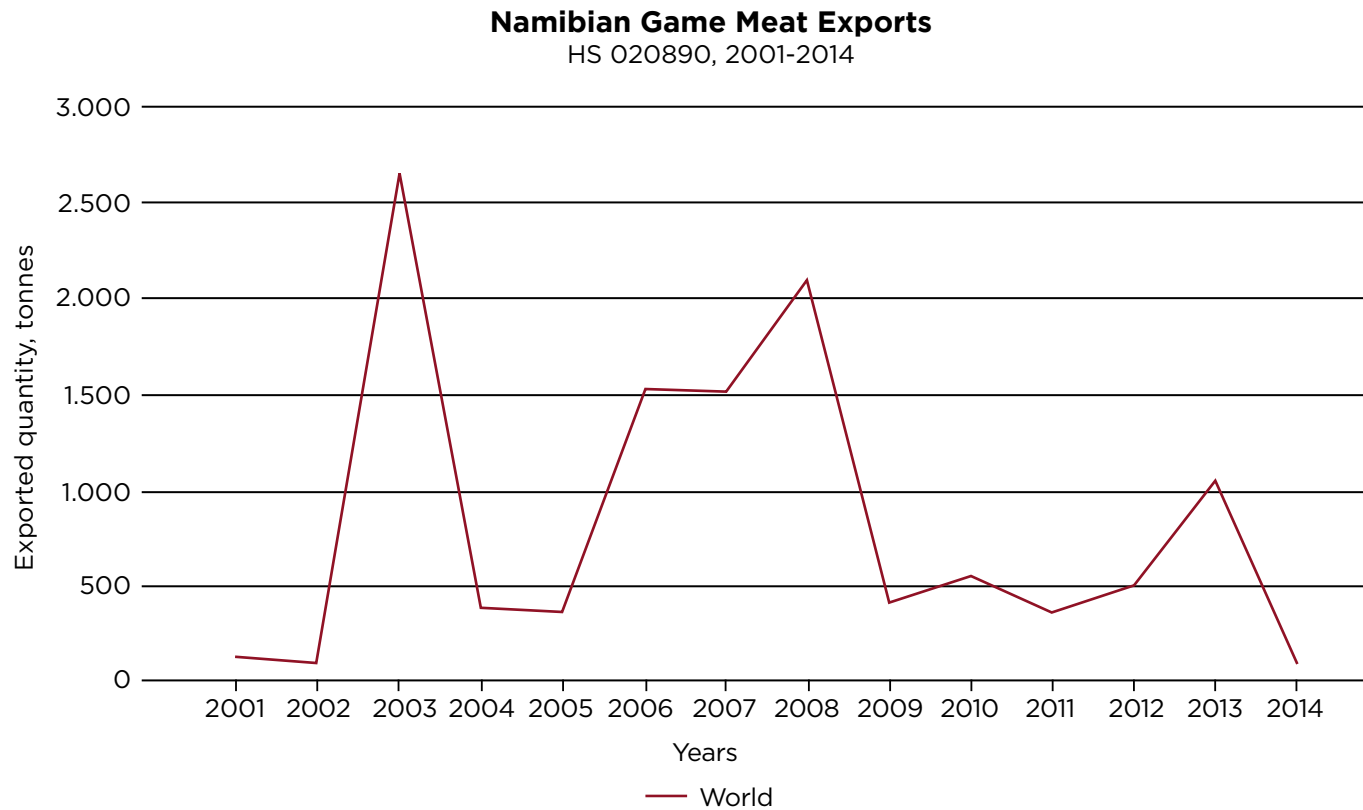
South Africa has been Namibia's only permanent game meat trading partner, but volumes exported to the RSA have also been fluctuating greatly (between 35 tonnes and 2,510 tonnes per year); with all other regional and international trading partners, there have been years with relevant export activities (i.e. more than 100 tonnes) followed by years with hardly any exports at all.

This is the case for Belgium, Norway, Switzerland, the UK and the USA internationally and for the DRC, Zimbabwe and Botswana in the regional sphere. Whereas in some years (e.g. 2003, 2006–2008 and 2013) up to half of game meat production was marketed abroad, in other years almost the entire output was locally marketed and consumed.

Such strong fluctuations indicate a general lack of well-established, long-term supplier-buyer relationships. The absence of permanent export opportunities and trade channels is also detrimental to the industry's overall growth perspectives.

As previously mentioned, Namibia's game meat exports were reported at 1,046 tonnes in 2013 and valued at NAD 53 million (NAD 50,800/tonne), and exports of processed game meat products were reported at 456 tonnes and valued at NAD 11 million (NAD 24,500/tonne).





**Figure 5: Namibian game meat exports, 2001–2014, by volume**  
Source: Intracen, based on UN Comtrade

That year, the country accounted for half of all African exports and ranked 16th on the list of leading game-meat-export nations volume-wise. The largest export share went to the RSA (740 tonnes of game meat cuts and 357 tonnes of processed products), but relevant quantities of game meat were also exported to markets where Namibian products were fetching higher unit values, namely Belgium (105 tonnes) and Norway (102 tonnes).

Reported export volumes for 2014 and 2015, however, reveal a sharp downturn in Namibia's export performance in both product categories, with game meat exports

plummeting from 1,046 tonnes in 2013 to 86 tonnes in 2014 and 38 tonnes in 2015 (mirror data). Exports of processed products have dropped as well, though less dramatically (from 456 tonnes in 2013 to 209 tonnes in 2014; no data are available for 2015). It is estimated that Namibia is currently losing more than NAD 30 million annually alone by not exporting to the EU.

By contrast, regional competitor South Africa has had a successful export performance in recent years: whereas in 2013, the country ranked second after Namibia on the list of major African game meat exporters, with a re-



Exporting game meat has been facilitated by relatively liberal import policies in the major meat-importing countries.

ported export volume of 786 tonnes, the South African game meat industry was able to grow its exports to 1,909 tonnes in 2015 (out of regional exports totalling 2,156 tonnes) and currently ranks 14th worldwide in terms of quantity and 13th in terms of value, with export earnings totalling NAD 190 million in 2015. Meanwhile, Namibia has become South Africa's most important trading partner for game meat imports (641 tonnes in 2015; a six-fold increase since 2014); value-wise, the major contributors to South Africa's game meat export earnings in 2015 were Germany (224 tonnes valued at NAD 223,000/tonne), Belgium (207 tonnes at NAD 186,000/tonne) and the Netherlands (265 tonnes at NAD 149,000/tonne).

A similar trend can be observed in the biltong and droëwors product category, where South Africa grew its exports from 1,862 tonnes in 2013 to 4,843 tonnes in 2015, thus becoming the regional export champion (regional exports: 5,000 tonnes) and number six worldwide.

The different performances of Namibia's and South Africa's game meat industries in recent years can be explained to a great extent by the end of Namibian game meat exports to the EU; however, the changing trade relationship with South Africa (from a net exporter to a net importer position in both product categories) suggests that the Namibian game meat industry faces a major competitiveness challenge.

As previously outlined, the international trade in game meat and game meat products is relevant and still shows modest growth rates. The European Union alone imported about 66,500 tonnes of game meat valued at USD 534 million in 2014 and 123,650 tonnes of processed game meat products worth USD 375 million. This makes Europe by far the most important consumer market for game meat products, with a current share in global imports of 76.2% by value.

Given the simultaneous importance of Europe as a game meat supplier, regional consumer demand is satisfied to a great extent by local production and intraregional trade. Within the EU, the major importing countries are Germa-

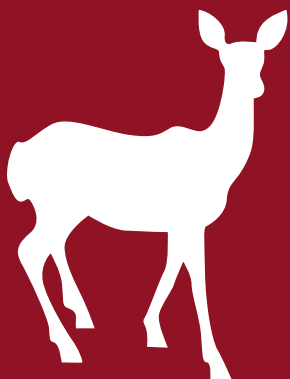
ny (19.9% of global imports by value), Belgium (13.4%), France (10.9%) and the Netherlands (9.5%). Other relevant markets are Switzerland (8.2%) and the USA (7.2%).

Generally speaking, more profitable consumer markets, with higher import unit values, tend to be those where prices for conventional meats are higher and less subsidised, since this tends to allow game meat to fetch a higher premium over the prices of beef and lamb. Since the Namibian game meat industry exported relevant volumes of raw meat cuts for several years to the European Union and Norway, it has proven its capacity to meet international standards and supply this highly competitive market.

Exporting game meat has been facilitated by relatively liberal import policies in the major meat-importing countries. By and large, the same animal health regulations were applied to game as to other meats. Along with tariff duties generally lower than those for conventional meat imports, this made it relatively easy and attractive in the past for countries free of major animal diseases like Namibia to export game meat, especially when they already had export-approved meat-handling facilities.

So far, no duties or levies are payable to markets in the RSA and the EU. However, the increasing large-scale production of game meat in the major consuming countries has exerted price pressures on worldwide game meat exports, at least in real terms. While this contributed to bringing game into the reach of a broader consumer segment, increasing sales and trade volumes, it has also affected the overall profitability levels in the industry.

Regional demand for game meat products is also on the rise, as the middle class in Africa is growing and gaining more purchasing power to spend on items such as meat and meat products. For example, the popularity of dried game meat products at sport events is contributing to this overall trend. The trend can also be seen in South Africa, where the industry has successfully started exporting game meat and game meat products to other African countries such as Mozambique, Lesotho, Gabon,



Nigeria, Botswana, Congo, Zimbabwe, Angola, the DRC and Tanzania recently.

Namibia's domestic market is relatively small, considering that the country has a population of only approximately 2.5 million. Until recently, there has been no competition for fresh, chilled and frozen game meat cuts on the local market. However, as outlined above, for raw cuts and processed game meat products, South African competitors are now successfully selling to Namibia and other countries in the region.

The most relevant consumer segments, which all the products serve, are private households and the food catering and hospitality industry, i.e. restaurants and lodges catering to both local costumers and tourists.

Despite this mixed overall record, experts agree that game meat production in Namibia has not reached its full potential yet, assuming demand continues to rise, particularly from discerning customers looking for a healthy alternative to conventional meats and for an ethical and ecological alternative to industrial factory farming. Further investments in game production, harvesting and processing for the local and export markets are therefore welcomed and needed, as they will open more and more opportunities for sustainable use of local wildlife resources, employment and wealth creation.

## 1.6 Characterisation of Value Chain Operators and Their Functions

The businesses involved in the game meat value chain are spread throughout Namibia and not concentrated in regional production clusters. However, the operators in the different value-chain segments tend to interact frequently, as they recognise their interdependence. The following are considered the main operators in the value chain:

- Primary producers (game farmers who supply the animals)
- Game harvesters (who remove the animals from the veld by shooting them)
- Game meat handlers/abattoirs (who deskin or dehide, debone, cut, pack and store raw meat)
- Game meat processors (who manufacture value-added game meat products)
- Game meat traders and wholesalers
- Retailers and restaurants (who sell to end consumers)

Figure 6 depicts the game meat value chain with all relevant operators on the micro level (direct stakeholders), the meso level and the macro level (indirect stakeholders).

### Primary Production (Game Farming and Harvesting)

Input suppliers in the game meat value chain are **farmers** who either have mixed farming with both game and sheep or cattle or specialise in game farming.

Table 1 presents the estimated game numbers of commercially harvestable species in different regions in Namibia. Major game species for meat production are gemsbok, springbok, kudu, Hartmann's mountain zebra

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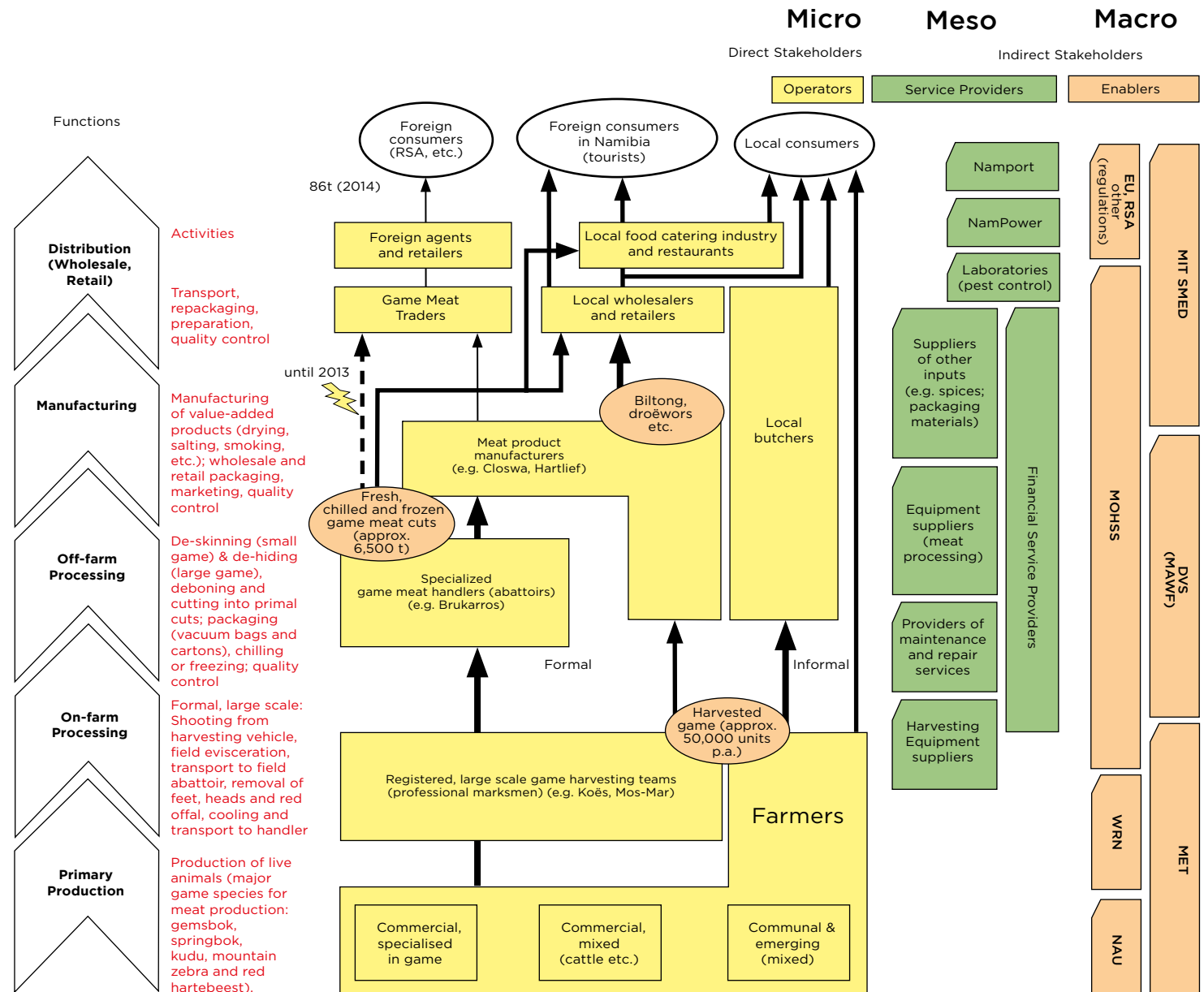
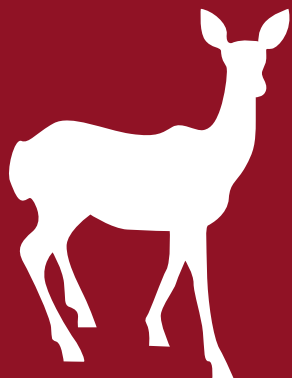


Figure 6: Value chain map game meat  
Source: GIZ ProCOM, based on OABS, 2016

and red hartebeest. Quotas, as issued by the MET, are usually based on 10–20% offtake of the population numbers. All game is sourced locally; no foreign game carcasses are brought in from neighbouring countries for processing.

Game is usually harvested by professional marksmen. Only a few well-organised **game-harvesting teams** in Namibia are registered with the MET. These are contracted by the major game meat handlers to harvest on a large scale. The Mos-Mar harvesting team delivers approx-

imately 4,000 springboks and 2,000 large game units annually. The Koës harvesting team has a turnover of 150 tonnes annually.

The harvesting teams usually enter into contracts with game meat handlers for the months May to August (winter months and the official season for night culling) to supply game, with fixed numbers of carcasses to be delivered and fixed prices. Day harvesting is allowed throughout the year (Van Schalkwyk and Hoffman,

**Table 1: Regional distribution of commercial game species in Namibia**

	Erongo	Hardap	//Kharas	Khomas	Kunene	Omaheke	Otjozondjupa	Oshikoto/ Oshana/ Omusati	Total
Springbok	38 234	332 946	239 470	71 491	14 409	25 683	35 769	4 623	762 635
Gemsbok	66 057	111 764	32 970	83 460	36 155	41 093	119 230	11 599	502 328
Kudud	52 150	60 962	29 500	52 756	41 093	141 089	17 567	449 199	
Warthog	52 585	37 515	2 603	78 931	30 129	72 279	139 765	9 666	423 472
Red Hartebeest	8 474	35 170	3 471	54 023	5 764	39 258	38 419	1 849	186 428
Elan	4 129	2 345	7817 117	8 646	7 705	56 303	2774	89 798	
Harmann Zebra	11 299	22 665	868	17 468	9 956	1 834	13 910	3 194	81 195
Blue Wildebeest	1 304	17 976	1 041	11 646	5 764	6 971	29 145	1 849	75 696
Ostrich	1 521	15631	11 366	8 087	4 391	7 705	19 209	1 409	69 320
Common Impala	3 107	7 034	0	8 411	2 358	6 971	33 120	756	61 757
Black Wildebeest	1 956	6 253	781	10 675	1 834	8 439	15 434	588	45 959
Waterbuck	43	1 563	347	4 205	1 310	8 806	12 254	420	28 949
Plain Zebra	435	3 908	0	4 432	576	2 201	7 949	185	19 686
Black Face Impala	326	1 563	434	2 201	972	7286	706	13 488	
Sable antelope	0	0	0	0	157	73	1 987	50	2 268
Lechwe	0	0	0	0	79	0	795	25	899
Tsessebe	0	0	0	0	629	0	66	202	897
Roan antelope	0	0	0	0	629	0	66	202	897
Total	241 628	657 295	323 631	412 027	179 112	271 083	672 063	577 464	2814 304

Source: Lindsey, 2012

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2015). Numbers, species, quality and price are then fixed to allow game farmers, harvesters and handlers to plan and budget. It is, however, a challenge for harvesters to obtain the necessary permits in time, as the MET only accepts applications as from April and develops a backlog. Harvesting teams usually need between one and two hours to fill in all the necessary information on checklists as required by the MET and DVS.

All inputs into the process need to be transported; transport costs amount to approximately 15% of the sales price. Delayed deliveries can be estimated at 2%. The value of loss as a percentage of delivery value has been estimated at less than 1%.

The game animals are shot from a harvesting vehicle, field eviscerated and loaded onto the vehicle. The white offal is usually left in the field for predators. The vehicle then takes the carcasses to the field abattoir. There, the heads and feet are removed, as well as the red offal, which is placed in plastic bags and hung next to the corresponding carcass. Later, the carcasses are cooled in a refrigerated truck (when large numbers have been harvested), which also transports them to a game-handling facility.

Aside from the professional harvesting teams engaged in formal harvesting and input (carcass) supply, there is also a significant amount of informal trade, with game farmers delivering carcasses directly to their local butcheries. These carcasses are often transported in unrefrigerated trucks, which might cause food safety and quality problems.

### Meat Processing and Meat Product Manufacturing

Partially eviscerated game carcasses are supplied by the game-harvesting teams either to the **game meat handlers (abattoirs) or directly to processors (meat product manufacturers)**. Carcass delivery time varies greatly and can be anywhere from six to 12 hours, or even up to two

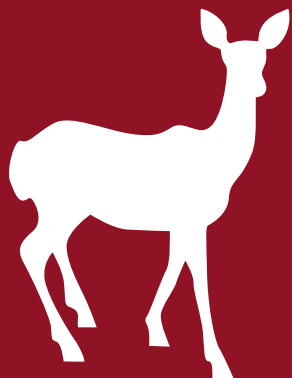
days (the product is kept in a refrigerated truck) due to the distances involved.

There is a trust relationship between sellers and buyers of the raw product, as they are dealing with a biological product where a lot can go wrong, especially during the harvesting process. The usual means of communication is by phone, as e-mail is often unavailable in remote areas. Frequency of personal contact is minimal, however, due to the large distances between suppliers and buyers. The trustful relationship enables efficient business transactions.

At the game-handling facility, carcasses are deskinning (small game) or dehided (large game), deboned and cut into primal cuts. Cuts and red offal are packed in vacuum bags and cartons, which are either chilled or frozen according to the requirements of the customer. The capacity to formally and hygienically dress and debone game carcasses in Namibia is limited to a few companies.

The largest stakeholders in the industrial segment of the game meat value chain, i.e. meat handlers and meat product manufacturers, are Brukarros Meat Processors, Closwa Biltong, Hartlief, Namaqua Meat, Simondeum and Beefcor Meat Suppliers. All these companies are under Namibian ownership and operate nationally, except for Closwa Biltong and Hartlief, which also export a small portion of their output to South Africa. Their combined market share adds up to around 80%. No foreign direct investment is known of in the game meat industry.

As core competencies of these companies, quality management (food safety management and quality-control systems), branding (strong brand positions in the market) and generation of sustainable profits through good financial management can be mentioned. The exporting companies must adhere to the standards and requirements of the importing countries and foreign buyers.



## Distribution and Trade

Chilled and frozen game meat cuts and trimmings are either directly sold by game handlers who assume wholesaler functions to retailers and restaurants or sold from handlers to a meat product manufacturer. Companies selling game meat to one another usually do not conclude formal contracts; rather, orders are placed verbally or in writing.

The industry stakeholders prefer not to make use of agents in the distribution chain, as this can become very costly. However, larger retail companies and chains are seen as agents of a kind, as it is very difficult to sell high volumes of product without supplying them.

The informal game meat trade in Namibia – although its share of the total trade in game meat and meat products is not easy to quantify – is considered significant, as everyone knows someone on a farm and receives game meat from the farm from time to time.

## Indirect Stakeholders (Meso and Macro Level)

At the meso level, relevant **operational service providers** that feed into the different value chain segments include: suppliers of additional production inputs (e.g. spices; packaging materials; cleaning chemicals) and equipment, such as rifles and other game-harvesting supplies (knives, sterilisers, clothing, etc.); manufacturers of customised game-harvesting vehicles and refrigeration trucks and providers of maintenance and repair services; providers of laboratory and pest control services; packaging service providers; and suppliers of meat-processing equipment. **Basic service providers** include NamWater (for water supply) and NamPower (for electricity), and **financial services** are provided by different commercial banks.

The primary producers of game in Namibia are part of organised agriculture, i.e. the Namibia Agricultural Union and the **Meat Board of Namibia**. However, the breeding, harvesting and processing of game for commercial meat production is not addressed by these organisations. Primary producers have recently established an organisation called **Wildlife Ranching Namibia** that to some extent deals with the breeding of game.

Currently, several regulations apply to the sustainable use of game. These are also applicable when game is harvested and processed for commercial meat production.

Game meat production in Namibia is regulated by the **Ministry of Environment and Tourism (MET)** through the Nature Conservation Ordinance No. 4 of 1975, as amended. As per this ordinance, game harvesters must be registered with the MET and must apply for a harvesting permit when they want to remove game for the commercial meat value chain. In addition, harvesting teams and meat processors must comply with the regulations and guidelines of the **Directorate of Veterinary Services (DVS)** of the Ministry of Agriculture, Water and Forestry (MAWF) and with the **Ministry for Health and Social Services (MOHSS)**. Food safety requirements, such as the maintenance of the cold chain, must be adhered to throughout the value chain, and production processes must be adjusted in order to sell the product, both on the local market and abroad. Other relevant acts, regulations and regulatory requirements applicable to the game meat industry and its value chain comprise the Public Health Act No. 36 of 1919, the Animal Health Act No. 1 of 2011 and its regulations, Prevention of Undesirable Residues in Meat Act No. 21 of 1991 as amended, the Animal Protection Act No. 71 of 1962 as amended and veterinary circulars (VC). Administrative requirements producers must meet in order to produce and export products include processing and export licenses as well as export permits. The future development of the industry is also influenced by regional and international regulatory framework conditions. For exports to the RSA, the following **South African requirements** to hygiene-management systems and control procedures based on the HACCP (Hazard Analysis and Crit-

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ical Control Points) principles must be adhered to: the Meat Safety Act No. 40 of 2000; red meat regulations (17 September 2004); and veterinary procedural notices (VPNs) and standard operating procedures (SOPs).

For exports to the **European Union** (EU), the following list of EU directives and regulations have an important influence on the industry's future growth performance:

- Commission Regulation (EU) No. 178/2002, setting the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety
- Commission Regulation (EU) No. 1441/2007, amending parts of Regulation No. 2073/2005 on microbiological criteria for foodstuffs
- Commission Regulation (EU) No. 2073/2005, on microbiological criteria for foodstuffs (as amended)
- Commission Regulation (EU) No. 2075/2005, laying down specific rules on official controls for *Trichinella* in meat (as amended)
- Commission Regulation (EU) No. 854/2004, laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption (as amended)
- Commission Regulation (EU) No. 852/2004, on the hygiene of foodstuffs (as amended)
- Commission Regulation (EU) No. 853/2004, establishing specific hygiene rules for food of animal origin (as amended)
- Commission Regulation No. 10/2011, on plastic materials and articles intended to come into contact with food (as amended)
- Commission Regulation (EU) No. 206/2010 of 12 March 2010, laying down lists of third countries, territories or parts thereof authorised to introduce certain animals and fresh meats into the European Union and the veterinary certification requirements (as amended)
- Commission Regulation (EU) No. 16/2012 of 11 January 2012, amending Annex II to Regulation No. 853/2004 of the European Parliament and of the Council regarding the requirements

concerning frozen food of animal origin intended for human consumption (day of production is day of killing)

- Council Directive 98/83/EC, on the quality of water intended for human consumption
- Council Directive 2002/99/EC, establishing the animal health rules governing the production, processing, distribution and introduction of products of animal origin for human consumption (as amended)
- Council Directive 2003/99/EC, on the monitoring of zoonosis and zoonotic agents.

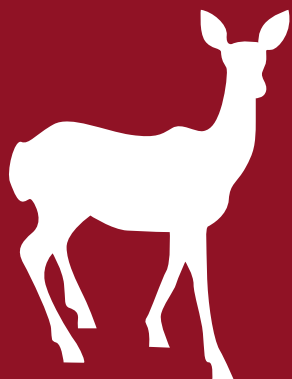
## Costs and Margins

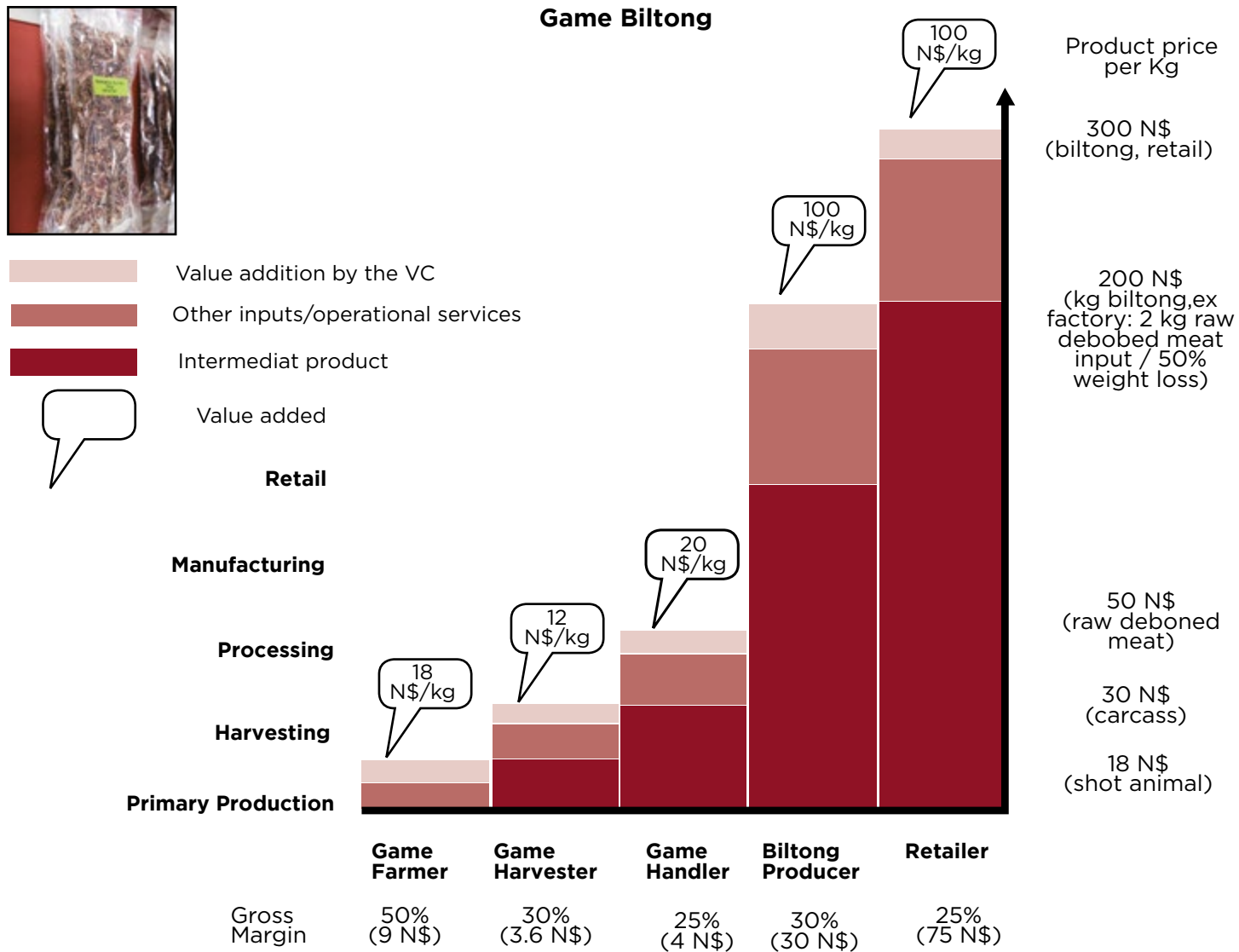
The price a game farmer receives for the product lies between NAD 15 and NAD 18 per kg, which yields a gross margin above 50%. In South Africa, game farmers receive more for their product, but unlike in Namibia, ex-producer prices include harvesting and transport; additionally, the distances the trucks need to travel in South Africa are much shorter than in Namibia.

Harvesting-related costs are significantly higher than farming costs, as the game harvesters have to buy and maintain harvesting vehicles, structures for field abattoirs, refrigerated trucks, etc. Prices received for harvesting services vary between NAD 10 and NAD 13 per kg, which generates a gross margin of approximately 30%.

Both the investment and operational costs for a game-handling facility are substantial. A minimum investment of NAD 20 million is required to construct a facility. The selling price (ex-handling facility) of raw deboned game meat is usually between NAD 40 and NAD 50 per kg, with a gross profit margin of 20%.

Manufacturing game meat products such as biltong also requires huge capital and operational costs, approximately NAD 10–20 million per plant. The ex-factory price is usually between NAD 100 and NAD 300 per kg, generating a gross profit margin of 26–30% for the manufacturer.





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Figure 7: Value addition and gross profit margins along the game meat value chain  
Source: GIZ, based on data from OABS 2016

In Figure 7, an ex-factory price of NAD 200 has been applied to biltong; the retail price of the finished consumer product is NAD 300 per kg. The diagram shows the value-addition processes along the value chain and gross profit margins obtained by the different chain operators.

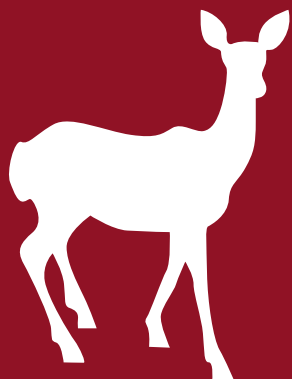
## 1.7 Classification and Characteristics of Namibian Products

The current products of the game meat value chain in Namibia are raw game meat cuts and dried game meat products, namely game biltong and droëwors.

**Raw game meat cuts** are perishable and therefore either kept chilled (<7 °C) or frozen (minimum -12 °C). Good-quality game meat has a pH value of below 6.

The fat percentage is less than 3%, which is much lower than that of other commercial livestock. When cooked or fried, game meat has a very distinctive taste. Quality-wise, Namibian game meat is a superior product. Average live and carcass weights compare favourably to the same product in South Africa. Due to the grazing on natural pastures, the meat quality is also superb and applauded by consumers from all over the world.

**Dried meat products** comprise mainly game biltong and game droëwors. About 50% of the weight is lost when the game meat is dried. Due to the spicing and preservation, a very distinctive taste develops. Dried meat is considered a safe product, as it is high in salt and has low water activity. It can also be stored and sold at ambient temperature (22 °C to 25 °C). Dried meat has a shelf life of approximately 30 days plus.



## 2. IDENTIFIED OPPORTUNITIES FOR AND CONSTRAINTS TO INDUSTRY GROWTH



## 2. IDENTIFIED OPPORTUNITIES FOR AND CONSTRAINTS TO INDUSTRY GROWTH

This chapter describes the constraints to and opportunities at the micro, meso and macro levels for the Namibian game meat industry and associated value chain identified according to the following analytical framework:

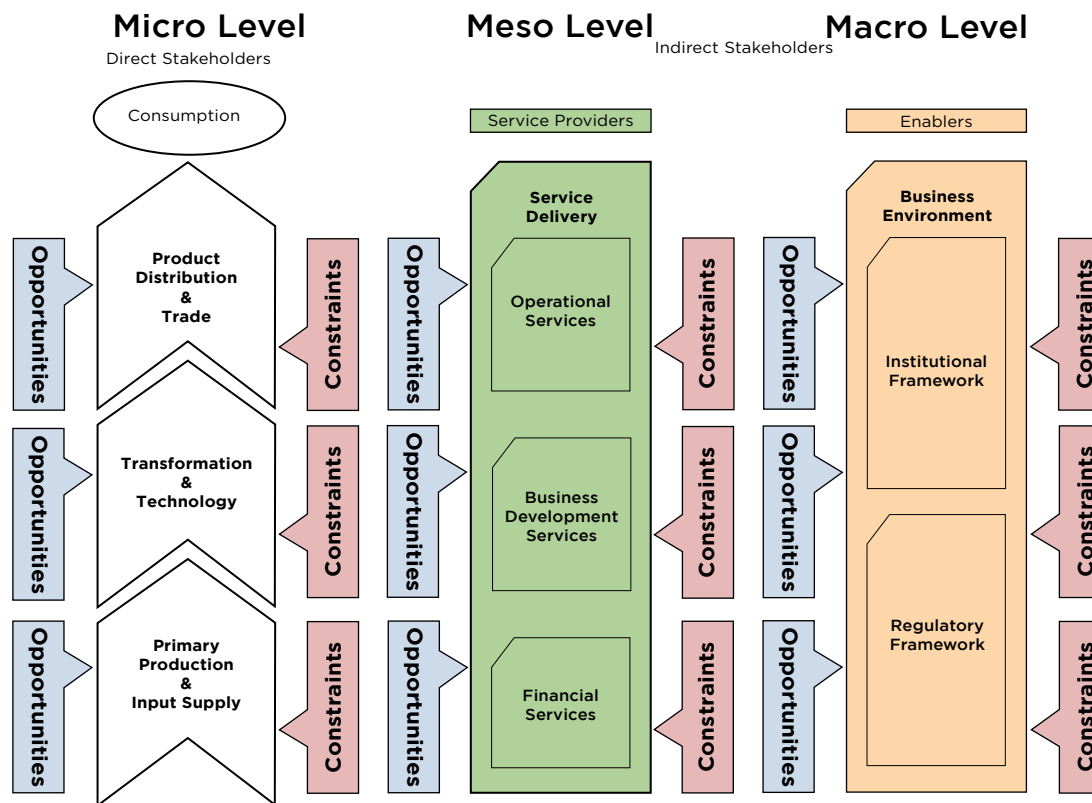


Figure 8: Analytical framework developed to identify opportunities and constraints  
Source: GIZ ProCOM

## 2.1 Primary Production and Input Supply

The value chain operators source their knowledge from formal education, experience, literature, traditional methodologies, etc. The level of sophistication at the primary production level is low, as the methods and techniques applied to harvesting are very robust depending on terrain. There is scope in Namibia for additional commercial game-farming operations geared at meat harvesting. However, Namibian farmers are reluctant to venture into game farming, as many do not have the required knowledge and the industry is not yet formalised and organised. This is certainly a constraint to the national game meat industry's growth. Unlike for the more developed commercial livestock value chains (cattle and sheep), there is no grading system in place for game animals and game meat and thus no current reward for improving quality.

It is clear that producers need to improve the efficiency of game utilisation, as game currently occupies 30% of the available farm area but only yields 20% of total income, whereas other livestock production occupies 70% of the available farm area and contributes 80% to total income. It is, however, an advantage of the game meat value chain that game farmers have lower variable production costs, as they do not have to inoculate, vaccinate, feed or water the game. At only 8.6%, game farming actually has the lowest variable cost ratio, compared to 10% for goats, 11% for sheep and 34% for cattle.

Game harvesters have proved innovative when it comes to the design of field abattoirs. In the past, they used structures on the ground; nowadays they have whole abattoirs with sanitary facilities built in on the backs of trucks. There are also designs of enclosed field abattoirs on the market, built on trailers with their own refrigeration.

Little research has been conducted so far on alternative ways and means of harvesting and transporting eviscer-

ated carcasses to the nearest handling facility. While introducing new technology might increase efficiency, the related costs can also be high. Thus, proper cost-benefit analysis needs to precede any investments in technological upgrading of harvesting and offtake activities. It is also imperative that the Directorate of Veterinary Services (DVS) and the MET are in attendance when new technologies are tried out, in order to get the input and buy-in of the competent authorities.

In recent discussions, it was also agreed that more research should be done on the current guidelines regarding the shooting ratio of male to female animals in a given population. Since hygienic work methods are essential for food safety, there is a constant need for training to maintain high standards. Professional marksmen and blockmen are always required in the value chain, as not many persons with these skills are currently available in Namibia.

## 2.2 Transformation and Technology

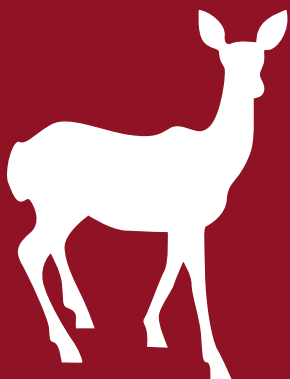
Sophistication at the secondary level is much higher, as the few dressing, deboning and cutting facilities operating in the formal sector use state-of-the-art technologies. Consistency of supply and of product quality are known challenges the industry faces. Pathogens are considered a high risk to the sustainable growth of the industry, as there is currently a lack of research in Namibia around STEC contamination, which was responsible for the halt in game meat exports.

There is currently a lack of first-stage processing facilities with the capacity to formally and hygienically dress, debone and cut game, which bottlenecks the value chain, constraining production and throughput. There are currently no more than four companies in this business, mainly due to the high construction, technology and operational costs (labour and other) involved. Since such facilities and their equipment often use stainless steel, the investment costs tend to be high. Labour costs in this

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So far no duties or levies are payable for exporting to key international markets, namely the Republic of South Africa and the EU, where consumer demand for game meat and meat products is high and on the rise.



value chain segment are also high, as the level of sophistication does not yet include fully mechanised operations (like in the poultry industry, for example). Five past attempts to establish new game-handling facilities in Namibia reportedly have not succeeded. While the capital investment required for a game-handling facility is high – a minimum of NAD 20 million is estimated for a factory – stakeholders reported that the current selling price of the product (NAD 40 per kg average for game meat cuts) still allows for a 20% gross profit margin at the handler level. Most processors are not aware of the support offered by the government in incentive and equipment schemes. So far, no foreign direct investment has flowed into the game meat value chain.

Availability and costs of water and electricity supply are also topics of concern for the processors and manufacturers. Energy costs are a relevant factor for harvesting but especially for game handling and meat processing, as it is extremely costly to maintain the cold chain and to chill and freeze products. Thus, some companies have already introduced energy-saving mechanisms and technologies, and others have plans to do so, e.g. by switching to solar energy. Unlike game farming and harvesting, handling and processing require large amounts of water; though water consumption for the game meat manufacturing process is lower than for cattle (about 500 litres per game animal compared to 800–1,000 litres per head of cattle), bulk supply of water is the norm and is usually costly. A lot of wastewater is created that should preferably be screened and filtered before it can enter the sewerage of the municipality or be dumped. Although in theory biogas can be produced from biological waste, so far little knowledge is available on this topic in the Namibian industry, so this requires further research and feasibility studies.

## 2.3 Product Distribution and Trade

So far no duties or levies are payable for exporting to key international markets, namely the Republic of South Africa and the EU, where consumer demand for game meat and meat products is high and on the rise (as outlined, in the EU alone 200,000 tonnes of raw and processed game meat are consumed annually). While this in principle provides a favourable scenario for export promotion and growth, Namibia has exported no game meat nor meat products except for biltong and droëwors in the last three years. Stakeholders estimate that Namibia is currently losing more than NAD 30 million annually simply by not exporting game meat to EU markets. Exports were, however, part and parcel of the industry until 2012. Several impediments hampered further exports, the biggest being the STEC problem, i.e. the Shiga toxin-producing *Escherichia coli* bacteria that is persistently found in game, especially springbok. There is a lack of cooperation within the industry on starting a project to solve this problem, the biggest obstacle being project funding.

Although Namibian game meat is praised by everyone and traditionally well received in local markets, and was in foreign markets until 2013, effective product-differentiation efforts marketing and promoting meat and meat products from free-range Namibian game as natural and organic are deemed necessary by the value chain operators to promote further industry growth.

Though overall demand for game meat and meat products has been increasing, little effort has so far gone into product development, partly due to the seasonal nature of production. The general impression is that both game meat handlers and food product manufacturers are in a comfort zone and less exposed to new trends and ideas regarding food handling and product manufacturing than stakeholders in the other meat value chains operating in Namibia. Consumers of niche food products tend to react very quickly to new trends and product developments, which may hold both opportunities for and constraints to the Namibian game meat industry. A higher exposure to supply and demand trends could be fostered

by joint industry visits to regional and international trade fairs and study tours to competitor countries.

Marketing budgets vary widely depending on company size and can be as low as NAD 20,000 or up to NAD 500,000 or more. The bigger companies' marketing and promotion strategies currently concentrate on the local market, largely neglecting promising export markets. However, since the domestic market is rather small and will not grow significantly in the next few years, future industry growth rates will critically depend on successfully exploring and penetrating foreign niche markets, including regional markets, where game-product exports from South Africa have gained a strong foothold in recent years. As the middle class in Africa is growing, so is purchasing power and the propensity to buy food items like meat and meat products, and so regional demand for game meat products (namely biltong and droëwors) is also on the rise. However, as of now the industry is not systematically exploring regional market opportunities.

The promotion of game meat and game meat products, both at home and abroad, is not organised in a collective and systematic way, which in the opinion of many industry stakeholders is a major impediment to competitiveness. As South African game meat products are increasingly marketed in Namibia at the expense of local production, the local dried game meat manufacturers in particular have to increase their marketing, branding and promotion efforts – or they will lose out even further on their local market share. This will require simultaneous, complementary optimisation efforts with regard to quality management, consistency of supply, speed of delivery and shelf life, along with competitive pricing policies. Consistent volumes and quality are prerequisite for the larger retail groups, but are difficult to achieve under the current supply conditions.

Industry stakeholders prefer not use marketing agents, as this can become very costly. Retail companies are seen as a kind of agent themselves, though, as it is very difficult to sell high volumes of products without supplying them. However, reportedly they often manipulate

the price and profit margins and squeeze the other value chain operators. In retail contracts, prices tend to be fixed and can become a challenge for producers when unforeseen circumstances arise. These are issues that could be better addressed if an industry and value chain association were successfully established.

As mentioned, there is a high degree of informal trade of game meat and meat products, which affects the overall reputation of the value chain and might cause food safety and quality problems. It is deemed that problems related to this could also be successfully tackled by an inclusive industry and value chain association.

## 2.4 Service Delivery

Specialised business development services and support facilities for this industry and value chain are almost non-existent, and there is a perceived lack of quality business consulting and market information services in the industry. The players in the industry source their knowledge from formal education, experience, literature, traditional methodologies, etc. Most of the knowledge in the game meat value chain is experience and knowhow passed from one generation to another. The little bit of technical information that is actually shared in the industry tends to be disseminated via communication technologies such as cell phone, social media, etc. However, recent game counts, product prices and sales stats and other market information is largely absent.

Unlike in competitor countries, not many employees in the game meat industry have tertiary education in this particular field. Applied knowledge varies widely, as there are so far no coherent standards, practices and procedures enforced by authorities. Guidelines for harvesting and processing game have been established recently, but it is expected that as these guidelines are disseminated, current regulations will be revised and amended in order to effectively steer the industry.

Future industry growth rates will critically depend on successfully exploring and penetrating foreign niche markets, including regional markets.



By actively engaging service providers, certain marginalised groups of society could be empowered to participate in and benefit more from the activities carried out along the value chain.

While current research on game farming, meat processing and product manufacturing is limited, the scope for demand- and problem-driven research is high; there are specific issues within the game meat value chain that can only be addressed through a formal research process, the most important being the STEC problem, which is a central constraint to the industry's export activities.

As in other industries and value chains where food safety is a key issue, requirements for microbiological testing tend to be high and costly. On the other hand, the industry faces the constant risk of entire product batches being recalled in the case of non-conformances or if critical limits of microbiological contaminations are exceeded.

Often, maintenance and repair services for sophisticated equipment are only available in South Africa, and experts have to be flown in at high costs.

Commercial banks are reluctant to supply loans, especially for larger investments in the game meat value chain, and along with charging higher interest rates than development banks, they require high collateral for the loans they do issue. Many of the game harvesters are young adults who are starting their careers and struggle to finance the vehicles and equipment they need. The same applies to handling and processing game meat, as stakeholders reported several unsuccessful attempts to obtain funding for investments. The current image of the wildlife sector and the game meat industry is such that few financiers believe in the industry's profitability and sustainability. The fact that harvesting seasons are unavoidable contributes to the perception that the game meat industry can only operate for half the year, affecting the overall profitability of value chain operations. Further industry-inherent supply risks that might keep banks at bay are droughts (with game starving due to unavailability of food and water), diseases (foot and mouth disease in some areas; anthrax can also be a threat) and pathogens (STEC contamination, responsible for halting game meat exports).

Hence, the industry must jointly promote a better understanding of the value chain to public and private providers of business development and financial services, and it has the opportunity to do so.

By actively engaging service providers, certain marginalised groups of society could be empowered to participate in and benefit more from the activities carried out along the value chain, for example in industry-specific vocational training efforts or as understudies in factories.

Last but not least, improved access to productive infrastructure through low-interest loans and to public services through targeted public and private investments would also support the industry.

## 2.5 Business Environment

With regard to the institutional framework conditions, stakeholders state that currently no institutions specifically support trust-based business relationships and collaborative action along the chain or the permanent exchange of information, knowledge and experiences on value chain -specific topics. While the primary producers of game in Namibia are officially part of organised agriculture and livestock production, i.e. the Namibia Agricultural Union (NAU) and the Meat Board of Namibia, they feel that breeding, harvesting and processing game for commercial meat production are not really addressed by these organisations. A producer group recently established an organisation called Wildlife Ranching Namibia (wrnam.org) that deals to some extent with breeding game. However, value chain stakeholders feel the need and see the opportunity for establishing a game meat association, which would incorporate the game producers and the game-harvesting teams, given their specific roles in and import for the competitive functioning of the industry and value chain.

A potential to improve input supply (game farming and harvesting) in the game meat value chain is the system to issue permits by the Ministry of Environment and



Tourism (MET). Permits are handwritten and only issued by the head office in Windhoek. With the official harvesting season running from May to August (the winter months), it is a challenge for harvesters to obtain the necessary permits in time, as the MET currently only accepts applications from April. Under the present regulatory framework conditions, the number of game animals that a farmer may take off his land is determined by the MET quota system. Ownership of game animals is a contentious issue to many game farmers, who feel that they could act on a self-regulatory basis and decide for themselves how many animals to remove. Stakeholders mentioned a rate of 10–20% of population numbers. In any case, farmers perceive the quota system as being very cumbersome. In addition, ante-mortem counts are not regularly conducted on the farms, and no permits are issued without these numbers.

Industry stakeholders also see it as an unnecessary impediment that the MET only issues night-culling permits for springbok and gemsbok, as day harvesting is not preferred for large numbers of other beasts, for instance red hartebeest, kudu, eland, etc. Since the ambient temperature is higher during the day, flies and other pests

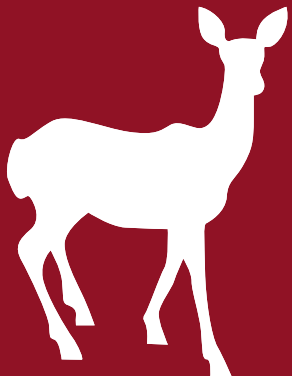
are more common, among other considerations. This and some of the other regulations from the Nature Conservation Act of 1975 currently hamper efficient game harvesting. Stakeholders are of the opinion that the Act needs to be revised to align with new developments in the game meat industry. Revising it would support the overall competitiveness of game farming and harvesting operations in Namibia, as new technologies and scientific knowledge could be applied at the primary production stage.

The current MET administration has indicated its readiness to support the economic development of the game meat value chain. This is regarded as a key opportunity for industry growth, because requirements and regulations could be simplified and modified as an outcome of a public-private dialogue and general regulatory reform process as envisaged in the Growth at Home Strategy, increasing opportunities for efficient and competitive businesses along this value chain that will receive effective support from the DVS and the MET. Such a supportive approach to the value chain actors will certainly change their perceptions of these bodies from “policing” to “enabling” agencies.

The current MET administration has indicated its readiness to support the economic development of the game meat value chain. This is regarded as a key opportunity for industry growth.



### 3. INDUSTRY GROWTH STRATEGY



### 3. INDUSTRY GROWTH STRATEGY

Over several work-group sessions, formal workshops (15 April and 20 October 2015) and deliberations with individual industry and value chain stakeholders, a portfolio of interventions has been developed.

#### 3.1 Vision of Industry Stakeholders

*“By 2020, Namibia’s game meat industry will have become a recognised role model for sustainable and profitable wildlife use, delivering high-quality food products to discerning costumers at home and abroad, thanks to successful public-private value chain -promotion activities at the different stages of value addition (farming, harvesting, handling, processing and marketing).”*

#### 3.2 Industry Growth Indicators

- Increase the overall value of game meat and game meat product sales by at least 50%, from less than NAD 200 million (2015) to more than NAD 300 million (2020), and the industry’s contribution to GDP from 0.23% to 0.3% (Base 2015: NAD 195 million (estimate TBC, based on annual production of 6,500 tonnes of game meat and average value of NAD 30,000/tonne + NAD 30/kg); Target 2020: NAD 300 million; Data source: Survey to be conducted by MET and MITSMED)
- Position Namibia in the top 20 worldwide game meat and meat product exporters by volume (Base 2014: 30/32; Target 2020: 20+/ 20+; Data source: ITC/UN Comtrade)
- Grow the number of employees in the game meat industry (harvesting, handling and processing) by at least 50% from 300\* (2015) to 450 (2020) (Base 2014: 300 (stakeholder/OABS, TBC); Target 2020: 450+ (TBC) Data source: Survey to be conducted by MET and MITSMED)

#### 3.3 Strategic Objectives, Indicators and Proposed Interventions

Three core areas have been identified where interventions are necessary to achieve the outlined industry growth vision by 2020. The changes these interventions intend 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 three strategic objectives and the industry growth vision are achieved.

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**Intervention Area 1:**  
Primary Production  
and Input Supply

**Intervention Area 2:**  
Transformation and  
Technology

**Intervention Area 3:**  
Product Distribution  
and Trade

## Intervention Area 1: Primary Production and Input Supply

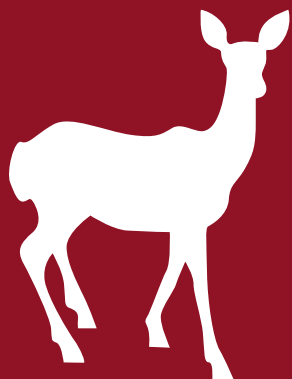
The first intervention area addresses central opportunities and constraints in the primary production segment of the game meat value chain, including all meso- and macro-level aspects that have direct influence on the overall scope, efficiency and profitability of game farming and harvesting operations.

### Strategic Objective 1:

*“Improve the industry’s contribution to sustainable wildlife use by creating an enabling environment for professional game farming and harvesting.”*

### Indicators and Targets:

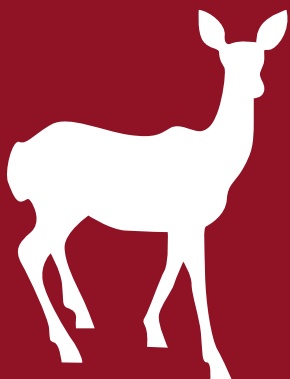
- Grow the share of game farmers and harvesters trained in applying good game farming, harvesting and offtake practices, according to the guidelines and established mandatory and voluntary game meat industry standards, to at least 75%
- Implement at least five successful initiatives and projects at the level of game farming and harvesting (including transport of eviscerated carcasses) which are based on value chain specific R&D activities carried out in Namibia
- Increase the percentage of interviewed direct stakeholders in the primary segment of the value chain that are “largely” or “completely” satisfied with the legal and regulatory framework conditions that apply to their businesses to at least 75% by 2020



## Proposed Interventions:

Int. Num.	Intervention	Key Activities	Proposed Champion(s)
1.1	<b>Promotion of game farming and harvesting through innovative, customised campaigns to raise awareness, share information and build knowledge geared at different stakeholder groups (policy makers, potential financiers and investors, entrepreneurs, etc.)</b>	<ul style="list-style-type: none"> <li>• Identify specialised service providers to establish scope of promotion campaign, target-group-specific knowledge and information needs and expected results and outcomes</li> <li>• Develop tools and formats to raise awareness, share information and transfer knowledge</li> <li>• Experiment with and adapt the different tools according to stakeholder feedback and outcomes</li> <li>• Continuously update the tools and formats according to developments within the game meat value chain and changes in the institutional and regulatory framework conditions</li> </ul>	New value chain association and MET
1.2	<b>Support to the implementation of best game-farming and harvesting practices through disseminating production guidelines, introducing and certifying primary production and product standards and constant training in their application</b>	<ul style="list-style-type: none"> <li>• Conduct benchmarking study and awareness campaign, including workshops, to sensitise VC stakeholders to importance of guidelines and standards for their activities and to jointly define the scope of a project formulating, implementing and possibly certifying best practices</li> <li>• Lobby for support for the project and assist existing and prospective game farmers and harvesters with training, technical considerations and possibly certification and auditing (e.g. by subsidising costs, building local certification and inspection capacities to reduce costs)</li> <li>• Develop methodology to measure best practice implementation amongst game farmers and harvesters</li> </ul>	New value chain association, MET, DVS





Int. Num.	Intervention	Key Activities	Proposed Champion(s)
1.3	<b>Support to value chain-specific R&amp;D that promotes productivity gains and sustainable resource use at primary production level (game farming and harvesting), including financial and technical support to pilot initiatives</b>	<ul style="list-style-type: none"> <li>• Support research, knowledge exchange and technology transfer and adaptation to Namibian framework conditions regarding game-farming methods (e.g. more efficient land use, enhanced quality of game population for meat production) as well as game harvesting (e.g. innovative design of field abattoirs, alternative harvesting and transport methods for eviscerated carcasses to the nearest handling facility, shooting ratio of male to female animals in a given population, etc.)</li> <li>• Provide public financial and technical support to innovative process-upgrading pilot projects at the farming and harvesting levels presented by value chain stakeholders and entrepreneurs based on value chain -specific R&amp;D</li> </ul>	MET, MITSMED, new value chain association and academy
1.4	<b>Expert study and joint public-private review of the legal framework (with focus on the Nature Conservation Act of 1975), in line with developments in the game meat industry</b>	<ul style="list-style-type: none"> <li>• Conduct a participatory in-depth analysis and benchmarking study with competitor countries (RSA, others) regarding key regulatory issues such as length of harvesting season, wildlife resource ownership, license and permit requirements (e.g. night culling) and offtake numbers</li> <li>• Identify potential reforms to the legal framework and assess their impact on the resource base and the efficiency and competitiveness of Namibian game farming and harvesting operations; draft amendment proposals to current legislation</li> </ul>	MET, new value chain association
1.5	<b>Joint public-private review of the current license, inspection and quota assignation system</b>	<ul style="list-style-type: none"> <li>• Identify administrative bottlenecks, assess their impact and formulate possible solutions</li> <li>• Design and implement a process optimisation project, including action plan and joint monitoring scheme for implementation progress (direct results and outcomes, impact on sustainable wildlife use, input supply and game meat industry growth)</li> </ul>	MET (and other public stakeholders), new value chain association

## Intervention Area 2: Transformation and Technology

The second intervention area addresses central opportunities and constraints in the industrial segment of the game meat value chain, also including meso- and macro-level aspects that have direct influence on the overall scope, efficiency and profitability of game-handling facilities and game meat product fabrication plants.

### Strategic Objective 2:

*“Increase output of high-quality game meat by supporting new investments in game meat handling; foster value addition by supporting product and process innovations in the game meat product industry.”*

### Indicators and Targets:

- Increase the volume of game carcasses being processed in official game-handling facilities by at least 75% (35,000 processed game carcasses) by 2020
- Support at least two new capacity-expanding investment projects in the industrial segment of the value chain to be carried out by existing companies, entrepreneurs or foreign investors by 2020
- Support at least three prioritised public-private research, technology transfer and upgrading projects that address critical competitive challenges in the Namibian game meat industry by 2020
- Increase the percentage of interviewed direct stakeholders in the industrial segment of the value chain who confirm that their access to finance has improved “somewhat” or “considerably” to at least 75% by 2020

### Proposed Interventions:

Int. Num.	Intervention	Key Activities	Proposed Champion(s)
2.1	<b>Support to business plans and market and feasibility studies on investment opportunities in the game meat industry, with focus on output expansion and manufacturing value addition</b>	<ul style="list-style-type: none"><li>• Prioritise business and investment opportunities with industry stakeholders and experts (strategy steering committee)</li><li>• Develop TORs for feasibility and market studies (demand profiling, supply costing, testing feasibility and sensitivity, etc.) and tendering</li><li>• Should feasibility be established, disseminate findings among industry stakeholders and potential local and foreign investors (investment promotion)</li><li>• Provide financial and technical (mentoring) support to local or foreign investors and entrepreneurs during implementation of the business plan</li></ul>	MITSMED

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Int. Num.	Intervention	Key Activities	Proposed Champion(s)
2.2	<b>Support to the implementation of best game-manufacturing practices through disseminating processing and manufacturing guidelines and introducing and certifying processing and product standards, including constant training in their application by the industry</b>	<ul style="list-style-type: none"> <li>• Conduct a benchmarking study (including study tour to RSA) and awareness campaign (including workshops) to sensitise VC stakeholders to the importance of guidelines and standards for their activities and to jointly define the scope of a project formulating, implementing and possibly certifying best manufacturing practices</li> <li>• Lobby for support to the project and assist existing and prospective game handlers and processors with training, technical help and possibly certification and auditing (e.g. by subsidising costs, building local certification and inspection capacities to reduce costs)</li> <li>• Develop methodology to measure best practice implementation amongst game farmers and harvesters</li> </ul>	New value chain association, MET, DVS, MITSMED
2.3	<b>Support to industry-specific R&amp;D projects that address competitive challenges in game meat handling and manufacturing of value-added game meat products</b>	<ul style="list-style-type: none"> <li>• Identify and prioritise topics for applied research, technology transfer and technical upgrading that address competitive challenges in the Namibian game meat industry, such as consistency of supply, reliability of product quality, mechanisation of operations, low product-development capacities, high energy and water consumption and costs, waste management, etc.</li> <li>• Conduct research and support national and international knowledge exchange and technology transfer regarding game handling and game-based food production</li> <li>• Provide public financial and technical support to innovative process-upgrading pilot projects at the game-handling and product-manufacturing levels presented by value chain stakeholders and entrepreneurs based on value chain specific R&amp;D</li> </ul>	MITSMED, new value chain association

Int. Num.	Intervention	Key Activities	Proposed Champion(s)
2.4	<b>Facilitation of access to finance for productive investments in the game meat industry according to performance</b>	<ul style="list-style-type: none"> <li>• Design a communication strategy promoting a better understanding of the game meat value chain at funding institutions (commercial and development banks) to facilitate informed decisions when entrepreneurs and established businesses apply for funding</li> <li>• Establish a monitoring system for key performance indicators in the game meat industry and value chain to foster evidence-based decision making by investors and financiers</li> <li>• Provide updated information on chain performance to industry stakeholders, including financial service providers</li> <li>• Conduct regular meetings with financial service providers to inform them of developments in the industry and investment opportunities and to negotiate terms for value chain financing</li> </ul>	New value chain association

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### Intervention Area 3: Product Distribution and Trade

The last intervention area addresses central opportunities and constraints in the fields of marketing, promotion and trade; it also includes meso- and macro-level aspects that strongly influence the industry's positioning in local, regional and international markets. As it bears relevance here as much as in the other core intervention areas and the overall strategy-implementation process, the establishment of an industry and value chain association has been incorporated into the list of proposed interventions.

#### Strategic Objective 3:

*“Reposition Namibian game meat and game meat products on local, regional and international markets by removing current obstacles to trade and implementing a joint marketing and promotion strategy spearheaded by a proactive industry and value chain association.”*

#### Indicators and Targets:

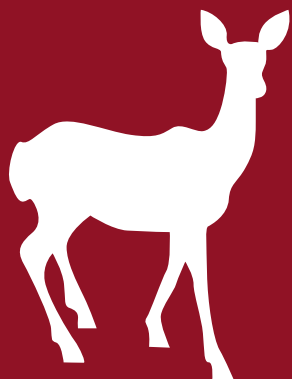
- Increase the share of game meat exports to at least 40% of total production and the share of export earnings to at least 60% of total industry earnings from sales of game meat and meat products



- Establish exports to at least three new regional markets, with export volumes reaching at least 100 tonnes during two consecutive years
- Establish at least three export-promotion instruments with tangible effects on market penetration and diversification between 2017 and 2020 (one additional instrument per year)
- Increase the average sales unit value by at least 25% on the domestic market and by at least 50% on foreign markets via interventions in quality management and hygiene, product traceability, product development, marketing and branding, etc.

### Proposed Interventions:

Int. Num.	Intervention	Key Activities	Proposed Champion(s)
3.1	<b>Support to a research project on food safety issues (focusing on STEC contamination) and to implementation of food safety standards in the value chain</b>	<ul style="list-style-type: none"> <li>• Design a research project on food safety and pathogen (STEC) contamination in the value chain</li> <li>• Select a research partner institution and draft the research protocol</li> <li>• Conduct research and share results with the industry, DVS and other VC stakeholders</li> <li>• Design a project establishing microbiological testing facilitates and managing hygiene standards according to research outcomes and recommendations</li> </ul>	DVS, new value chain association
3.2	<b>Support to the definition and implementation of product standards in the game meat value chain</b>	<ul style="list-style-type: none"> <li>• Conduct a complementary benchmarking study on quality management/assurance and certification and verification systems in competitor countries, including food safety, environmental and social standards</li> <li>• Conduct a market study focused on current and future requirements of buyers in high-value target markets for Namibian game meat and processed game meat products</li> <li>• Formulate a product-differentiation and quality-assurance strategy according to identified requirements of different key export markets</li> <li>• Support standard-setting and standard-assurance processes (first party and/or B2B assurance) and/or auditing/third-party assurance/certification, testing and accreditation processes according to strategy implementation milestones</li> </ul>	NSI, MITSMED, new value chain association



Int. Num.	Intervention	Key Activities	Proposed Champion(s)
3.3	<b>Support to product development initiatives</b>	<ul style="list-style-type: none"> <li>• Appoint a representative product-development work group</li> <li>• Design tools that facilitate Namibian processors' and manufacturers' access to information on international demand and supply trends in the food product industry and promote information sharing within the industry (e.g. through participation in trade shows, study tours and/or periodic bulletins)</li> <li>• Support activities and events that allow Namibian industry players to benchmark their products against foreign competitors</li> <li>• Organise national industry activities, platforms and events that actively promote product innovation and entrepreneurship within the industry</li> </ul>	New value chain association, MITSMED
3.4	<b>Support to joint strategic marketing initiatives for market penetration and diversification</b>	<ul style="list-style-type: none"> <li>• Appoint a representative marketing and promotion work group for game meat</li> <li>• Commission an industry-specific product branding and promotion strategy, including both local marketing and export promotion tools (campaigns, brand logos, etc.)</li> <li>• Once approved by industry stakeholders, get support from MITSMED, MET and other sponsors to develop trade missions and other activities according to the product branding and promotion strategy</li> <li>• Follow up on the strategy and conduct a joint evaluation on the overall effectiveness of different instruments</li> </ul>	New value chain association, MITSMED, MET
3.5	<b>Support to the establishment and operation of a value chain association to develop the game meat industry</b>	<ul style="list-style-type: none"> <li>• Conduct consultations with representatives of the different value chain segments to define essential aspects (scope, mandate, structure, etc.)</li> <li>• Support the legalisation and organisational kick-off process with assistance from external experts and process facilitators</li> </ul>	MITSMED

## INDUSTRY GROWTH STRATEGY



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