Report Title: International trade demand and realistic export potential with a focus on selected Pork related products – for South Africa

Client Organisation:

South African Pork Producers’ Organisation (SAPPO)
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**Selected relevant abbreviations**

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<thead>
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<tr>
<td>AMIESA</td>
<td>Association of Meat Importers and Exports of South Africa</td>
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<tr>
<td>ASF</td>
<td>African Swine Fever</td>
</tr>
<tr>
<td>CEPII</td>
<td>Centre d'Etudes Prospectives et d'Informations Internationales</td>
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<tr>
<td>DAFF</td>
<td>Department of Agriculture, Forestry and Fishing</td>
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<tr>
<td>DSM</td>
<td>Decision Support Model</td>
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<tr>
<td>DTI</td>
<td>Department of Trade and Industry (the dti)</td>
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<td>EU</td>
<td>European Union</td>
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<td>FMD</td>
<td>Foot-and-Mouth Disease</td>
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<td>HS</td>
<td>Harmonised System</td>
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<td>International Trade Administration Commission of South Africa</td>
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<td>NWU</td>
<td>North-West University</td>
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<td>OIE</td>
<td>World Organisation for Animal Health but kept its historical acronym OIE (Office International des Epizooties)</td>
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<tr>
<td>RCA</td>
<td>Revealed Comparative Advantage</td>
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<tr>
<td>REO</td>
<td>Realistic Export Opportunity</td>
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<tr>
<td>RTA</td>
<td>Revealed Trade Advantage</td>
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<td>SAPPO</td>
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<td>Trade Research Advisory (Pty) Ltd.</td>
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<td>TRADE</td>
<td>an acronym for Trade and Development</td>
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<td>WCO</td>
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Executive summary

The South African Pork Producers’ Organisation (SAPPO) serves the commercial pork producer by co-operating within organised agriculture, as well as liaising with other sectoral and government bodies in the interest of commercial pork production. The SAPPO has its own constitution and is a body corporate with full autonomy regarding aspects affecting commercial pork producers. It operates according to policies determined by its annual general meeting or National Council.

In this context SAPPO, with the aim of assisting its stakeholders, in its process of evaluating potential alternative markets for expansion internationally requested assistance in this regard from TRADE at North West University and Trade Research Advisory (Pty) Ltd.

This report contains a summary of the study’s methodology, approach and outcomes obtained.

TRADE at NWU has developed a scientific method to identify export opportunities for a company or country to inform on export growth and diversification strategies. The origin of this method was initially developed in order to identify the product-country combinations with the highest export potential for a single country. It was specifically designed to provide export promotion agencies with a more scientific way to determine the products and destination countries on which to focus their scarce export promotion resources. Further refinements to the approach were introduced by the research entity TRADE at NWU in South Africa and the outcomes of this analysis are based on this subsequent refined approach.

The outputs of the project can be summarised as a view on the global international trade demand and realistic export potential related to the Pork specific products. Aspects used to contextualise each country include global trade (of relevant products) and relative position of individual various countries in terms of value, volumes and growth analysis. Realistic export opportunities for each country for the products in question were identified using the TRADE-DSM approach.

In order to guide the process and disseminate the outcomes a working group with representatives from SAPPO, Lynca Meats, Winelands Pork and AMIESA were constituted. Various interactive working meetings informed the final outcomes.

What follows is a summary of the outcomes of this process for reference purposes in terms of the development of a pork product export strategy and is based on the final presentation and recommendations as communicated during the Pork Export Working Group Meeting presentation session (DAFF, Delphen House, Pretoria, South Africa) on 5 Feb 2019.
Regional focus areas

Through the process of this study and various engagements, the final outcome is that 3 broad geographic regional focus areas were identified on which to focus and deploy national resources to develop these areas for the purposes of furthering the interests of South African pork producers. These areas can be summarised as South-East Asia, Eastern Europe and Sub-Sahara Africa.

Furthermore, the work group recommended that the target market priorities consider the industry’s current relatively “small” export orientated production capacity. Hence initial focus should rather be on “small to medium” sized potential markets - to ensure sustainability of initial order fulfilment and building of long-term commercial relationships.

A summary for each of the geographic focus areas are presented in the following sections.
**South-East Asia**

In terms of focus markets with the South-East Asia region therefore includes 3 "new" countries and 2 "ongoing" countries.

The focus countries with applicable tariff ranges (*ad valorem* equivalent) for relevant HS product lines indicated are:

- Vietnam (3 – 15%)
- Philippines (0 – 5%)
- India* (30 – 100%)
- Indonesia (5%)
- Singapore (0%)

According to the work group current efforts associated with Thailand is ongoing as well. Based on the DSM methodology Thailand is not in group due to high tariffs (30 – 40%) combined with relatively expensive logistics from South Africa to Thailand\(^1\).

Furthermore India was not in the initial outcomes for this group and was added based on the work group request.

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\(^1\) The working group raised a question on the status of formal engagements between DAFF and Thailand with reference to the Feb 2018 letter? This report is not suitable for tracking responses and developments around these types of issues and hence the communications around this topic is excluded from the scope of this report.
Eastern Europe

For the European region, the final outcomes are all focused within the Eastern European geography. There are 7 primary focus countries which are all “new” focus markets from a national strategy perspective.

Source: Author, TRADE-DSM V8.8

The focus countries with applicable tariff ranges (ad valorem equivalent) for relevant HS product lines indicated are:

- Lithuania (0%)
- Bulgaria (0%)
- Montenegro (0-7%)
- Slovenia (0%)
- Czech Republic (0%)
- Latvia (0%)  
- Ukraine (5-12%)

According to the work group there are no current active efforts with these target markets. The workgroup further recommended that a “secondary” focus be placed on other countries in the same geography. These include Belarus, Albania, Estonia, Malta, Serbia and Bosnia and Herzegovina.
**Sub-Saharan Africa**

Similar than for the European region case, in Africa the final outcomes are all also focused within a sub-geography, in this case sub-Saharan Africa. In total there are 15 countries, of which 1 is a “new” primary focus country that the work group recommended to be added as a result of the process, while for the rest of the 14 markets all are “ongoing” in terms of current trade and focus markets from a national strategy perspective.

![Map of Sub-Saharan Africa](image)

*Source: Author, TRADE-DSM V8.8*

The focus countries with applicable tariff ranges (*ad valorem* equivalent) for relevant HS product lines indicated are:

- Botswana (0%)
- Democratic Republic of the Congo (DRC) (10%)
- Ghana (0-20%)
- Guinea-Bissau (5%)
- Kenya (25%)
- Madagascar (0%)
- Malawi (0%)
- Mauritius (0%)
- Mozambique (0%)
- *Namibia (0%)*
- Rwanda (25%)
- Seychelles (0-25%)
- Tanzania (0-25%)
- Uganda (10-25%)
- Zambia (0%)

* Namibia was not part of the initial outcomes due to limited ‘untapped’ potential since South Africa is already the dominant supplier into this market.
Recommendations

Over and above the generalised recommendation that the focus regions and countries should be used to target co-ordinated and planned engagements with from a national perspective, the following recommendations emerged from the process.

**SAPPO – for immediate and longer term completion:**

i. Selected HS codes (currently grouped within HS 6-digit “aggregates”) need to be classified in the short term on HS 8-digit level. This process is within ITAC/DTI/SARS control and will assist with more detailed identification and tracking of specific product lines exports and imports. The argument is that if products can uniquely be identified and demonstrated to be clear of e.g. issues such as Listeria and AFS, partner countries will be more able and willing to allow such products to continue to be trade. Currently however, due to the fact that such products are not isolated on an HS code basis, these partner countries cannot identify them, which leads to unnecessarily negative impacts for the exports of such products;

ii. In the longer term it is recommended that a submission is made to the WCO to split at HS 6-digit level for international tracking as this will assist on global level (macadamia nuts is a relevant example case study). Currently the events in China and Poland provides “current” motivation and these opportunities should not be wasted to get finer detail applied to support import and export tracking as well as better statistics for relevant products.

iii. It was further recommended by the working group that SAPPO include FMD tests in the set of standard 6-monthly cycle tests to pre-emptively assist with queries from target countries.

iv. It is further proposed that the developments impacting an national pork export strategy for the various identified focus regions, focus markets and products need to be monitored on an ongoing basis and major reviews may be required once every 3 years (unless something drastically change in the shorter term and is identified during the monitoring activities).

Specific recommendations for consideration by DAFF that was raised as part of the process are:

**DAFF - for immediate attention (proposed to be acted on in Feb/March 2019):**

i. For Singapore the recommendation was that a formal invitation be sent to Singapore (an initial proposed visit was Feb 2019, which subsequently moved to Dec 2019). The communication should indicate that an earlier than Dec 2019 would be preferred.

ii. For India DAFF also needs to communicate a formal invitation to India as soon as possible.

iii. In terms of the rest of the countries identified through this process the working group requested DAFF to initiate formal communication with these focus countries to start
creating awareness and initiation of relevant protocol that need to be put in place in order to facilitate the “opening up” of such markets for trade of pork related products.

**DAFF - for immediate action but to be completed in the medium term:**

iv. DAFF needs to get countries to agree to bilateral import permit "templates" that specifies the “compartment” system explicitly as opposed to current “zone” terminology.

v. DAFF need to engage with the World Organization for Animal Health (OIE) via Dr Michael Modisane. Purpose is to get the OIE to communicate widely that compartmentalisation as an option and need to be incorporated into the “standard” international import permit templates.

vi. A further proposal that should be tabled is that a specific pamphlet /brochure be produced (endorsed by OIE) that South African pork exporters could use when engaging with trading partners.

**The Pork specific and broader SA Meat industry:**

i. The working group raised the question whether the industry should consider **self-regulation** as the way to go?

ii. If so - how to work in partnership with DAFF to achieve?

These questions need to be raised through relevant formal forums and brought to conclusion speedily if the pork exporters (and broader meat industry) is to be enabled to grow exports and as a result continue to contribute to South Africa’s domestic economic growth, employment creation and forex earning activities.
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1. Project context

The South African Pork Producers’ Organisation (SAPPO) serves the commercial pork producer by co-operating within organised agriculture, as well as liaising with other sectoral and government bodies in the interest of commercial pork production. The SAPPO has its own constitution and is a body corporate with full autonomy regarding aspects affecting commercial pork producers. It operates according to policies determined by its annual general meeting or National Council.

TRADE (an acronym for Trade and Development) is a research focus area at the North-West University (Potchefstroom Campus) specialising in the fields of international trade and economic development. TRADE is also a chair of the WTO Chairs Programme. TRADE’s research activities are heavily geared towards export promotion and development – from identifying new and high-potential export opportunities for South Africa as well as other countries, to uncovering the keys to greater competitiveness and inward investment flows – all areas of great concern to economic policymakers and decision-makers in business. TRADE has an experienced and committed team of researchers who are well connected in government and business circles, and continuously stay abreast of local and international developments in their particular focus areas.

At the heart of TRADE’s research programmes is a Decision Support Model (DSM) which is used to identify realistic export opportunities for countries, provinces and industry sectors in the form of high-potential product-market combinations. Complementing the DSM is the TRADE-DSM Navigator® – a powerful, interactive computer instrument that interprets the results of the DSM in a user-friendly way.

The DSM and its many applications are extensively covered in the book ‘Export Promotion: A Decision Support Model Approach’ by Prof Ludo Cuyvers of the University of Antwerp and Prof Wilma Viviers, director of the TRADE research entity at NWU.

TRADE also provides commercial advisory services to provide practical assistance to both export-ready and active exporting companies through the application of the Decision Support Model (DSM). The TRADE team offers an applied research service that involves identifying the most promising export opportunities for products and services emanating from particular sectors, provinces and countries, using the DSM methodology. Such a service is made available on an advisory basis.

TRADE-DSM Navigator® is a registered trade mark of TRADE, used under license by TRADE Research Advisory (PTY) Ltd.
In the beginning of 2016 the NWU made a decision to place this commercial activity in a spin-out company partly owned by the NWU. This proposal and contract will be executed in TRADE Research Advisory (PTY) Ltd (referred to as TRADE Advisory) in close co-operation with the TRADE research entity at NWU. TRADE can assist with the development of such market identification and penetration strategies based on our experience of similar projects with the added advantage that we have a systematic quantitative approach to assist with the initial phases of the project, namely the TRADE-DSM approach.

In this context SAPPO, with the aim of assisting its stakeholders, in its process of evaluating potential alternative markets for expansion internationally requested assistance in this regard from TRADE at North West University and Trade Research Advisory (Pty) Ltd.

This report contains a summary of the study’s methodology, approach and outcomes obtained.

2. Methodology

TRADE at NWU\(^4\) has developed a scientific method to identify export opportunities for a company or country to inform on export growth and diversification strategies. The origin of this method\(^5\) was initially developed\(^6\) in order to identify the product-country combinations with the highest export potential for a single country. It was specifically designed to provide export promotion agencies with a more scientific way to determine the products and destination countries on which to focus their scarce export promotion resources. Further refinements to the approach were introduced by the research entity TRADE at NWU in South Africa and the outcomes of this analysis are based on this subsequent refined approach.

\(^{3}\) Company registration number 2016/008021/07.
\(^{4}\) North-West University (NWU), Potchefstroom, South Africa.
\(^{5}\) Also known as the TRADE-DSM (Decision Support Model).
2.1. A brief overview of the TRADE-DSM approach

In a nutshell the method consists of evaluating all worldwide country and product combinations, and screening these using various intelligent ‘filters’ to eliminate export opportunities that are not potentially viable.

The method uses four consecutive filters that sequentially eliminate less realistic/interesting product-country combinations in an effort to categorise and prioritise realistic export opportunities (REOs) in different positions on a grid (referred to as the REO Map®), for the country for which the analysis is applied. These filters can be categorised in broad terms as:

a. **Filter 1**: Broad general market potential as reflected by economic size, growth and political and commercial risk;

b. **Filter 2**: Product-country market potential characteristics;

c. **Filter 3**: Product-country market access conditions including aspects such as market concentration and accessibility; and lastly

d. **Filter 4**: Categorisation of outcomes based on comparative advantage, revealed trade advantage and “home market” and “target market” product level trade characteristics.

The revealed comparative advantage (RCA) is a key measure used in this approach as a proxy for aspects that are difficult to get empirical information on, such as productivity of firms (trade theory

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7 REO-Map is a registered trade mark of TRADE.
8 Cameron, M.J. and W. Viviers. 2015. Realistic Export Opportunity Analysis for Agricultural Products in the Major Group: HS08 - Edible fruit and nuts; peel of citrus fruit or melons. Study report prepared by TRADE (Trade and Development) research focus area, North-West University, Potchefstroom Campus, for Department of Agriculture, Forestry and Fisheries, South Africa.
states that typically it is more productive firms that export\textsuperscript{10}. The RCA can be described as a measure of both comparative (relative size of exports in the export basket) as well as competitive (in terms of the proxy for productivity) advantage of a product in a country’s export context. The final outcome obtained can be represented as follows in Figure 2.

**Figure 2: REO Map®**

<table>
<thead>
<tr>
<th>REALISTIC EXPORT OPPORTUNITIES</th>
<th>Home Market relative market share of Target Market</th>
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<tr>
<td></td>
<td>SMALL</td>
</tr>
<tr>
<td>LARGE</td>
<td>REO1,1</td>
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<tr>
<td>GROWING Short &amp; Long term</td>
<td>REO1,2</td>
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<tr>
<td>LARGE AND GROWING Short term</td>
<td>REO1,3</td>
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<td>LARGE AND GROWING Long term</td>
<td>REO1,4</td>
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<tr>
<td>LARGE AND GROWING Short &amp; Long-term</td>
<td>REO1,5</td>
</tr>
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Source: Cameron and Viviers (2015). Adapted from Cuyvers et al. (2012)\textsuperscript{11}

### 2.2. REOs “Home market” market share characteristics:

Evident from the map is that the characteristics of the REOs (which are the result of the process described at a high level above) can be used to inform appropriate, though still broadly defined, export promotion or marketing strategies as follows:

a. **REO\textsubscript{1,1} to REO\textsubscript{2,5}** – the “home market” (in this case South Africa) has a non-existent to low market share for various reasons, and an offensive market exploration strategy is appropriate for products where a comparative advantage exists or can be developed;

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b. **REO\textsubscript{3,1} to REO\textsubscript{3,5}** – the “home market” has a relatively medium large market share and REOs are situated in large and/or growing market segments, therefore an offensive market expansion strategy can be advocated; and

c. **REO\textsubscript{4,1} to REO\textsubscript{4,5}** – the “home market” already has gained an important relative market share and therefore a defensive market sustain and maintain strategy seems more appropriate.

### 2.3. REOs “Target market” characteristics:

The target (or importing) market’s characteristics in terms of both size and growth can also be used to inform strategies.

a. **REO\textsubscript{1,1}; REO\textsubscript{2,1}; REO\textsubscript{3,1}**: “Breaking into” a large “relatively” new market, especially when the market share of the “home market” is still relatively small (REO\textsubscript{1,1} and REO\textsubscript{2,1});

b. **REO\textsubscript{1,2}; REO\textsubscript{2,2}; REO\textsubscript{3,2}**: “Taking advantage of a growing market”, i.e. opportunities in target markets that are growing in both the long and short term.

c. **REO\textsubscript{1,3}; REO\textsubscript{2,3}; REO\textsubscript{3,3}**: “Growing and consolidating”, i.e. opportunities in target markets that experienced growth in the recent past / emerging opportunities.

d. **REO\textsubscript{1,4}; REO\textsubscript{2,4}; REO\textsubscript{3,4}**: “Leapfrogging”, i.e. opportunities in target markets that exhibit long term growth.

e. **REO\textsubscript{1,5}; REO\textsubscript{2,5}; REO\textsubscript{3,5}**: “jumping on the bandwagon”, i.e. target markets that shows large import volumes and growth in both the short and long run.

### 2.4. The HS system and data availability

Key to the fundamental analysis based on the TRADE-DSM approach is the selection of specific relevant tariff codes. The tariff codes are determined by the Harmonized Commodity Description and Coding System (HS).

The HS is an internationally standardized system of names and numbers to classify traded products that came into effect for the first time in 1988. The coding system has since been further developed and maintained by the World Customs Organization (WCO) (formerly the Customs Co-operation Council), an independent intergovernmental organization based in Brussels, Belgium, with over 200 member countries.

The detail of what the HS coding looks like and how it is to be interpreted is facilitated by the example in Figure 3. The lowest level of internationally consistent codes applied according to the system is at the HS 6-digit product level, however individual countries may extend the coding system.
as required. Some countries (such as the United States of America) apply a 10-digit classification for some products.

**Figure 3: Example of the HS coding system**

It should be noted however that in international trade statistics and data, cross-country **international** comparison of reported trade flows (import and exports) on tariff code level can therefore only be conducted on a 6-digit level basis.

So while the South African Revenue Services, Department of Customs and Excise (SARS), defines tariff lines and records, for some product codes, data at the HS 8-digit level of detail, this study is confined to using only HS 6-digit level internationally comparable data (indicated by the green shaded entries in the example Table 1).

**Table 1: Example of HS6 and 8-digit detail level**

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<tr>
<td></td>
<td>Carcasses and half-carcasses</td>
</tr>
<tr>
<td></td>
<td>Hams, shoulders and cuts thereof, with bone in</td>
</tr>
<tr>
<td></td>
<td>Other (Rib &amp; Other)</td>
</tr>
<tr>
<td></td>
<td>- Rib</td>
</tr>
<tr>
<td></td>
<td>- Other</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>HS020310</th>
<th>Fresh or chilled:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS020311</td>
</tr>
<tr>
<td></td>
<td>HS020312</td>
</tr>
<tr>
<td></td>
<td>HS020319</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>HS020320</th>
<th>Frozen:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS020321</td>
</tr>
<tr>
<td></td>
<td>HS020322</td>
</tr>
<tr>
<td></td>
<td>HS020329</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HS02032910</th>
<th></th>
</tr>
</thead>
</table>

Source: Author, compiled from SARS Tariff Schedule 1 / Part 1 24 August 2018 revision.

So e.g. for the tariff code 0203.29 (HS 6-digit) SARS provides a next level (8-digit) of detail in terms of tariff code 0203.29.10 and 0203.29.10 in this example. However, other countries do not have the

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same level of detail, and where they do; the 8-digit codes do not necessarily refer to exactly the same products (see appendix section 9.1 for more detail).

2.5. The calculation of potential export values

Up until this point, only lists of realistic export opportunities can be provided, and it is difficult to prioritise between export opportunities and between regions, countries, sectors and products, as no value is attached to the product-country combinations. By way of an example from a previous application of the DSM, small wares and toilet articles had export opportunities in 41 countries and ranked second when compared with other products, while motor vehicles for the transportation of goods or materials ranked 20th with opportunities in 35 countries. The size of the export opportunities was not considered and a ranking based on the number of opportunities is not accurate.

However, a statistical analysis of all the product codes on which trade is recorded over a five-year period shows that for 94 percent of country-product import lines (more than 840,000 in the data set), the top six supplying countries supply more than 80 percent of a country’s imports in value terms (see Figure 4 panel [A]).

Figure 4: Analysis of import partners

![Figure 4: Analysis of import partners](image)

Source: Authors calculation from CEPI\textsuperscript{13} BACI data

\footnotesize{\textsuperscript{13} Centre d’Etudes Prospectives et d’Informations Internationales (the main French institute for research into international economics, part of the network coordinated by the Economic Policy Planning for the French Prime Minister. Founded in 1978.}
Further analysis also shows that 46 percent of these country-product import lines have more than 10 supplying trading partners (exporters to the importing country), while 20 percent have two or less partners.

Therefore, the calculation of a potential export value for each product-country combination that was selected as a realistic export opportunity is introduced at this point:

$$ Pot_{exp,i,j} = \text{average}(Z_{Six1,i,j}, Z_{Six2,i,j}, \ldots, Z_{Six6,i,j}) $$

where:

$Z_{Six1.6,i,j}$ is country $i$’s import of product $j$ from each of the top six competitors (excluding the exporting country for which the model is applied).

The potential export value is therefore considered the average market value of the top six competitors in each market (excluding the exporting country for which the model is applied). It gives a better indication of the size of the export opportunities relative to one another and is in line with filter 4 in which the exporting country’s market share in each market is compared to that of the top six competitors. The potential value will therefore be much higher than the exporting country’s actual export value if the export opportunity is classified into cells 1 to 10 (REO1,1 to REO2,5 in Figure 2), while it will be much closer for export opportunities in cells 11 to 20 (REO3,1 to REO4,5 in Figure 2). It is possible that the actual export value can be higher than this potential export value, which means that the exporting country is one of the main exporters in a particular market and exceeds the average market value of its top six competitors.

### 2.6. The data used

The international trade data that informs the TRADE-DSM outcomes as applied in this report is based on the CEPII, 2018 – HS2007 revision. However, the CEPII data only contains Southern African Customs Union (SACU) aggregate data. In practice, South Africa accounts for the majority of transactions. For this reason adjustments had to be made to the data to reflect Botswana, Namibia, Lesotho and Swaziland (eSwatini) separately. Although more recent (2017) data was available for some countries from the Division’s UNCOMTRADE database and the ITC’s TradeMap, the modelling requirement for reconciled data places a limit on the currency of the data. However, relative fundamental outcomes informed by this approach should not show significant differences from one year to the next.
The current DSM analysis and outputs as applied in this report therefore make use of data for the period 2012-2016. Note that since this study was conducted in new revision of the data and modelling became available in March of 2019 with data and results up to 2017, but this analysis was completed during October / November 2018 and hence does not contain this latest data.

3. Study approach

The following section provides an overview of how the project was approach, expected deliverables, working group members, product definitions and geographic focus that informed the outcomes of the study.

3.1. Overview

Based on discussions with the SAPPO team on 20 July 2018 as well as 2 August 2018 the approach proposed and followed focused on the provision of three components or phases (with high-level activities indicated) to assist in informing the strategy development process:

a. **Phase 1** – Macro analysis of realistic export opportunities across the world for select product (HS) codes;
b. **Phase 2** – Sub-set of focus country more in-depth analysis; and
c. **Phase 3** – Development of a shorter term market supply selection model

**Phase 1:** The objective of this phase was to provide the key stakeholders and decision-makers with some broader context regarding potential markets on a “geographic” basis. For this purpose the top markets in each of the geographic groupings (Americas, Europe, West, Middle, South and South-East Asia as well as Oceania and Africa) were analysed and presented for context. Due to the focus on Africa this region were deconstructed into North, West, Middle, East and Southern Africa). From this analysis, the SAPPO key stakeholders and decision-makers needed to indicate which countries to focus on for the phase 2 analysis. An interactive engagement process was followed, with the SAPPO team and key industry representatives providing strategic direction as to the split of number of focus countries between geographies – as well as potential products / groups of products to focus.

A key activity in this phase was also the definition and grouping of HS codes for the specific pork-related products (more detail on this follows in the rest of the report later).

**Phase 2:** This phase was proposed to focus on more detailed per country analysis. The analysis would include aspects such as more detailed and more recent analysis of import demand trends, competitor analysis, market access dimensions and challenges. This analysis would still be based on
desktop research and cannot substitute in-market detailed intelligence gathering, but would provide a set of results based on a structured and fact-based approach that will assist with an objective analysis of potential options to include in the SAPPO strategy for export development. Note that the analysis does not consider production side constraints – only import demand-side potential.

**Phase 3**: Development of a shorter term market supply selection model. The commercial environment is extremely dynamic and in this context it is also possible to develop shorter term market supply selection models. Such a model will help inform strategic shorter term decisions informed by short-term variables such as e.g. prevailing supply (from South Africa) as well as target market conditions that may influence business decision making in the shorter term (e.g. the recent listeria incident in South Africa, or non-tariff barriers such as seasonal border closings in e.g. some African markets etc.). This model could potentially even include a logistics costing component to inform various supply-routing scenarios.

The process of analysis and synopsis from Phase 1 and 2 would help inform the client team whether this phase would be sensible to pursue and what the possibilities are. This model would require information such as current and expected short term market conditions, prices supply and import variables as well as logistics information. Expected outcomes and reports would be discussed with the client team in terms of requirements.

*However, SAPPO selected for only conducting phase 1 as proposed and described above.*

**Purpose and context of outcomes**: Based on this analysis inputs for a strategy with relevant context in terms of various elements covered only in **Phase 1** was developed to help SAPPO determine direction for the next 5 to 10 years. The analysis is informed by historical as well as structural information that do not change drastically in the shorter term and hence is relevant for more strategic longer term decision making. Note that this type of analysis and information is not well suited for short-term and day-to-day market and production decisions, neither does it constitute “the strategy” itself.

**3.2. Study deliverables**

The Phase 1 outputs can be summarised as a view on the global international trade demand and realistic export potential related to the Pork specific products. Aspects used to contextualise each country include global trade (of relevant products) and relative position of individual various countries in terms of value, volumes and growth analysis. Realistic export opportunities for each country for the product in question are identified using the TRADE-DSM approach. This includes:
1.1. Profiling global international trade demand and realistic export potential (from South Africa’s perspective) and comparing with current internal (SAPPO) strategic choices;

1.2. Workshop(s) – with aim of disseminating more detail on the approach and global findings, after which the client team needed to indicate focus countries (proposed e.g. 5 countries in Africa and 10 in rest of world);

1.3. From the outcomes of this task a sub-set of focus countries could therefore be selected for more in-depth analysis in Phase 2 if required (but this option was not pursued);

1.4. Documenting analysis, findings and decisions in a report (this report);

Overall, the process of engagement with various key stakeholders assisted the team to develop more context and understanding around potential export markets and possible challenges as well as opportunities with such markets.

3.3. Core working group

The following team members formed a core working group to guide the process and internalise the outcomes obtained from the process:

- **SAPPO**: Johann Kotze, Peter Evans, Isabel Brocker
- **Lynca Meats**: Wantie Burger & Mike Burger (Brent Fairlie at inception stage)
- **Winelands Pork**: Henry Shaw (Alex Pasjar at inception stage)
- **AMIESA**: Paul Matthew

Over and above working meetings (SAPPO offices or Skype) the following major engagements formed part of the program:

- a) Scoping meeting – SAPPO Offices [2 Aug 2018];
- b) Individual sessions to obtain inputs – Lynca Meats (Meyerton) [27 Aug 2018];
- c) Individual sessions to obtain inputs – Winelands Pork (OR Tambo) [4 Sep 2018];
- d) Inception (scope finalisation) meeting – SAPPO Offices [17 Sep 2018];
- e) Finalised inception report [21 Sep 2018];
- f) Final outcomes discussion & prep session for DAFF Pork Export Working Group Meeting (Skype) [4 Feb 2019];
- g) Pork Export Working Group Meeting presentation session (DAFF, Delphen House) [5 Feb 2019];
3.4. Product definitions

Key to the fundamental analysis based on the TRADE-DSM approach is the selection of specific relevant HS codes. The product definitions based on preliminary SARS Customs & Excise Duty Schedule 1 (2017 revision) descriptions was workshopped with the core working group.

3.4.1. High level pork value chain and product aggregations

Based on the stakeholder discussions and needs statements as well as to facilitate the dissemination of result and context the following high-level Pork value chain diagram has been constructed with elements relevant to this study more expanded while elements less relevant to the direct focus of the study in less detail.

Figure 5: Study specific illustrative high level Pork value chain

Evident from Figure 5 is that the HS codes of products for the export market be grouped and aggregated into sets of products that broadly fit into 6 major categories associated with the level of “value-add” associated with such products as follows:
A) Low value add-processed - primal cuts (fresh/frozen)

[1] Carcasses and half-carcasses [ HS020311 (fresh/chilled) + HS020321 (frozen) ]
[2] Hams, shoulders and cuts thereof, with bone in [HS020312 (fresh/chilled) + 
   HS020322 (frozen) ]
[3] Other (Rib & Other) [HS020319 (fresh/chilled) + HS020329 (frozen)]

This sub-grouping will therefore consist of 3 “products” – which actually according to tariff codes 
represent 6 different HS codes.

B) Low value add-processed – offal and fats (fresh/frozen)

[4] Offal [ HS020630 (offal) + HS020641(livers) + HS020649 (other) ]
[5] Fats [HS020900 (fat)]

This sub-grouping will therefore consist of 2 “products” – which actually according to tariff codes 
represent 4 different HS codes.

C) Medium value add-processed – primal cuts (Salted, in brine, dried or smoked; edible flours and 
meals)

[6] Hams, shoulders and cuts thereof, with bone in [HS021011]
[7] Bellies (streaky) and cuts thereof (includes Bacon) [HS021012]
[8] Other [HS021019]

This sub-grouping will therefore consist of 3 “products” – which corresponds to individual tariff 
codes.

D) High value add-processed – further prepared

[9] *Sausages and similar products, of meat/meat offal/blood; food preps. based on these 
   prods. [HS160100]
[10] Other prepared or preserved meat including Hams and cuts thereof [HS160241] + 
    Shoulders and cuts thereof [ HS160242]
[11] Other, including mixtures (e.g. Cooked rib, frozen, not marinated etc.) [HS160249]

This sub-grouping will therefore consist of 3 “products” – which actually according to tariff codes 
represent 4 different HS codes.

* Sausages [HS160100] were identified as a further value-added product that needed to be added to 
the initial set of codes for opportunity analysis.

E) Further-Processed – Offal** related preparations

** All codes in this grouping were identified as a further value-added product that needed to be 
added to the initial set of codes for opportunity analysis.
[12] Guts, bladders and stomachs of animals (excluding fish), whole and pieces thereof, fresh, chilled, frozen, salted, in brine, dried or smoked: Including sausage casings [HS050400]

[13] Gelatin, incl. gelatin in rect. (incl. square) sheets, whether or not surface-worked /coloured & gelatin derivs.; isinglass; oth. glues of animal origin (excl. casein glues of 35.01) [HS160241]

This sub-grouping will therefore consist of 2 “products” – which corresponds to individual tariff codes.

**F) Semi-processed non-food – Skins***

*** All codes in this grouping were identified as a further value-added product that needed to be added to the initial set of codes for opportunity analysis.

[14] Raw hides & skins of swine (fresh/salted/dried/limed/pickled/othw. presvd. but not tanned/parchment-dressed/furth. prepd.) - In the wet state (including wet-blue) [HS410631]

+ Tanned/crust hides & skins of swine, without wool/hair on, in the wet state (incl. wet-blue) whether or not split but not furth. prepd. - In the dry state (crust) [HS410632]

This sub-grouping will therefore consist of 1 “product” – which actually according to tariff codes represents 2 different HS codes.

In total we initially identified 14 different pork and pork-related “product groups” (which through the preceding aggregation in total represents 22 HS tariff codes at the 6-digit level).

**3.4.2. Treatment of HS 0206.90**

In our proposal and during the meeting of 17 September 2018 it was indicated HS 0206.90 could also relate to Pork (or Swine) edible offal. However, a detailed analysis of the WCO original HS publication (HS Nomenclature 2017 edition, section 2 Meat and edible meat offal. 0102-2017E) shows that this code refers to edible offal excluding that of bovine animals and swine – meaning what remains i.e. sheep, goats, horses, asses, mules or hinnies etc.

This interpretation is further supported by investigation of interpretation thereof by the European Union, US Government as well as the UK Government’s tariff schedules and the ITC TradeMap interpretations.
Our finding is therefore that this product code should be excluded from international trade data analyses and for reporting imports and exports that specifically related to pork. More detail is provided in the appendix in section 9.1

3.4.3. Industry product “groupings” applied for this study

The final set of HS codes and industry “groupings” derived through the process are as follows:

Table 2: Pork related products definitions at HS6 digit detail grouped for study purposes

<table>
<thead>
<tr>
<th>Item No</th>
<th>Study Grouping</th>
<th>HS6</th>
<th>HS6 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Fresh Carcasses (Full / Half)</td>
<td>HS020311</td>
<td>Carcasses/half-carcasses of swine, fresh/chilled</td>
</tr>
<tr>
<td>02</td>
<td>Fresh Primal Cuts (Bone-in &amp; Boneless)</td>
<td>HS020312</td>
<td>Hams, shoulders &amp; cuts thereof , fresh/chilled, bone-in</td>
</tr>
<tr>
<td>03</td>
<td>Fresh Primal cuts - Ribs</td>
<td>HS020319</td>
<td>Meat of swine (excl. carcasses/half-carcasses/hams/shoulders &amp; cuts thereof ), fresh/chilled</td>
</tr>
<tr>
<td>04</td>
<td>Frozen Carcasses (Full / Half)</td>
<td>HS020321</td>
<td>Carcasses/half-carcasses of swine, frozen</td>
</tr>
<tr>
<td>05</td>
<td>Frozen Primal cuts (Bone-in &amp; Boneless)</td>
<td>HS020322</td>
<td>Hams, shoulders &amp; cuts thereof , frozen, bone-in</td>
</tr>
<tr>
<td>06</td>
<td>Frozen Primal cuts - Ribs</td>
<td>HS020329</td>
<td>Meat of swine (excl. carcasses/half-carcasses/hams/shoulders &amp; cuts thereof ), frozen</td>
</tr>
<tr>
<td>07</td>
<td>Edible Offal (Fresh, Frozen, Semi-processed)</td>
<td>HS020630</td>
<td>Edible offal of swine, fresh/chilled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS020641</td>
<td>Livers of swine, frozen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS020900</td>
<td>Pig fat (free of lean meat) &amp; poultry fat (not rendered/othw. extracted), fresh/chilled/frozen/salted/in brine/dried/smoked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS050400</td>
<td>Guts, bladders &amp; stomachs of animals (other than fish), whole &amp; pieces thereof , fresh/chilled/frozen/salted/in brine/dried/smoked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS020649</td>
<td>Edible offal of swine (excl. liver), frozen</td>
</tr>
<tr>
<td>08</td>
<td>Semi-processed Meats &amp; Bacons</td>
<td>HS021011</td>
<td>Hams, shoulders &amp; cuts thereof , of swine, salted/in brine/dried/smoked, bone-in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS021012</td>
<td>Bellies (streaky) &amp; cuts thereof , of swine, salted/in brine/dried/smoked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS021019</td>
<td>Meat of swine (excl. hams/shoulders &amp; cuts thereof &amp; bellies (streaky) &amp; cuts thereof ), salted/in brine/dried/smoked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS160241</td>
<td>Hams &amp; cuts thereof</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS160242</td>
<td>Shoulders of swine &amp; cuts thereof</td>
</tr>
<tr>
<td>09</td>
<td>Sausages and Food Preparations (incl. swine)</td>
<td>HS160100</td>
<td>Sausages &amp; sim. prods., of meat/meat offal/blood; food preps. based on these prods.</td>
</tr>
<tr>
<td>10</td>
<td>Homogenised (blended) preparations of swine</td>
<td>HS160249</td>
<td>Prepared/presvd. preps. of swine (excl. of 1602.41, 1602.42 &amp; homogenised preps.), incl. mixts.</td>
</tr>
<tr>
<td>11</td>
<td>Gelatine</td>
<td>HS350300</td>
<td>Gelatin, incl. gelatin in rect. (incl. square) sheets, whether or not surface-worked /coloured &amp; gelatin derivs.; isinglass; oth. glues of animal origin (excl. casein glues of 35.01)</td>
</tr>
<tr>
<td>12</td>
<td>Skins for leather industry</td>
<td>HS410631</td>
<td>Tanned/crust hides &amp; skins of swine, without wool/hair on, in the wet state (incl. wet-blue) whether or not split but not further prepared.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HS410632</td>
<td>Tanned/crust hides &amp; skins of swine, without wool/hair on, in the dry state (crust) whether or not split but not further prepared.</td>
</tr>
</tbody>
</table>
Evident is that in total for pork related products there were 21 HS 6-digit product codes identified to be relevant. The workgroup\(^{14}\) grouped these into 12 major “industry” reference groups to facilitate translation of HS codes to industry terminology for these products.

### 3.5. Geographic focus

For purposes of this study the workgroup requested that the analysis provides context from a regional perspective. These groupings are depicted in Figure 6. Within this broader grouping, the working group directed that the Americas (North and South America) as well as Oceania be ignored for purposes of informing the SAPPO export strategy inputs.

Figure 6: Geographic groupings for pork study

\(^{14}\) A special thanks to Dr Wantie Burger is applicable for his efforts in this regard.
4. Global production, imports and South Africa’s exports context for pork

While the TRADE-DSM methodology does not consider domestic nor target market production related information, we provide a brief discussion on these issues as part of this report based on feedback from the working group members – purely for context.

4.1. Global pork production

According to Szűcs and Vida (2017) the top 10 countries playing the largest roles in global pork meat production are presented in Figure 7. Evident (panel [A]) is that the share of these countries represents around 88% of global pork production. Within this group, China dominates (at 46%) and its contribution is larger than all EU countries and US production combined.

Figure 7: World pork meat production, trade, utilization (2015-2016) 1000 tonnes, carcass weight equivalent and top 10 producing countries


While the production output in both Japan and Mexico are negligible, it is interesting to note that these countries each alone produces nearly as much as the African continent in total.

It is important to also note that China’s pork production and consumption has a noticeable impact on the world’s production of pork and alone can influence other agricultural aspect such as for feed
crops, as nearly half of these will be required by China for their pig feeding. The other key player in international pork is the EU, as they are the second largest producer and supplier of exports.

**Figure 8: World pork meat production and exports (2017-2027) projections**

![Graph A: Pig meat: Production](image1)

![Graph B: Pig meat: Exports](image2)

Source: Global pork production & consumption outlook 2018-2027 [Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO)].

Evident from Figure 8 is that the OECD and FAO are projecting that the USA will be surpassing the EU in terms of export volumes in the next 10 years. Also observe that while China is the largest producer of pork, the country does not export a lot of its production in relative terms. However, in nominal terms this is still a large volume relative to e.g. South Africa (panel [B]).

**Figure 9: Human consumption of pork meat (2017-2027) projections**

![Graph A: Pig meat: Human consumption per capita](image3)

![Graph B: Pig meat: Human consumption per capita](image4)

Source: Global pork production & consumption outlook 2018-2027 [Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO)].

China and the EU are projected to continue to be the largest consumers of pork meat in per capita terms (in excess of 30 kilograms per person per year) over the next 10 years, followed by the USA and Brazil. South Africa is estimated to consume less than 5 kilograms per person per year.

However, of importance to South African exporters of pork meat and related products is the import demand of potential target markets. In this context OECD and FAO projections are that China’s imports will be declining, while that of the USA will be increasing over the next 20 years (Figure 10 panel [A]). The EU will see a sharper rise in imports of pork products while Brazil a decline. For
context, South Africa’s import demand is projected to be stable around 30 thousand tonnes over the period.

Figure 10: Imports of pork meat (2017-2027) projections

Source: Global pork production & consumption outlook 2018-2027 [Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO)].

4.2. South Africa’s export statistics context for pork

As explained in section 2.6 the TRADE-DSM approach makes use of consolidated global trade as opposed to only South African export data as reported by the South African Revenue Service’s (SARS) Department of International Trade Statistics. However, as many industry players monitor and are familiar with the SARS data, a short contextual summary of South Africa’s exports is provided in this section.

Note that the global import destination context provided is informed by the ITC TradeMap data (which also uses as base the UN COMTRADE data) but the picture is compiled from the perspective of all countries that report their imports of pork products – not only from South Africa.

We provide a brief contextual analysis in this section based on the South African Revenue Service’s (SARS) Department of International Trade Statistics reported statistics summarised according to the product groups as defined in section 3.4 previously. Note that the information and discussion of the data in Figure 12 is new and was added to the final report, but not discussed during the workshops.
Note that at the time of analysis of the data the annual data for 2018 only includes SARS reported data up to Q3 2018. We have updated this information with the latest (Q-1 2019) as reported by SARS. Evident from the data is that overall exports of pork products in value (ZAR) terms have slightly declined slightly between 2017 and 2018.

Part of the reason for this is the increased listeriosis occurrences (and traced to processed meat related products) experienced in the period from around March 2018 onwards. By Sept 2018 a product recall was issued within South Africa, while many export destinations banned related imports from South Africa. Around 15 export destinations were impacted\(^\text{15}\) (see appendix for more

details). These countries included Angola, Botswana, Democratic Republic of the Congo, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Uganda, Zambia, and Zimbabwe.

Notable (from Figure 12 panel B) is that the 3 largest gainers in terms share of export value from 2017 to 2018 are:

- 11_Gelatine (+4.87%);
- 10_Homogenised (blended) preparations of swine (+4.59%);
- 06_Frozen Primal cuts - Ribs (+2.33%);

and largest losers are:

- 09_Sausages and Food Preparations (including swine) (-10.77%);
- 08_Semi-processed Meats & Bacons (-1.39%);
- 03_Fresh Primal cuts - Ribs (-1.38%).

In terms of major destinations we observe that Zimbabwe in recent years have become a high-value export destination overtaking Mozambique. However, Mozambique has been a more consistent market for pork exports over a longer period. Similarly, Lesotho was also a more consistent market for pork exports over a longer period. Namibia has emerged as another important export market.

Figure 13: South Africa’s export context for pork – major destination markets

Source: Calculated from SARS Department of International Trade Statistics.

Countries such as Viet Nam, China and Zambia in recent years have also featured, albeit small in relative terms.
4.3. Recent global import trends for pork

From a global pork import demand perspective Figure 14 provides a view of global imports in US$ value terms from 2010 to 2017 (panel [A]) and product shares of global imports in 2017 (panel [B]). In principle, data on either world exports or world imports could be used to analyse global trade patterns. The two differ in practice due to various reasons (on of which e.g. is reporting of data at Free on Board (FOB) values typically for exports and Cost Insurance and Freight (CIF) for imports). However, import data are generally regarded as more reliable at the country level due to import tariff collection than exports, therefore we prefer to use import data (also see WITS (2010)).

Figure 14: Global imports context for pork

![Graph showing global imports context for pork](source: Calculated from ITC TradeMap)

Evident is that global imports have declined around 2015 but increased again towards 2017. This is a global phenomenon observed in total global trade – not only that of pork products (see UNCTAD 2016. No single explanation accounts for the entire slowdown in world trade over this period. The decline can be attributed to a combination of factors including e.g. structural factors (such as a deceleration in the speed of trade openness, slowing of supply chain fragmentation, structural changes in China’s trade), as well as cyclical factors (e.g. the weakness in the trade-oriented components of aggregate demand) are all likely contributors (Lewis and Monarch, 2016). However, in more recent data global trade seems to be slowly increasing again. In terms of the relative share of the various product groups (from Figure 14 panel [B]) it is that the 3 largest gainers in terms share of export value over the preceding 5 years (2013 versus 2017) are:

- 06_Frozen Primal cuts - Ribs (+1.9%);
- 07_Edible Offal (Fresh, Frozen, Semi-processed) (+1.7%);
- 05_Frozen Primal cuts (Bone-in & Boneless) (+0.7%);
and largest losers are:

- 01_Fresh Carcasses (Full / Half) (-1.1%);
- 03_Fresh Primal cuts - Ribs (-0.9%);
- 08_Semi-processed Meats & Bacons (-0.7%)

4.4. Summary contextual trade observations

Globally China, Europe and the USA are key players from both a production as well as supply perspective. Further evident is that for both South African exports and global imports, 06_Frozen Primal cuts – Ribs have experienced an increase in relative share of total exports (South Africa) and imports (global). While globally the import share of 03_Fresh Primal cuts - Ribs and for South African the export share has declined. The same holds true for 08_Semi-processed Meats & Bacons. In terms of South African exports the product group with the largest increase in share (11_Gelatine) have shown a slight decrease in global import share.

In relative terms South Africa is a small player in the supply of international pork, while it is projected that markets like Europe will require more pork related imports into the future. This presents an opportunity for local pork producers to develop their own supply context strategically in specialised markets in some of these regions.

For this purpose, in the next section we therefore employ the use of the TRADE-DSM methodology to provide context and inputs for purposes of developing more understanding of potential realistic export opportunities in such markets, for product groupings and geographies as informed by the work group guidance.
5. DSM filtering process - practical illustration for pork examples

With reference to the method as explained in summarised fashion in section 2, the following examples serves to demonstrate how the method informs the outcomes.

Figure 15: Global imports and South Africa export context – unfiltered ‘untapped’ demand for pork

Before any filtering is applied there are 209 markets that do show import demand for the group of 21 pork products (HS6 digit level as per product definitions in section 3.4). Overall the global import demand fluctuated around 50 billion US dollars over the period (2012 to 2016).

South Africa’s overall exports of the aggregate group of products is shown to be around 150 million US dollars, while imports fluctuated around 100 to around 140 million over the same period.

In terms of ‘untapped’ potential (the calculation of which is explained in section 2.5), evident from the geographic representation in Figure 15 (green bubbles) that target markets with considerable ‘untapped’ demand are observed in the east (Japan, China, Hong Kong and South Korea). North America also exhibit relative large markets in terms of Mexico, USA and Canada. In Europe Germany, the United Kingdom, France, Italy, Czech Republic as well as Russia exhibits noticeable demand pools.
In Africa and Latin America the relative size of potential ‘untapped’ demand is small compared to the regions such as East Asia, Europe and North America.

The above outcomes are however ‘unfiltered’ in terms of the TRADE-DSM approach to help screen and identify priority focus countries from the more than 200 possible target markets.

The following examples illustrate how the methodology influences outcomes, after which the identified realistic export opportunities are discussed in the next section.

5.1. Overall filtering impact demonstrated

By applying the DSM approach to the set of outcomes described in the previous section, that consisted of 209 possible markets, combined with 21 HS Codes, resulting in 3 607 combinations (based on data available), we can filter the results to focus on market x product combinations that meet the methodological requirements as described in section 2. We demonstrate the effect of the various step-wise filters (or hurdles than an opportunity needs to pass) in Figure 16.

Figure 16: TRADE-DSM filtering impact demonstrated

Evident is that when filter 1 is applied (that considers economic size, growth and wealth projections) the number of markets are reduced from 209 to 138. These still yield 2 455 combinations of potential market x production options to investigate.
To further reduce the set of results that need further investigation, we apply filter 2 which considers the import demand characteristics of each of the import markets for each of the individual product codes. We apply a further more stringent hurdle in that we are only interested in import demand patterns that are on a time-weighted basis positive in absolute terms over the period. This yields a sub-set of outcomes of only 734 markets x product combinations.

In the next step we consider market concentration and access to these markets as further dimensions. What remains is a set of 76 markets for the 21 products, for which the overall set of opportunities are described by 260 combinations of individual markets and products for each of these markets. Note that not all markets will be an opportunity for all products; otherwise this result set would have been 76 x 21 = 1 596 combinations. The outcomes are presented in geographic format in Figure 17.

Figure 17: Global imports and South Africa export context – filtered ‘untapped’ demand for pork

Evident is that the aggregate imports for the 260 realistic export opportunities (76 markets and 21 products – various combinations) exhibits a positive growth pattern (and an associated ‘untapped’ potential of around 1.15 billion US dollars), while South African exports of these products to these markets also demonstrated a strong positive trend, but at only around 15 million US dollars as opposed to global imports of close to 10 billion US dollars. However, the results are dominated by
China as observed in terms of the relative size of the bubbles in the chart. To understand and unpack the detail better, we exclude China in the next view presented in Figure 18.

**Figure 18: Global imports and South Africa export context – DSM filtered ‘untapped’ demand for pork**

When China is excluded the relative distribution of realistic export opportunities is more visible on a geographic basis. Note however that the overall ‘untapped’ potential has declined by nearly 50 percent from 1.15 billion US dollars to around 620 million US dollars. China has 7 products associated with it and the number of combinations therefore reduces to 253 (as opposed to 260). One of these product opportunities is associated only with China, since the total number of products reduces to 20 (from 21). On closer inspection we find that the product in question is **HS410631 - Tanned/crust hides & skins of swine, without wool/hair on, in the wet state (incl. wet-blue) whether or not split but not further prepared.**

If we exclude all other regions with the exception of Africa, Figure 19 shows the outcome for the continent. Noticeable is that Ghana exhibits the largest ‘untapped’ potential within the group of 15 African countries.
Figure 19: Africa imports and South Africa export context – DSM filtered ‘untapped’ demand for pork

Source: Author, TRADE-DSM V8.8

5.2. Filtering impact demonstrated at country level

To illustrate this at a more granular level (for a country) we use the example of Thailand.

Figure 20: TRADE-DSM filtering impact demonstrated – Thailand example

Source: Author, TRADE-DSM V8.8
As illustrated in Figure 20 Thailand passed filter 1, but only 11 of the 21 products pass filter 2 for Thailand. When considering how concentrated (in terms of supplying partner countries from where Thailand sources these products) Thailand’s outcome for Filter 3.1 is that only 6 products are not too concentrated in relative terms from a supply perspective. When considering relative costs, logistics and tariffs for these products from South African into Thailand, these 6 products do not pass the threshold. Hence no opportunities are therefore associated with Thailand for the group of 21 products. However, this does not mean Thailand is not an opportunity – just that relative to the other 76 markets Thailand, for these specific products, is relatively more expensive to trade with – and if choice has to be made, it may be better to spend time and effort on focusing on alternative markets within the 76 markets identified that did have products that passed all the filters, as they are deemed to be relatively easier and less costly to access.

Figure 21: TRADE-DSM filtering impact demonstrated – further country examples

Countries which the work group were also considering included Nigeria, Angola and Russia. We provide a brief analysis of how these countries fared for the 21 products based on the methodology.

In the first step, all 3 these countries were eliminated due to the IMF growth projections for these economies not being relatively positive. If we were to relax this requirement Russia only has 1 product (Gelatin) passing all the filters, while Angola only has 2 products that remain after filter 2 (Gelatin & Livers); and then both these products don’t pass concentration filter (most imports from
the Netherlands and Portugal). In the case of Nigeria after filter 2 only 9 products remain, but none after accessibility filter (Filter 3.2). So for these 3 markets x 21 product combinations none would have passed even if we relaxed the first filter, with the exception of gelatine for Russia.

In order to be economical with both time and space in this report, this explanatory process is not repeated for each of the regions and individual possible country x product combinations. Rather, just the summarised outcomes are discussed in the next section.

5.3. Consideration of size of ‘untapped’ potential

Due to the fact that South Africa, with the exception of HS050400 - Guts, bladders & stomachs of animals (other than fish), whole & pieces thereof, fresh/chilled/frozen/salted/in brine/dried/smoked), can be viewed as “immature” in terms of exports of pork products when evaluated relative to the world norm (in terms of revealed comparative advantage (RCA) – see section 2.1.) consideration needs to be given to the relative size of potential market opportunities. The reason for this is that South Africa currently has relatively limited capacity for production of pork products at volume for exports to larger markets that may typically purchase larger volumes.

The approach applied to cater for this dimension of the export strategy development inputs are briefly explained below.

Figure 22: Distribution of size (in value terms) of South Africa’s export by partner country vs. ‘untapped’ potential

Source: Calculated from ITC TradeMap.
By investigating South Africa’s actual export values on an annual basis to various partner countries (aggregated over set of individual HS products) we find that around 68.0 percent of countries have total imports from South Africa of between 0 and 250 US dollars (we call this “micro”); 2.7 percent greater than 250 and less than 2,500 US dollars (we call this “small”) and for 29.3% more annual imports are valued at more than 2,500 US dollars (which we therefore call “small”). In this data set the largest reported export market from South Africa is Zambia (at 2.4 million US dollars) and the smallest sustained importer is Madagascar (at 11,000 US dollars per annum).

When arranging the identified opportunities in a similar analysis we find that relative “small” opportunities account for 52% of opportunities (market x sum of products combination) of “untapped” potential have a value of 700,000 thousand US dollars or less (which is more than 280 times the size of “small” partner transactions for South Africa). “Medium” opportunities of more than 700,000 US dollars and less than 7 million US dollars accounts for the next 21% of opportunities and “Large” opportunities of more than 7 million US dollars the last 27%.

At a lower level of detail, when analysing the South African actual exports and ‘untapped’ potential aggregated by industry product group and country (as opposed to only destination country) a similar pattern is observed as is evident in Figure 23.

Figure 23: Distribution of size (in value terms) of South Africa’s export by partner country and product vs. ‘untapped’ potential

In terms of South Africa’s actual reported exports for these opportunities 74.6 percent of country and product combinations have exports values between 0 and 250 US dollars (so “micro”), 3.3 percent have between 250 US dollars and 2,500 US dollars while 22.0 percent have more than 2,500
US dollars reported. The largest reported export product x market from South Africa is Zambia (with 2.0 million US dollars represented by the industry product grouping of 07-Edible Offal (Fresh, Frozen, Semi-processed)). The smallest sustained reported is Ghana at 2,800 US dollars for the industry product grouping of 08-Semi-processed Meats & Bacons.

In terms of identified opportunities, relative “small” opportunities constitute 43.5 percent of opportunities (market x individual product combinations) with “untapped” potential values of 250,000 US dollars or less. “Medium” opportunities accounts for the next 29.2 percent with more than 250,000 US dollars and less than 2.5 million US dollars. Finally, “large” opportunities accounts for the remaining 27.3 percent and more than 2.5 million US dollars.

So while the distribution “pattern” looks similar (bathtub type distribution) the magnitude of ‘untapped’ potential versus actual exports are at significantly different levels. For each group of countries the outcomes are therefore ranked and segmented into “small”, “medium” and “large” opportunities (following the bathtub pattern). The observed pattern of distribution of outcomes, linked with the relatively “immature” export status and supply side (production) capacity limitation in the shorter term, the workgroup opted to focus more on “smaller” and “medium” markets for initial phase of strategy in order to maximise chances of success not being threatened by potential large orders not being fulfilled.

Sustainable exports need a trust relationship between suppliers (exporters) and customers (importers) and in this context it is strategically more important to build longer term supply relationships by rather starting small, than aiming for ad-hoc / once off larger deals that cannot be serviced on a sustainable basis.
5.4. Regional summary of realistic export opportunities obtained

The overall outcomes for the 76 markets x 21 products are summarised and presented in Figure 24.

**Figure 24: Summary by region of outcomes for 76 markets**

![Image of the figure showing summary by region of outcomes for 76 markets](image)

### Focus Regions

| Region / Product Group | Count | **| **| **| **| **| **| **| **| **| **| **|
|------------------------|-------|---|---|---|---|---|---|---|---|---|---|
| **Africa**             |       |   |   |   |   |   |   |   |   |   |   |
| 01 Fresh Carcasses (Full or Half) | 0.01 | 0.02 | 0.06 | 0.03 | 0.13 | 2.53 | 0.34 | 0.16 | 0.24 | 0.79 | 4.30 |
| **Total**              |       |   |   |   |   |   |   |   |   |   | 10 |
| **Americas**           |       |   |   |   |   |   |   |   |   |   |   |
| 02 Fresh primal cuts (Bone-in & Boneless) | - | - | - | 84.69 | 0.71 | 4.16 | 10.59 | 8.60 | 9.07 | 117.82 | 6 |
| 03 Frozen primal cuts - ribs | - | - | - | 0.57 | 0.72 | 1.21 | 0.47 | 0.05 | 0.27 | - | 3.65 |
| **Total**              |       |   |   |   |   |   |   |   |   |   | 9 |
| **Central & Western Asia** |       |   |   |   |   |   |   |   |   |   |   |
| 04 Frozen Carcasses (Full or Half) | 0.27 | 0.01 | 0.08 | - | 1.86 | 73.33 | 242.84 | 270.87 | 1.00 | 0.24 | - |
| 05 Frozen primal cuts - ribs | - | 0.02 | - | - | - | - | - | - | - | - | 10.76 |
| **Total**              |       |   |   |   |   |   |   |   |   |   | 9 |
| **East, South & South-East Asia** |       |   |   |   |   |   |   |   |   |   |   |
| 06 Edible Offal (Fresh, Frozen, Semi-processed) | 10.79 | 21.10 | 160.40 | 0.84 | 0.40 | 11.81 | 14.16 | 39.90 | 93.84 | 36.47 | 22.99 | 0.02 | 412.72 |
| **Total**              |       | 11.06 | 21.13 | 161.00 | 2.78 | 73.76 | 340.16 | 289.74 | 50.73 | 105.30 | 45.36 | 43.90 | 4.47 | 149.39 |
| **Europe**             |       |   |   |   |   |   |   |   |   |   |   |
| 07 Edible Offal (Fresh, Frozen, Semi-processed) | 10.79 | 21.10 | 160.40 | 0.84 | 0.40 | 11.81 | 14.16 | 39.90 | 93.84 | 36.47 | 22.99 | 0.02 | 412.72 |
| **Total**              |       | 11.06 | 21.13 | 161.00 | 2.78 | 73.76 | 340.16 | 289.74 | 50.73 | 105.30 | 45.36 | 43.90 | 4.47 | 149.39 |
| **Oceania**            |       |   |   |   |   |   |   |   |   |   |   |
| 08 Semi-processed Meats & Bacons; and | - | - | 0.53 | - | 0.12 | 0.75 | 4.12 | - | - | 0.01 | - | 5.54 |
| **Total**              |       | 11.06 | 21.13 | 161.00 | 2.78 | 73.76 | 340.16 | 289.74 | 50.73 | 105.30 | 45.36 | 43.90 | 4.47 | 149.39 |

*Values based on 5-year time-weighted calculation (both imports and potential) **Potential based on 5-year time-weighted average of top 6 importing partners (excluding ZA)

Source: Author, TRADE-DSM V8.8

Evident from the summary is that Europe has most diversity from industry product group perspective (with all 12 groupings represented), followed by Africa (with 10) and Central and West-Asia (with 9) as well as East, South and South-East Asia (also with 9).

The product groups with aggregated most opportunities are:

- 06_Frozen Primal cuts – Ribs;
- 07_Edible Offal (Fresh, Frozen, Semi-processed);
- 08_Semi-processed Meats & Bacons; and
- 11_Gelatine.

These industry product groups appear in all 6 of the focus regions.

While this set of results is summarised for all regions, the next section will focus on specific regional groupings as informed by the working group directions as explained in section 3.5, i.e. for Africa, Central and Western Asia, East, South and South-East Asia and Europe only.
6. Results obtained

The working group deliberated based on the detailed outcomes as discussed in the preceding section. Based on this process the following final selections in terms of geography, markets and size have been recommended by the group.

6.1. Overview by pork industry product groups

This section provides a view similar to that for the potential target markets (as presented in the preceding section). However, the view in this section is informed from an industry product grouping perspective as opposed to a country perspective. This provides stakeholders with more insight in terms of the specific group of products for which selected markets exhibit a potential.

Evident from the summarised overview in Figure 25 is that overall pork ribs (both Frozen [06] and Fresh [03]) as well as edible offal (07) exhibit largest overall potential across the 76 markets.

Figure 25: Outcomes by industry product group

* Values based on 5-year time-weighted calculation (both imports and potential)
** Potential based on 5-year time-weighted average of top 6 importing partners (excluding ZA)
6.1.1.01-Fresh Carcasses (Full / Half)

In terms of this product group the Netherland, Sweden and Cyprus exhibit the largest ‘untapped’ potential. While Botswana and Mozambique also feature in the outcomes, South Africa already is the dominant supplier for these two markets.

Figure 26: Fresh Carcasses (Full / Half) – outcomes by country

Source: Author, TRADE-DSM V8.8

6.1.2.02-Fresh Primal Cuts (Bone-in & Boneless)

For this product group, countries like Greece, Slovenia and Slovakia exhibit the largest ‘untapped’ potential. While the DRC and Mozambique also feature in the outcomes, South Africa already is the dominant supplier for these two markets.

Figure 27: Fresh Primal Cuts (Bone-in & Boneless) – outcomes by country

Source: Author, TRADE-DSM V8.8
6.1.3.03-Fresh Primal cuts - Ribs

For this product group, countries like Greece, Slovenia and Ireland exhibit the largest ‘untapped’ potential. While countries like Mozambique, Zambia and Malawi also feature in the outcomes, South Africa already is the dominant supplier for these markets.

Figure 28: Fresh Primal cuts - Ribs – outcomes by country

![Graph showing Fresh Primal cuts - Ribs outcomes by country.]

* Values based on 5-year time-weighted calculation (both imports and potential)
** Potential based on 5-year time-weighted average of top 5 importing partners (excluding ZA)

Source: Author, TRADE-DSM V8.8

6.1.4.04-Frozen Carcasses (Full / Half)

For this product group, countries like China, the Netherlands and the Czech Republic exhibit the largest ‘untapped’ potential. While Botswana also features in the outcomes, South Africa already is the dominant supplier for this market.

Figure 29: Frozen Carcasses (Full / Half) – outcomes by country

![Graph showing Frozen Carcasses (Full / Half) outcomes by country.]

* Values based on 5-year time-weighted calculation (both imports and potential)
** Potential based on 5-year time-weighted average of top 5 importing partners (excluding ZA)

Source: Author, TRADE-DSM V8.8
6.1.5.05-Frozen Primal cuts (Bone-in & Boneless)

For this product group, countries like China and Hong Kong exhibit the largest ‘untapped’ potential. Due to the relative size of China countries like Croatia and Malta seem very small, but also present opportunities. While Mozambique also features in the outcomes, South Africa already is the dominant supplier for this market.

Figure 30: Frozen Primal cuts (Bone-in & Boneless) – outcomes by country

Source: Author, TRADE-DSM V8.8

6.1.6.06-Frozen Primal cuts – Ribs

For this product group, countries like China and the USA and Taiwan exhibit the largest ‘untapped’ potential. While Mozambique also features in the outcomes, South Africa already is the dominant supplier for this market.

Figure 31: Frozen Primal cuts – Ribs – outcomes by country

Source: Author, TRADE-DSM V8.8
6.1.7.07-Edible Offal (Fresh, Frozen, Semi-processed)

For this product group, China clearly dominates. Other markets demonstrating ‘untapped’ opportunities include Vietnam, the Philippines, Romania, the Ukraine and Ghana. While Zambia, Zimbabwe, Uganda and Botswana also feature in the outcomes, South Africa already is the dominant supplier for these markets.

Figure 32: Edible Offal (Fresh, Frozen, Semi-processed) – outcomes by country

Source: Author, TRADE-DSM V8.8
6.1.8.08-Semi-processed Meats & Bacons

For this product group, Spain clearly dominates. Other markets demonstrating ‘untapped’ opportunities include Sweden, Slovakia, Hungary, Australia and Croatia. While Botswana and Zambia also feature in the outcomes, South Africa already is the dominant supplier for these markets.

Figure 33: Semi-processed Meats & Bacons – outcomes by country

Source: Author, TRADE-DSM V8.8
6.1.9. 09-Sausages and Food Preparations

For this product group, markets demonstrating ‘untapped’ opportunities include the Netherlands, Slovakia, Hungary, Sweden and Austria. While Botswana also features in the outcomes, South Africa already is the dominant supplier for this market.

Figure 34: Sausages and Food Preparations – outcomes by country

For this product group, markets demonstrating ‘untapped’ opportunities include the Netherlands, Slovakia, Hungary, Sweden and Austria. While Botswana also features in the outcomes, South Africa already is the dominant supplier for this market.

6.1.10. 10-Homogenised (blended) preparations of swine

For this product group, markets demonstrating ‘untapped’ opportunities include the Netherlands, Ireland, USA, Austria and the Czech Republic. While Botswana also features in the outcomes, South Africa already is the dominant supplier for this market.

Figure 35: Homogenised (blended) preparations of swine – outcomes by country

Source: Author, TRADE-DSM V8.8
6.1.11. **11-Gelatine**

For this product group, markets demonstrating ‘untapped’ opportunities include the Netherlands, Mexico, Spain, Indonesia and Romania. While Zimbabwe also features in the outcomes, South Africa already is the dominant supplier for this market.

**Figure 36: Gelatine – outcomes by country**

![Gelatine outcomes by country](source)

*Source: Author, TRADE-DSM V8.8*

6.1.12. **12_Skins for leather industry**

For this product group, only two markets demonstrate ‘untapped’ opportunities. These markets are China and Greece.

**Figure 37: Skins for leather industry – outcomes by country**

![Skins for leather industry outcomes by country](source)

*Source: Author, TRADE-DSM V8.8*
6.2. Overview by geographic regions

In terms of the recommendations regarding geographic regions only 4 regions should receive focus in the short to medium terms. These regions are indicated in Figure 38.

Figure 38: Recommended focus geographies

Source: Author, TRADE-DSM V8.8

When China is excluded from the East, South and South-East Asia region, Europe as a group presents the largest ‘untapped’ opportunity (and 24 markets), followed by the East, South and South-East Asia region (14 markets excluding China), then Africa (18 markets) and lastly Central and Western Asia with 7 markets.

More detail on each of the geographic regions is provided next. The three categorisations (as explained in section 5.3) are shown for each geographic area to help inform selection of focus markets.
6.2.1. Europe

Evident from Figure 38 is that the larger markets in Europe include those of the Netherlands, Hungary, Slovakia, Greece, Ireland, Romania etc. Countries that exhibit ‘untapped’ potential in the “mid-range” include Montenegro, Slovenia, Czech Republic, Latvia, Poland and the Ukraine. Finally “small” markets include Belarus, Albania, Estonia, Malta, Serbia and Bosnia & Herzegovina.

**Figure 39: Europe - recommended focus countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Actual Imports</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>359.43</td>
<td>55.80</td>
</tr>
<tr>
<td>Hungary</td>
<td>360.29</td>
<td>54.68</td>
</tr>
<tr>
<td>Slovakia</td>
<td>272.42</td>
<td>43.87</td>
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<td>Greece</td>
<td>226.63</td>
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<td>Ireland</td>
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<td>20.87</td>
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<td>19.35</td>
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<tr>
<td>Austria</td>
<td>123.12</td>
<td>19.10</td>
</tr>
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<td>Bulgaria</td>
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<tr>
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<td>Estonia</td>
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<td>Malta</td>
<td>1.71</td>
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</tr>
<tr>
<td>Serbia</td>
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<td>0.27</td>
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<tr>
<td>Bosnia &amp; Herzegovina</td>
<td>1.11</td>
<td>0.15</td>
</tr>
</tbody>
</table>

* Values based on 5-year time-weighted calculation (both imports and potential)  
** Potential based on 5-year time-weighted average of top 6 importing partners (excluding ZA)

Source: Author, TRADE-DSM V8.8

Based on the workgroup recommendations the primary focus of efforts should be to develop export markets associated with the “medium” group of countries, while a secondary focus should be placed on the “small” countries. Note that Montenegro and the Ukraine do not form part of the EU.
6.2.2. East, South and South-East Asia

Within the region, China represents 4 billion US dollar total imports (representing 89 percent of the region’s exports over the period of analysis), and 528.5 million US dollars of ‘untapped’ potential (around 87 percent of the region). China is excluded from the chart due to the relative size difference. The next largest countries are Taiwan, Hong Kong, Malaysia, Philippines and Indonesia. The smaller markets include Sri Lanka, Cambodia, and Myanmar etc.

Figure 40: East, South and South-East Asia - recommended focus countries

According to the working group there are ongoing activities focused on Singapore. The recommendation is that new focus markets should include Indonesia, Philippines, India and Vietnam. While Vietnam is a “large” market, the country is included due to emerging relationships (also evident in exports from South Africa as reported by SARS in section 4.2). While India was excluded based on the DSM methodology due to high protection barriers (from some of the pork products tariffs range from 30 percent to 100 percent), the working group recommended that this country be included as a result of ongoing efforts and discussions.
6.2.3. Africa

Within the African region there are no “large” potential markets in relative terms compared to other regions in the world. Ghana exhibits the single largest opportunity on the continent (within the “medium” sized range). Smaller markets include Morocco, Mauritius, Seychelles, Mozambique, Zambia etc.

The work group indicated that South Africa has ongoing focus in terms of engaging and exporting to most sub-Saharan markets. The recommendation was to include focus on Ghana as well based on this analysis. Note that Namibia is not included in the result set based on the fact that South Africa is already the dominant supplier into the market (around 98 percent of import demand is provided by South Africa). Hence the country is not included in the list contained in Figure 41.

Figure 41: Africa - recommended focus countries

In the current evaluation Zimbabwe was excluded from the list based on challenges in terms of the country’s ability to pay for imports.
6.2.4. Central and Western-Asia

Similar to the African context, the Central and Western Asia grouping (this includes the “middle East”) has no “large” markets from a relative ‘untapped’ potential perspective. The United Arab Emirates exhibits some “medium” sized potential, while other markets more “smaller” potential. These markets include Bahrain, Turkmenistan, Cyprus, Georgia, Kazakhstan and Jordan.

It must be noted that most of these markets has Muslim as a dominant religion and hence pork related products are treated as “Haram” – or unfit for consumption by persons practicing the Muslim religion. There are however pockets of non-Muslim markets such as for expats and tourism in hotels and airlines. However, the working group recommended that this region be excluded from current export strategy development efforts due to the limited markets and religious context of pork products for such markets, as the relative returns from a national (South African) resources investment to develop this region is set to be limited in the medium to longer term. This does however not mean that an individual company may not pursue such opportunities with their own efforts and resources.

Figure 42: Central and Western-Asia - recommended focus countries

Source: Author, TRADE-DSM V8.8
6.3. South African companies’ presence

From an export expansion and diversification strategy perspective for South African pork related products, it makes sense to consider in which markets other South African companies already has a presence – especially those related to food and tourism. Furthermore other activities also point to markets where South African’s are active and where the market knows South African companies – and subsequently it may be easier to build networks and link up with contacts in such markets.

Figure 43: South African companies’ presence - food retailers and Hotels

Source: Author, TRADE-DSM V8.8

Figure 44: South African company’s presence - non-food related

Source: Author, TRADE-DSM V8.8

For this purpose we also compiled a list of South African companies and where they report to have operational presence in global markets (see Figure 43 and Figure 44). This information is also overlaid with the outcomes from the DSM approach to help the working group to prioritise focus markets.
6.4. Product and markets combined

The following section provides the outcomes and final selections of the work group based on the combination of product x country as well as South African companies’ presence and grouped within regional focus areas. Note that the Central and Western-Asia region has been excluded from further analysis as explained in section 6.2.4.

6.4.1. Europe

Within the group of countries in Europe that exhibits ‘untapped’ potential from variety of products perspective the main countries would include the Netherlands, Hungary, Slovakia, Greece, Ireland, Romania, Croatia, Lithuania and Montenegro.

Figure 45: Europe – country, product and presence

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Source: Author, TRADE-DSM V8.8

However, when considering the relative size of ‘untapped’ potential and South African exporters’ export supply capacity, the work group opted to place primary focus on Lithuania, Bulgaria, Montenegro, Slovenia, Czech Republic, Latvia and the Ukraine. Within this group no explicit South African company presence were detected. Lithuania and Montenegro has the most diverse set of opportunities in terms of industry product groupings.

A secondary focus would be countries such as Belarus, Albania, Estonia, Malta, Serbia and Bosnia and Herzegovina.
6.4.2. East, South and South-East Asia

South Africa does not feature as supplier for these countries except for Vietnam (emerging), Hong Kong and China (but very small). While China dominates overall ‘untapped’ potential and has some South African company presence, the working group recommended focus on other markets in the region, as trade with China is being facilitated at various other levels already. Hong Kong is also an existing trading partner requiring little further export development and facilitation focus.

New markets to be targeted in this region include Malaysia, Philippines and Singapore. Within this “new” group Malaysia exhibits the most diverse set of industry product groups (4) from an opportunity perspective. For Malaysia the largest of these seems to be 07-Edible Offal (Fresh, Frozen, Semi-processed).

Figure 46: East, South and South-East Asia – country, product and presence

### Figure 46: East, South and South-East Asia – country, product and presence

<table>
<thead>
<tr>
<th>Country</th>
<th>07-Edible Offal (Fresh, Frozen, Semi-processed)</th>
<th>21-Fresh Carcasses (FHL/FAH)</th>
<th>22-Fresh primal cuts (Bone-in &amp; Boneless)</th>
<th>23-Frozen Carcasses (FHL/FAH)</th>
<th>24-Frozen primal cuts (Bone-in &amp; Boneless)</th>
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* Values based on 5-year time-weighted calculation (both imports and potential)
** Potential based on 5-year time-weighted average of top 6 importing partners (excluding ZA)

Source: Author, TRADE-DSM V8.8
6.4.3. Africa

While the group of potential target markets in Africa has the most representation of South African companies’ presence, the overall potential associated with these markets is the smallest in relative terms. While potential markets such as Morocco and Tunisia featured on the list, the working group was of the opinion that these markets were too far from South Africa and with limited networks competition from European suppliers will be stiff. It is worth noting that Tunisia as a priority partner for South Africa as per the dti’s diversification strategy.

However, similar to the arguments regarding Central and Western-Asia related to Muslim religion, both Morocco and Tunisia are predominantly Muslim countries and the work group therefore discarded these markets as part of the current initiative.

Zimbabwe was excluded in the short to medium term due to political instability and the sovereign’s ability to pay for imports. For the rest of these markets (with the exception of Ghana) South Africa is an existing supplier or pork related products and in some cases the dominant supplier. These markets will therefore be classified for “ongoing” relationship development.

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Figure 47: Africa – country, product and presence

Source: Author, TRADE-DSM V8.8

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7. Summary outcomes and recommendations

The project approach, methodology and approach applied and filtering steps were discussed in the preceding sections of this report. This section provides a summary of the outcomes of this process for reference purposes in terms of the development of a pork product export strategy and is based on the final presentation and recommendations as communicated during the Pork Export Working Group Meeting presentation session (DAFF, Delphen House, Pretoria, South Africa) on 5 Feb 2019.

7.1. Final focus areas

Through the process of this study and various engagements, the final outcome is that 3 broad geographic regional focus areas were identified on which to focus and deploy national resources to develop these areas for the purposes of furthering the interests of South African pork producers. These areas can be summarised as South-East Asia, Eastern Europe and Sub-Saharan Africa.

Figure 48: Final regional focus areas

Source: Author, TRADE-DSM V8.8

Furthermore, the work group recommended that the target market priorities consider the industry’s current relatively “small” export orientated production capacity. Hence initial focus should rather be on “small to medium” sized potential markets - to ensure sustainability of initial order fulfilment and building of long-term commercial relationships.

A summary for each of the geographic focus areas are presented in the following sections.
7.1.1. South-East Asia

In terms of focus markets with the South-East Asia region therefore includes 3 "new" countries and 2 "ongoing" countries.

Figure 49: South-East Asia – summary of selected focus countries

Source: Author, TRADE-DSM V8.8

The focus countries with applicable tariff ranges (*ad valorem* equivalent) for relevant HS product lines indicated are:

- Vietnam (3 – 15%)
- Philippines (0 – 5%)
- India* (30 – 100%)
- Indonesia (5%)
- Singapore (0%)

According to the work group current efforts associated with Thailand is ongoing as well. Based on the DSM methodology Thailand is not in group due to high tariffs (30 – 40%) combined with relatively expensive logistics from South Africa to Thailand.

Furthermore India was not in the initial outcomes for this group and was added based on the work group request.

17 The working group raised a question on the status of formal engagements between DAFF and Thailand with reference to the Feb 2018 letter? This report is not suitable for tracking responses and developments around these types of issues and hence the communications around this topic is excluded from the scope of this report.
7.1.2. Eastern Europe

For the European region, the final outcomes are all focused within the Eastern European geography. There are 7 primary focus countries which are all “new” focus markets from a national strategy perspective.

Figure 50: Eastern Europe – summary of selected focus countries

![Map of Eastern Europe focusing on selected countries]

Source: Author, TRADE-DSM V8.8

The focus countries with applicable tariff ranges (ad valorem equivalent) for relevant HS product lines indicated are:

- Lithuania (0%)
- Bulgaria (0%)
- Montenegro (0-7%)
- Slovenia (0%)
- Czech Republic (0%)
- Latvia (0%)
- Ukraine (5-12%)

According to the work group there are no current active efforts with these target markets. The workgroup further recommended that a “secondary” focus be placed on other countries in the same geography. These include Belarus, Albania, Estonia, Malta, Serbia and Bosnia and Herzegovina.
7.1.3. Sub-Saharan Africa

Similar than for the European region case, in Africa the final outcomes are all also focused within a sub-geography, in this case sub-Saharan Africa. In total there are 15 countries, of which 1 is a “new” primary focus country that the work group recommended to be added as a result of the process, while for the rest of the 14 markets all are “ongoing” in terms of current trade and focus markets from a national strategy perspective.

Figure 51: Sub-Saharan Africa – summary of selected focus countries

The focus countries with applicable tariff ranges (ad valorem equivalent) for relevant HS product lines indicated are:

- Botswana (0%)
- Democratic Republic of the Congo (DRC) (10%)
- Ghana (0-20%)
- Guinea-Bissau (5%)
- Kenya (25%)
- Madagascar (0%)
- Malawi (0%)
- Mauritius (0%)
- Mozambique (0%)
- *Namibia (0%)
- Rwanda (25%)
- Seychelles (0-25%)
- Tanzania (0-25%)
- Uganda (10-25%)
- Zambia (0%)

* Namibia was not part of the initial outcomes due to limited ‘untapped’ potential since South Africa is already the dominant supplier into this market.
7.2. Recommendations

Over and above the generalised recommendation that the focus regions and countries should be used to target co-ordinated and planned engagements with from a national perspective, the following recommendations emerged from the process.

SAPPO – for immediate and longer term completion:

i. Selected HS codes (currently grouped within HS 6-digit “aggregates”) need to be classified in the short term on HS 8-digit level. This process is within ITAC/DTI/SARS control and will assist with more detailed identification and tracking of specific product lines exports and imports. The argument is that if products can uniquely be identified and demonstrated to be clear of e.g. issues such as Listeria and AFS, partner countries will be more able and willing to allow such products to continue to be trade. Currently however, due to the fact that such products are not isolated on an HS code basis, these partner countries cannot identify them, which leads to unnecessarily negative impacts for the exports of such products;

ii. In the longer term it is recommended that a submission is made to the WCO to split at HS 6-digit level for international tracking as this will assist on global level (macadamia nuts is a relevant example case study). Currently the events in China and Poland provides “current” motivation and these opportunities should not be wasted to get finer detail applied to support import and export tracking as well as better statistics for relevant products.

iii. It was further recommended by the working group that SAPPO include FMD tests in the set of standard 6-monthly cycle tests to pre-emptively assist with queries from target countries.

iv. It is further proposed that the developments impacting an national pork export strategy for the various identified focus regions, focus markets and products need to be monitored on an ongoing basis and major reviews may be required once every 3 years (unless something drastically change in the shorter term and is identified during the monitoring activities).

Specific recommendations for consideration by DAFF that was raised as part of the process are:

DAFF - for immediate attention (proposed to be acted on in Feb/March 2019):

i. For Singapore the recommendation was that a formal invitation be sent to Singapore (an initial proposed visit was Feb 2019, which subsequently moved to Dec 2019). The communication should indicate that an earlier than Dec 2019 would be preferred.

ii. For India DAFF also needs to communicate a formal invitation to India as soon as possible.

iii. In terms of the rest of the countries identified through this process the working group requested DAFF to initiate formal communication with these focus countries to start
creating awareness and initiation of relevant protocol that need to be put in place in order to facilitate the “opening up” of such markets for trade of pork related products.

**DAFF - for immediate action but to be completed in the medium term:**

i. DAFF needs to get countries to agree to bilateral import permit "templates" that specifies the “compartment” system explicitly as opposed to current “zone” terminology.

ii. DAFF need to engage with the World Organization for Animal Health (OIE) via Dr Michael Modisane. Purpose is to get the OIE to communicate widely that compartmentalisation as an option and need to be incorporated into the “standard” international import permit templates.

iii. A further proposal that should be tabled is that a specific pamphlet /brochure be produced (endorsed by OIE) that South African pork exporters could use when engaging with trading partners.

**The Pork specific and broader SA Meat industry:**

i. The working group raised the question whether the industry should consider *self-regulation* as the way to go?

ii. If so - how to work in partnership with DAFF to achieve?

These questions need to be raised through relevant formal forums and brought to conclusion speedily if the pork exporters (and broader meat industry) is to be enabled to grow exports and as a result continue to contribute to South Africa’s domestic economic growth, employment creation and forex earning activities.
8. References


Cameron, M.J. 2018. “Proposal: International trade demand and realistic export potential with a focus on selected Pork related products”, Version 1.0, 3 August 2018. Trade Research Advisory (Pty) Ltd.


Cameron, M.J. and W. Viviers. 2015. Realistic Export Opportunity Analysis for Agricultural Products in the Major Group: HS08 - Edible fruit and nuts; peel of citrus fruit or melons. Study report prepared by TRADE (Trade and Development) research focus area, North-West University, Potchefstroom Campus, for Department of Agriculture, Forestry and Fisheries, South Africa.


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9. Appendices

9.1. Examples of differences in country HS codes at lower levels of detail than HS 6-digit

Pork related HS codes and example of differences in country HS codes at lower levels of detail than HS 6-digit. The following examples are compared to the European Tariff Codes\(^{18}\).

Figure 52: Example of HS 6 and 8-digit differences between countries

Figure 53: Further examples of HS 6 and 8-digit differences between countries and “bacon” specific references

<table>
<thead>
<tr>
<th>HS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0201</td>
<td>Pig fat, free of lean meat, and poultry fat, not rendered or otherwise extracted, fresh, chilled, frozen, salted, in brine, dried or smoked</td>
</tr>
<tr>
<td>0210</td>
<td>Meat and edible offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal</td>
</tr>
<tr>
<td>0210.11</td>
<td>Ham, shoulders and cuts thereof of swine, salted, in brine, dried or smoked, with bone in</td>
</tr>
<tr>
<td>0210.111</td>
<td>Domestic swine hams and cuts thereof, salted or in brine, with bone in</td>
</tr>
<tr>
<td>0210.119</td>
<td>Domestic swine shoulders and cuts thereof, salted or in brine, with bone in</td>
</tr>
<tr>
<td>0210.131</td>
<td>Domestic swine hams and cuts thereof, dried or smoked, with bone in</td>
</tr>
<tr>
<td>0210.139</td>
<td>Domestic swine shoulders and cuts thereof, dried or smoked, with bone in</td>
</tr>
<tr>
<td>0210.190</td>
<td>Ham, shoulders and cuts thereof of non-domestic swine, salted, in brine, dried or smoked, with bone in</td>
</tr>
<tr>
<td>0210.12</td>
<td>Bellies ‘streaky’ and cuts thereof of swine, salted, in brine, dried or smoked</td>
</tr>
<tr>
<td>0210.121</td>
<td>Bellies ‘streaky’ and cuts thereof of domestic swine, salted or in brine</td>
</tr>
<tr>
<td>0210.129</td>
<td>Bellies ‘streaky’ and cuts thereof of domestic swine, dried or smoked</td>
</tr>
<tr>
<td>0210.19</td>
<td>Meet of swine, salted, in brine, dried or smoked (excl. hams, shoulders and cuts thereof, with bone in, and bellies and cuts thereof)</td>
</tr>
<tr>
<td>0210.1910</td>
<td>Bacon sides or spencers of domestic swine, salted or in brine</td>
</tr>
<tr>
<td>0210.1920</td>
<td>Three-quarter sides or middles of domestic swine, salted or in brine</td>
</tr>
<tr>
<td>0210.1930</td>
<td>Fore-ends and cuts thereof of domestic swine, salted or in brine</td>
</tr>
<tr>
<td>0210.1940</td>
<td>Loin and cuts thereof of domestic swine, salted or in brine</td>
</tr>
<tr>
<td>0210.1950</td>
<td>Meet of domestic swine, salted or in brine (excl. hams, shoulders and cuts thereof, bellies and cuts thereof, bacon sides or spencers, three-quarter sides or middles, and fore-ends, loin and cuts thereof)</td>
</tr>
<tr>
<td>0210.1960</td>
<td>Domestic swine fore-ends and cuts thereof, dried or smoked</td>
</tr>
<tr>
<td>0210.1970</td>
<td>Domestic swine loins and cuts thereof, dried or smoked</td>
</tr>
<tr>
<td>0210.1981</td>
<td>Dried or smoked boneless domestic swine meat (excl. bellies and cuts thereof)</td>
</tr>
<tr>
<td>0210.1989</td>
<td>Dried or smoked domestic swine meat, with bone in (excl. hams, shoulders and cuts thereof, bellies and cuts thereof, and fore-ends, loins and cuts thereof)</td>
</tr>
<tr>
<td>0210.1990</td>
<td>Meet of non-domestic swine, salted, in brine, dried or smoked (excl. hams, shoulders and cuts thereof, with bone in, and bellies and cuts thereof)</td>
</tr>
<tr>
<td>0210.20</td>
<td>Meet of bovine animals, salted, in brine, dried or smoked</td>
</tr>
</tbody>
</table>
Figure 54: Further example – relationship of HS 0206.90 and pork

<table>
<thead>
<tr>
<th>HS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.06.00</td>
<td>Edible offal of bovine animals, fresh, chilled or frozen</td>
</tr>
<tr>
<td>02.06.01</td>
<td>Fresh or chilled edible offal of bovine animals for manufacture of pharmaceutical products</td>
</tr>
<tr>
<td>02.06.02</td>
<td>Frozen edible offal of bovine animals</td>
</tr>
<tr>
<td>02.06.03</td>
<td>Frozen edible offal of bovine animals except tongues and livers</td>
</tr>
<tr>
<td>02.06.04</td>
<td>Frozen edible offal of bovine tongues</td>
</tr>
<tr>
<td>02.06.05</td>
<td>Frozen edible offal of bovine livers</td>
</tr>
<tr>
<td>02.06.06</td>
<td>Frozen edible offal of bovine tongues and livers</td>
</tr>
<tr>
<td>02.06.07</td>
<td>Frozen edible offal of bovine tongue and liver (excl. tongues and livers)</td>
</tr>
<tr>
<td>02.06.08</td>
<td>Frozen edible offal of bovine tongue and liver (excl. tongues and livers)</td>
</tr>
<tr>
<td>02.06.09</td>
<td>Frozen edible offal of bovine tongue and liver (excl. tongues and livers)</td>
</tr>
<tr>
<td>02.06.10</td>
<td>Fresh or chilled edible offal for manufacture of pharmaceutical products</td>
</tr>
<tr>
<td>02.06.11</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.12</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.13</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.14</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
</tbody>
</table>

Not Pork related:

<table>
<thead>
<tr>
<th>HS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02.06.00</td>
<td>Edible offal of swine, fresh, chilled or frozen</td>
</tr>
<tr>
<td>02.06.01</td>
<td>Fresh or chilled edible offal of swine</td>
</tr>
<tr>
<td>02.06.02</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.03</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.04</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.05</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.06</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.07</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.08</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.09</td>
<td>Frozen edible offal of swine, fresh or chilled</td>
</tr>
<tr>
<td>02.06.10</td>
<td>Fresh or chilled edible offal for manufacture of pharmaceutical products</td>
</tr>
<tr>
<td>02.06.11</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.12</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.13</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
<tr>
<td>02.06.14</td>
<td>Frozen edible offal for manufacture of pharmaceutical products, fresh or chilled</td>
</tr>
</tbody>
</table>

SARS√
9.2. Relevance of HS 0206.90 and pork demonstrated

Source: Original documentation of the HS System Nomenclature as published by the World Customs Organisation

This should be interpreted as edible offal excluding that of bovine animals and swine – meaning what remains i.e. sheep, goats, horses, asses, mules or hinnies etc.

These alternative sources confirms this interpretation.

So technically 0206.80 & .90 refer to anything except Pork related

If the industry does not use it in this way – this is incorrect and need to be clarified and corrected.

Source: US Government Tariff Schedule  Source: UK Government Tariff Schedule

Source: SARS

Part of the challenge is the way that SARS “formats” the Tariff book – 0206.3 should have similar bold + line like 0206.2 and 0206.4 as it is a major sub-section – the same goes for 0206.8 and 0206.9 – since they are not formatted in the correct way it is easy to mistakenly assume they sit “under” heading “0206.4 Of swine, frozen;” - when in actual fact they refer to different animal groups as explained above.
9.3. Listeriosis outbreak – World Health Organisation summary

Listeriosis – South Africa


Disease outbreak news

28 March 2018

In South Africa, an outbreak of listeriosis, a serious foodborne disease, has been ongoing since the start of 2017. Between 1 January 2017 through 14 March 2018, 978 laboratory-confirmed listeriosis cases have been reported to the National Institute for Communicable Diseases (NICD) from all provinces. The majority of cases have come from three provinces: 581 (59%) from Gauteng, 118 (12%) from Western Cape and 70 (7%) from KwaZulu-Natal provinces, with the remaining cases coming from the other provinces in South Africa. The outcome of illness is known for 674 patients, of whom 183 (27%) of them died; this case fatality rate is comparable to other recorded listeriosis outbreaks worldwide. Most of the cases are persons who have higher risks for a severe disease outcome, such as neonates, pregnant women, the elderly and immunocompromised persons. In this outbreak, 42% of the cases are neonates who were infected during pregnancy or delivery.

Whole genome sequencing was performed on isolates from a large subset of patients. Ninety one percent of the strains belonged to Listeria monocytogenes Sequence Type 6 (ST6). The same ST6 sequence type was identified in a widely consumed ready-to-eat processed meat product called “Polony”. The same strain was also found in the processing environment of the manufacturer of the implicated product. On 4 March 2018, the Ministry of Health, announced that this product was believed to be the source of the outbreak.

The food processing company and three of its retailers export to 15 countries\textsuperscript{19} in the African region. All of these countries have issued recalls for the implicated products. Environmental samples from other food production companies in South Africa have also tested positive for Listeria but with strains different from the outbreak strain. These companies have also issued food recalls. Some of their products have been exported to some of the countries mentioned above.

\textsuperscript{19} The 15 countries include: Angola, Botswana, Democratic Republic of the Congo, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Uganda, Zambia, and Zimbabwe.
Nine percent of the reported cases in the present outbreak in South Africa were infected with different strains of Listeria than the predominant ST6 outbreak strain. This may indicate that more than one outbreak is ongoing. Comprehensive investigations to identify the source of infection of these cases should be conducted.

Figure 55: Number of Laboratory-Confirmed Cases of Listeriosis

![Product recall graph]

Ordered by Week of Sample Collection and Province, South Africa, 01 January 2017 to 12 March 2018 (n=978)

Source: National Institute for Communicable Diseases (NICD), South Africa

Public health response

The country has activated a national multisectoral task force to coordinate investigation and response activities:

- The Minister of Health, South Africa, held a press conference on 4 March 2018 to announce the source of the outbreak.
- Following the source identification, the national authorities have taken measures to limit further infections and associated mortality, including but not limited to the issuance of safety recall notices, compliance notices, and measures related to exportation of implicated products and risk communication with vulnerable groups.

20 The provinces are: Western Cape (WC), North West (NW), Northern Cape (NC), Mpumalanga (MP), Limpopo (LP), KwaZulu-Natal (KZ), Gauteng (GA), Free State (FS) and Eastern Cape (EC).
The Southern African Development Community (SADC) Health Ministers held a meeting in Johannesburg on 15 March 2018, to share information and to enhance preparedness and response for listeriosis. Health Ministers were further reminded about their rights and obligations under the International Health Regulations (IHR) with regards to additional health measures for international travel and trade.

- Listeriosis has been made a notifiable medical condition in South Africa since December 2017.
- National risk communication activities have been initiated since December 2017 around the “WHO five keys to safer food messages”.