



Government of Sri Lanka

NATIONAL EXPORT STRATEGY OF SRI LANKA

SPICES AND CONCENTRATES STRATEGY

2018-2022



The National Export Strategy (NES) of Sri Lanka is an official document of the Government of Sri Lanka

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This Spices and Concentrates Strategy was developed on the basis of the process, methodology and technical assistance of the International Trade Centre (ITC) within the framework of its Trade Development Strategy programme.

ITC is the joint agency of the World Trade Organization and the United Nations. As part of the ITC mandate of fostering sustainable development through increased trade opportunities, the Chief Economist and Export Strategy section offers a suite of trade-related strategy solutions to maximize the development payoffs from trade. ITC-facilitated trade development strategies and road maps are oriented to the trade objectives of a country or region and can be tailored to high-level economic goals, specific development targets or particular sectors.

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Government of Sri Lanka

NATIONAL EXPORT STRATEGY
OF **SRI LANKA**
2018-2022

**SPICES AND CONCENTRATES
STRATEGY**



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JOINT MESSAGE OF THE SPICE AND CONCENTRATES INDUSTRY

Since ancient times, Sri Lanka has been renowned for its spices. Known globally as the 'spice Island', Sri Lanka is the ninth most important exporter of spices in the world. Sri Lanka is also the largest exporter of 'True Cinnamon' in the world. Despite Sri Lanka's established reputation as an island which has a prominent identity associated with spices, Sri Lanka has even greater aspirations to become the 'leading exporter of high quality, value added spices and concentrates meeting world standards'.

The Sri Lankan spice sector is dominated by small farm holders with over 70% of the cultivated lands having smallholdings and home-gardens. Sri Lanka exports around 30 thousand tonnes of various kinds of spices annually. However, the spice sector has significant potential to expand its current reach and contribute to Sri Lanka's social economic development by the creation of jobs and increasing export revenue.

The tangible potential of the spice sector in Sri Lanka has been recognised by making it a priority sector in the National Export Strategy. The National Export Strategy for the Spice sector was established through consultations between private and public-sector stakeholders in the industry. The overall aspiration of the National Export Strategy is to position Sri Lanka as a trade hub in the region driven by investment & innovation. Thus, the sector strategy for spices seeks to propel the industry to greater heights by establishing Sri Lanka as the key export destination for spices in the region.

D.A. Perera
Chairman
Spice Council

The demand for spices globally is increasingly driven by the health-conscious lifestyles and ethical practices, particularly among a mobile youth population. Spices demand is also created by its increased utilisation as natural preservatives in a variety of processed food products and the strengthening of economies in the Asia Pacific region leading to increased disposable incomes. Organic spices are another strongly expanding segment. Lately, especially in the European, Middle Eastern and Asia Pacific markets, there is a growing consumer preference for certified organic and Fair-Trade spices.

With Sri Lanka's natural endowments such as soil & climatic conditions and an available infrastructure for the growth and production of spices, Sri Lanka is well positioned to benefit from these rapidly changing global trends and to cater to these demands. In order for Sri Lanka to increase export revenue by catering to the current trends, Sri Lanka needs to optimise its strengths and reduce bottlenecks in production and supply.

The implementation of the National Export Strategy and the Plans of Action devised by the sector consultations will be crucial to drive the industry forward and to realise the immense potential of the Spice sector in Sri Lanka. This is a much looked forward to policy proposal and it is the expectation of all stakeholders in the Spice industry in Sri Lanka to integrate the recommendations to establish Sri Lanka as a world leader in Spices.

Mr. Vernon Abeyratne
Chairman
Spices & Allied Products Producers'
and Traders' Association (SAPPTA)

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The document benefited particularly from the inputs and guidance provided by the members of this sector that steered the formulation of the sector Strategy, namely:

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The full list of public and private stakeholders that contributed their precious time to the design of this strategy are detailed in Appendix 1.

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ACRONYMS

The following abbreviations are used :

BOI	Board of Investment of Sri Lanka	MoDSIT	Ministry of Development Strategies and International Trade
CAGR	Compound annual growth rate	MoF	Ministry of Finance
CCA	Ceylon Cinnamon Association	MoPI	Ministry of Primary Industries
CTA	Cinnamon Trading Academy	MPI	Ministry of Plantation Industries
DoA	Department of Agriculture	NES	National Export Strategy
DoEA	Department of Export Agriculture	PCC	Pure Ceylon Cinnamon
EDB	Sri Lanka Export Development Board	PoA	Plan of action
EU	European Union	R&D	Research and development
FAO	Food and Agriculture Organization of the United Nations	SC	Spice Council of Sri Lanka
GAP	Good agricultural practices	S&C	Spices and concentrates
GI	Geographical Indication	SAPPTA	Spices & Allied Products Producers & Traders Association
GIS	Global Information System	SLSI	Sri Lanka Standards Institute
GMP	Good manufacturing practices	UNIDO	United Nations Industrial Development Organization
HS	Harmonized System		
ITC	International Trade Centre		
ITI	Industrial Technological Institute		



EXECUTIVE SUMMARY

Sri Lanka, the 'Spice Island,' has always been renowned for its spices and its extracts or concentrates. The spices and concentrates (S&C) sector plays a valuable role not only in boosting export earnings, but also in enhancing the rural economy and social development. The S&C industry in Sri Lanka is composed of a large variety of products, ranging from bulk spice products like true cinnamon to value added essential oils. The sector is dominated by smallholders, and over 70% of cultivated land is smallholdings and home gardens. Sri Lanka exports around 30,000 tons of various kinds of spices annually.

At present, Sri Lanka is the ninth most important exporter of spices (specifically cinnamon, pepper, cloves, cardamom and nutmeg) in the world, with total spice exports touching US\$273 million in 2016. Sri Lanka is the largest producer and exporter of 'true cinnamon' in the world. In this strategy, the following spice products are focused upon, listed under their appropriate Harmonized System (HS) codes from the World Customs Organization:

HS chapter	HS 6 digit product
HS 0904: Pepper	HS 090411: Pepper of the genus <i>Piper</i> , neither crushed nor ground
	HS090412: Pepper of the genus <i>Piper</i> , crushed or ground
HS 0906: Cinnamon (Ceylon)	HS090611: Cinnamon <i>Cinnamomum zeylanicum</i>
	HS090620: Crushed or ground cinnamon and cinnamon-tree flowers
HS 0907: Cloves, whole fruit, cloves and stems	HS090710: Cloves, whole fruit, cloves and stems, neither crushed nor ground
	HS090720: Cloves, whole fruit, cloves and stems, crushed or ground
HS 0908: Nutmeg, mace and cardamoms	HS090811: Nutmeg, neither crushed nor ground
	HS090812: Nutmeg, crushed or ground
	HS090821: Mace, neither crushed nor ground
	HS090822: Mace, crushed or ground
	HS090831: Cardamoms, neither crushed nor ground

The key drivers of the global spice market have been increased demand for processed and ready-to-eat foods and a significant rise in demand for new flavours globally from a mobile, health-conscious and young population, which at the same time looks for healthy and nutrition-rich foods. The growing demand for spices is also supported by their increased use as natural preservatives in a variety of processed food products and by the strengthening economies of countries in the Asia-Pacific region, leading to increased disposable incomes.

The global spices market is growing at an annual rate of about 5% (by value) and is projected to exceed US\$10 billion by 2020. The Asia-Pacific region alone is projected to grow at an annual rate of 7% between 2015 and 2020. This upward trend in the spice trade can be explained by the increasing demand for spices, both by the food service sector and by home cooks, and the growing consumer fascination with different cuisines; the overall flavouring market has maintained an upward trend in both volume and value. Globalization has improved the spice trade across the world. Rapid growth of online marketing campaigns and accessibility through e-commerce platforms are expected to drive industry growth soon.

However, the market is expected to change due to the stringent government regulations related to food additives in countries such as Canada, the United Kingdom of Great Britain and North Ireland, France, Italy and the United States of America. Several food safety organizations, such as the United States Food and Drug Administration, have set high standards regarding the safety of a spice intended for use by consumers. Consumers in the EU, United States and Canadian markets are paying more attention to aroma, health, flavour, hygienic packaging and product innovation rather than price. Availability of a wide variety of ready-to-use spice mixes will soon be a key driver in the global spice market. Organic spices are another strongly expanding segment. Especially in the European, Middle Eastern and Asia-Pacific markets, lately there has been a growing consumer preference for certified organic and fair trade spices.



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The demand for spice-based cosmetics and medicinal products also is growing fast. Such products are generally more popular in Asia and specifically in South Asia. The market for cosmetics in India alone is US\$950 million, indicating a growth of 15% to 20% per annum. Nutraceuticals, a relatively new and emerging category of products derived from spices, is also slated to witness growth in Asia-Pacific and European markets.

For the spice sector to continue to add value and intensify market development, public and private industry representatives identified the following as the most pressing issues that should be addressed rapidly:

- Limited availability of high-yielding planting stock and low use of associated techniques causes slow productivity growth and low adoption of improved varieties;
- Absence of good quality packaging and labelling;
- Insufficient availability of skilled and unskilled labour, which is exacerbated by limited training opportunities;
- Implementation of standards and codes of conduct at production and processing levels;
- Limited links between the public and private sectors;
- Poor dissemination of trade information and limited promotion and inadequate brand promotion of spices in destination markets;
- Limited use of contract farming methods between producers, processors and exporters;
- Limited postharvest storage infrastructure, leading to high postharvest losses;
- Low technology and mechanization adoption; and
- Traceability for organics and Fair Trade segments.

MARKET ORIENTATION

Based on global trends in the growing S&C sector, Sri Lanka should set the following priorities, with short-, medium- and long-term goals. Short-term is defined as immediately to one year, medium-term as one to three years, and long-term is beyond three years.

Short-term goals:

- Diversify into production of spice mixes and spice-based sauces.

Medium-term goals:

- Increase market penetration in existing markets by improving product quality, enhancing packaging and labelling and increasing production volumes.
- Diversify into new markets, alongside existing ones, with spice mixes and spice-based sauces.

Long-term goals:

- Produce organic and Fair Trade spices and their extracts for existing and new markets.
- Encourage multinational pharmaceutical companies to invest in joint ventures with local enterprises for development of medicinal and high end food products.

THE WAY FORWARD

The S&C sector has significant potential to make socioeconomic contributions to Sri Lanka through export-led growth. To realize this potential, competitive constraints and structural deficiencies must be addressed, and identified opportunities should be leveraged. The following is a delineation of the proposed vision and strategic approach in this direction.

All stakeholders of the S&C sector value chain in Sri Lanka agreed on the following vision statement:

“ To be the leading exporter of high-quality, value added spices and concentrates meeting world standards ”

Strategic objectives

The Plan of Action (PoA) will respond to this vision by addressing the sector's constraints and leveraging opportunities in a comprehensive manner. To this end, specific efforts will be made to meet the following strategic objectives.

Coordinating activities, monitoring progress and mobilizing resources for implementation will be critical to successful achievement of these targets. As such, a public-private advisory committee for the S&C sector was established, operationalized and empowered. The S&C advisory committee is responsible for overall coordination, provision of policy guidance and the monitoring of industry development against the strategic objectives.

An effectively organized and supported committee can plan industry development strategically. High-level support from the Government, in collaboration with strong championship by the private sector, will be the real drivers to transform Sri Lanka into a global S&C destination.

Strategic objective 1: Led by industry stakeholders, strengthen, integrate and simplify the policies and governance framework relating to spices.

- Review and revise the existing regulations that relate to the spices and concentrates sector.
- Strengthen existing and build new links, both public and private, along the spice value chain for increased effectiveness and coordination.

Strategic objective 2: Improve production and productivity of Sri Lanka's spice sector by ensuring quality control and safety compliance in accordance with global standards.

- Improve access to high -yielding and quality planting material.
- Increase production and improve postharvest and processing techniques through technology adaptation.
- Expand mapping of cultivation areas and strengthen extension services.
- Improve application of standards along the spice value chain, including improvement in the capacities of laboratories to test product composition and for pesticide residue.

Strategic objective 3: Become globally recognized as an innovative player in the value added spice market segment.

- Strengthen value addition through research and development (R&D) and product development.
- Improve market intelligence (information and data collection and dissemination), develop spice sector brand recognition and increase outreach on geographic indicator (GI) and intellectual property issues.



Elixir of Life

Cinnamon & Black Tea

25 Pyramid tea bags

*Aesthetic
Spicy Sparkler*

Black Tea & All Spice

25 Pyramid tea bags

SPICES AND CONCENTRATES – THE ELIXIR OF LIFE

Spices have been globally traded since ancient times, given their importance in seasoning foods and serving as medicines. Spice production is dominated by a few countries, making spices one of the most profitable commodities among agricultural products. Spices are 'used for flavour, colour, aroma and preservation of food or beverages. Spices may be derived from many parts of the plant: bark, buds, flowers, fruits, leaves, rhizomes, roots, seeds, stigmas and styles or the entire plant tops. Spices are often dried and used in a processed but complete state.¹ The following are classified as spices: pepper, pimento, vanilla, cinnamon, cloves, nutmeg, mace, cardamoms, anise, badian, fennel, ginger and spices NES.² Details with scientific name and definitions for these spices are available in Appendix 2.

Spices are exported whole in fresh or dried form, in ground or powdered form and as concentrates. Concentrates are a spice's chemical constituents (such as essential oils, oleoresins, isolates and nutraceuticals) extracted from inert cellulose.

Concentrates are flavours that are extracted by distilling raw spices to produce essential oils or by using solvents to extract oleoresins and other standardized products. They are available in both tincture and powdered form and are in high demand for their flavouring, seasoning and aromatic attributes (Figure 1).

The spice market has good trade potential, especially for small-scale farmers in the Asian region, where agro-climatic conditions are favourable and there is a significant local demand for S&C. Most spices and spice derivatives sold globally are produced by small-scale farmers. The major spice trading countries are China, India, Madagascar and Indonesia, while Guatemala, Brazil, Viet Nam and Sri Lanka also are significant traders.

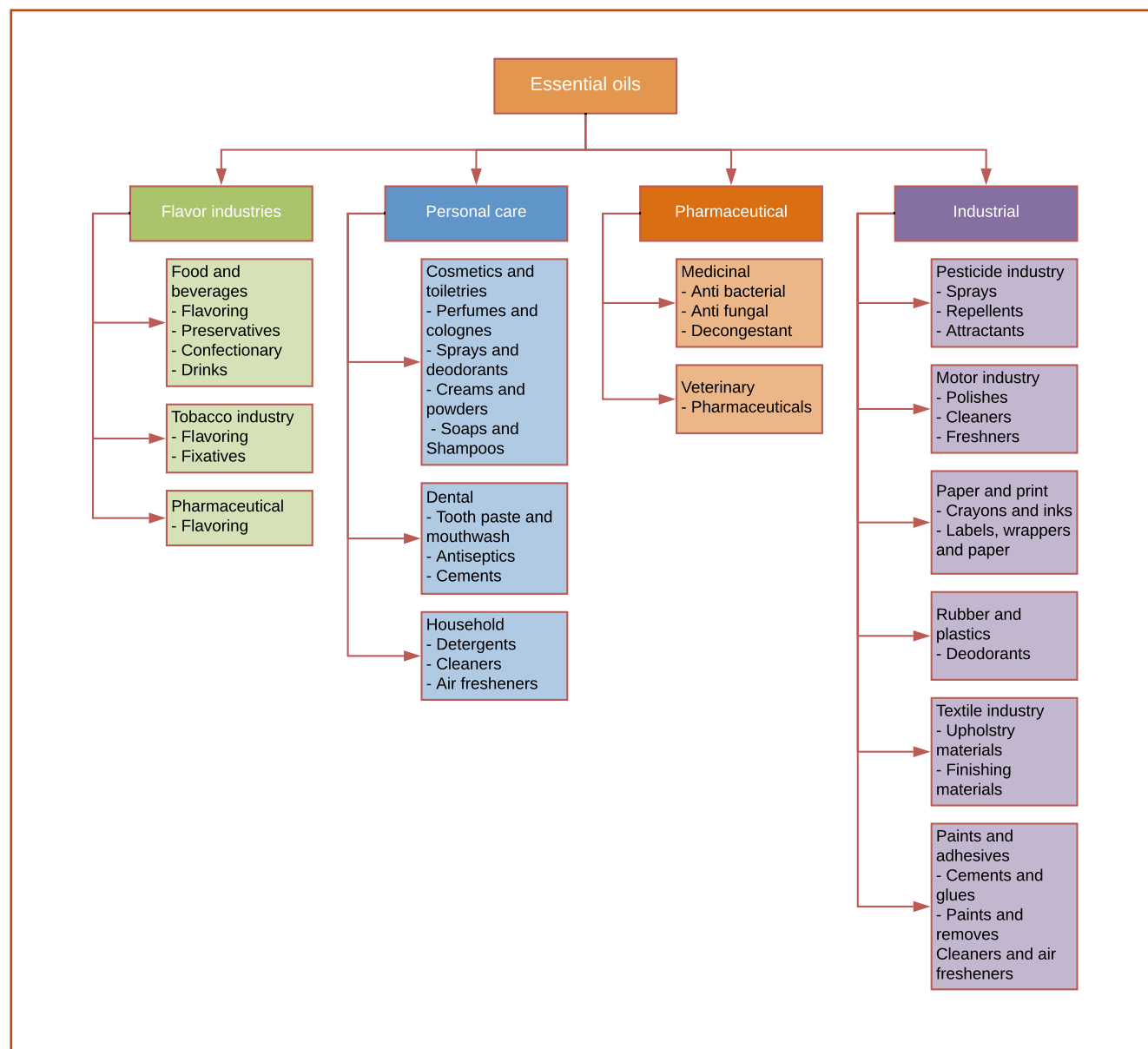
As mentioned previously, key drivers in the global spice market have been increased demand for processed and ready-to-eat foods and a significant rise in demand for new flavours globally from a mobile, health-conscious young population that also looks for healthy and nutrition-rich foods. The growing demand for spices is also supported by their increased use as natural preservatives in a variety of processed food products and by the strengthening economies of countries in the Asia-Pacific region, leading to increased disposable incomes.

However, the market is expected to be restrained due to stringent government regulations related to food additives in different countries such as Canada, the United Kingdom, France, Italy and the United States. Several food safety organizations, such as the United States Food and Drug Administration, have set high standards for the safety of spices for use by and in products for the consumer.

1.– Definition of spices by United Nations Industrial Development Organization (UNIDO) and Food and Agriculture Organization of the United Nations (FAO). UNIDO and FAO (2005). Herbs, spices and essential oils. Vienna and Rome. Available from <http://www.fao.org/3/a-ad420e.pdf>.

2.– Ten specific spices identified by FAO. FAO (1994). DEFINITION AND CLASSIFICATION OF COMMODITIES. Available from <http://www.fao.org/waicent/faoinfo/economic/faodef/fdef10e.htm>.

Figure 1: Industries and product categories that use essential oil



Source: UNIDO and FAO (2005). Herbs, spices and essential oils. Vienna and Rome.
Available from <http://www.fao.org/3/a-ad420e.pdf>.

Box 1: Quality requirements

Quality and food safety requirements are becoming more and more stringent. For example, in 2015 the European Union introduced new legal requirements for polycyclic aromatic hydrocarbons for pepper, capsicum, nutmeg, mace, turmeric, ginger and mixtures.

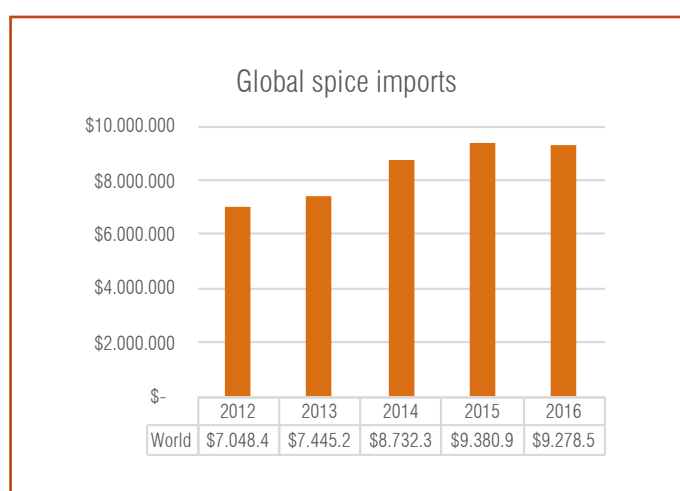
Compliance with quality and food safety standards is therefore strategic for adding value. Due to supply insecurity, products that comply with such requirements fetch a higher price.

OVERVIEW OF THE GLOBAL SPICE SECTOR

The global spice market is growing at an annual rate of about 5% (by value) and is projected to exceed US\$ 10 billion by 2020. The Asia-Pacific region alone is projected to grow at an annual rate of 7% between 2015 and 2020. The overall flavouring market has maintained an upward trend in both volume and value, and the upward trend for trade in spices (Figure 2) can be explained by the increasing

demand in food service and home cooking and by the growing consumer fascination for different cuisines. Each of the numerous different spices, origins and markets, however, has its own supply and demand dynamics. Each is subject to disparate production environments in different growing areas, to trends in global trade conditions and to sudden demand shifts in distant markets.

Figure 2: Global spice trade for HS codes 0904 to 0910, 2012-2016 (US\$)



Source: ITC calculations based on Comtrade data.



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The largest producer and exporter of spices in the world is India. It has registered substantial growth in spice exports over the last two decades, more than doubling its volume while increasing value by more than threefold. In addition to India's huge domestic market, the country commands a formidable position in the global spice trade, with a 45% share of volume and 23% share of value. In the case of cinnamon (cassia), Indonesia is by far the largest global producer, producing 91,400 tons in 2014. China and Vietnam are also

significant producers of cinnamon (cassia), with respective production volumes of 71,000 and 31,600 tons respectively in 2014. With regards to cinnamon (Ceylon), Sri Lanka is the world's leader in production and exports. Madagascar, the island nation off the southeast coast of Africa, dominates the world supply of cloves with a total share close to 36%. For nutmeg export, the South American country of Guatemala leads with a total world share of 37%.

GLOBAL TRENDS IN THE S&C SECTOR AND DRIVERS FOR SRI LANKA

The demand for spices and spice extracts, including essential oils and oleoresins, is booming globally. This demand comes from the dynamic change in consumer preferences, especially in the North American, European and Asia-Pacific markets. The latter two are the largest consumers of spices in the world and it is expected that their dominance will

continue. In 2013, the EU was the second largest market for seasonings, spices and herbs in the world, amounting to 520,000 tons with a value of US\$2.1 billion. The consumer in the United States, conversely, has developed a taste for 'hot and spicy', driving increased consumption of hot peppers and hot sauces.

The leading consumers in the EU markets are the United Kingdom, Germany, Romania and Hungary, together accounting for 58%. The EU market for spices (including herbs) has grown steadily, with the EU importing most of spices from developing countries and import volumes growing by an average five percent per annum. Spices and herbs in demand in the EU market are: pepper, parsley, paprika, marjoram, capsicum (chillies and cayenne pepper), oregano, pimento (allspice), thyme, coriander, bay leaves, cinnamon, rosemary, ginger, basil, nutmeg, mint, caraway, savoury, turmeric, dill, cumin, tarragon, cloves, sage, mace, cardamom, anise or badian seeds, fenugreek, saffron, vanilla, fennel seeds and juniper berries. Two firms that dominate the herb and spice market are McCormick & Company, Inc. and Tone Brothers, Inc. (a subsidiary of Associated British Foods). These multinational firms can source a wide range of herbs and spices from across the globe.

The main drivers for the global increase in the demand for S&C are as follows.

GLOBALIZATION

Globalization has improved the spice trade across the world. The increase in cheaper and easier foreign travel for business and leisure has allowed potential consumers to become familiar with new tastes and habits. The increase in both migration and travel has provided access to new flavours, especially in North America and Europe. Moreover, demand for ethnic food is rising in Europe, North America and the Asia-Pacific region due to the growing multicultural population and the rapid growth in global tourism, with people travelling to more exotic destinations and being exposed to a variety of flavours. This has led to the hospitality sector rapidly increasing the global demand for seasonings and flavours that enhance the aroma and taste of different cuisines. Consumers are developing more sophisticated tastes and are increasingly willing to experiment with new flavours and products. Currently, the following tastes are particularly popular: pepper, ginger and anise for Chinese-based cooking; curry, chillies and cardamom for Indian food; cassia cinnamon, cloves, nutmeg for Thai food and ginger, chillies, fennel, and pepper for Vietnamese cuisines. Furthermore, restaurant chains like Chipotle (Mexican) and Nando's (Portuguese/Mozambican) have seen impressive growth rates over the past few years. Chipotle recorded an impressive 19% CAGR between 2008 and 2013.

GROWING PROCESSED FOOD INDUSTRY

The spice market is also influenced by the growing processed food industry. The rise in consumption of bakery products, confectionery products and ready-to-eat and fried food in developed economies is driving the demand

for spices. The market share of spices used in food processing and institutional settings versus spices used in households is growing substantially. The ongoing search for new tastes by cooks, food manufacturers and consumers will further drive and restructure the demand of spices. Moreover, spices increase the shelf life of processed foods, and the need for longer shelf life increases the demand for spices. The meat and poultry industries consume the largest quantity of herbs and spices, as they make an effective and healthy natural preservative. For example, spices are used in the production of hotdogs, sausages, bologna and luncheon meat.

According to Euromonitor, the world's appetite for sauces appears to be increasing. The United States hot sauce market has grown over 150% since 2000, influenced largely by growing immigrant populations and rising cuisine trends that include Mexican and Asian foods.

HEALTHY EATING AND DIETARY CONCERNS

In the United States and Canadian markets, an increased awareness of and concern about tackling obesity is encouraging consumers to adopt new cooking habits at home. These new habits are increasing the demand for ready-to-use spice mixes and blends as they save time, effort and provide consistent taste. Consumers in these markets, along with Europeans, are paying more attention to aroma, health, flavour, hygienic packaging and innovative products rather than price. Also, packing herbs and spices together with relevant recipes for consumer convenience has become a growing trend in supermarkets in the United States. Diet seasonings and sauces (such as those with low salt, low sugar or low fat) also are growing in popularity, given the emphasis by consumers on health. The availability of a wide variety of ready-to-use spice mixes will drive the growth of the global spice market.

COSMETIC AND MEDICINAL USES

Spice oils have been used for cosmetic and medicinal purposes since ancient times in Asia, especially oils extracted from spices like cinnamon, pepper, cloves and turmeric. The demand for spice-based cosmetic and medicinal products are more popular, particularly in Asia and specifically in South Asia. The market for cosmetics in India alone, according to the Confederation of Indian Industry, is US\$950 million, indicating a growth of 15% to 20% per annum.

Nutraceuticals is a relatively new and emerging category of products that are derived from spices and is divided into functional foods and dietary supplements. Some examples of nutraceutical products are probiotics, fortified energy

drinks, vitamins and minerals, among others. Nutraceutical products are positioned between food and beverage products and pharmaceuticals. Globally, the nutraceuticals market is expected to witness growth in the Asia-Pacific and European markets. At the turn of the millennium, the industry grew at a CAGR of 7% and by 2010 that growth rate had doubled to 14%. Currently US\$ 12 billion to US\$ 15 billion is being added yearly to the global revenue for nutraceuticals.

CHANGES IN LOGISTICS AND E-COMMERCE FACILITIES

Rapidly improving global logistics facilities are making spices cheaper to trade. Although most spices are grown in Asia and parts of Africa, the demand for these products, value added or otherwise, is growing significantly in Europe and North America.

Rapid growth of online marketing campaigns and accessibility through e-commerce platforms, which has increased the popularity of these flavours around the world, is envisioned to drive industry growth soon. According to a report by DHL, a large global logistics player, opportunity for trade in spices extends to all types and sizes of retailers and manufacturers. Although e-commerce giants set standards for consumer experience, manufacturers stand to win big in the growing international trade since they can boost margins and control their brand by cutting out middlemen. Manufacturers are expected to grow 1.3 times as quickly as the already thriving average e-commerce retailer.

Many seasoning and spice companies have started using social media advertising campaigns on platforms such as Facebook, Pinterest and Twitter to establish their brand identity and to encourage the use of spices, seasonings and sauces by providing recipes. This is also encouraging the sale of spice and concentrates products across borders.

ORGANIC AND RESPONSIBLY SOURCED SPICES

Organic spices is a strongly expanding market, even though it is still relatively small. Especially in the European markets, lately there is a growing consumer preference for certified organic and Fair Trade spices. Consumers' focus is shifting to products that are responsibly sourced and free from contaminants and toxic residues that may affect the product at various stages of growing, processing, packaging, transport or storage. This indicates a competitive advantage in small markets such as the EU, and has the potential to be a specialized, niche market. This market possibly presents the strongest opportunity for new entrants in the spices market internationally. Over the next few years, the demand for organic spices will drive the global spices market, but it



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is important to note that buyers in the EU are increasingly showing preference for suppliers that provide certified organic products and treat and pay their workers fairly. Those who comply with such practices and can prove that through a certificate will have better opportunities to do business with Europeans.

While the potential for S&C is growing, regulations imposed by the American Spice Trade Association, the United States Food and Drug Administration, the United States Department of Agriculture, the Environmental Protection Agency and other national food safety entities regarding quality, food safety and traceability are strict and must be met to enter western markets. If these regulations can be met, the EU is a good destination market as European buyers are increasingly willing to buy from smaller suppliers as they see opportunities, especially in smaller or niche markets focused on special varieties, improved quality and sustainability.

Major global players dominating the spice market are: Associated British Foods, Döhler, Everest Spices, McCormick & Company, Knorr, Kerry Group and Kraft Foods Group. The upcoming players include Olam International Limited, MDH Spices, Nestle, Ariake Japan Company, SHS Group, Sensient Technologies and WorleeGruppe.

TOP MARKETS FOR SPICES

North America is presently the most attractive regional market for spices, followed by Europe, the Asia-Pacific region and the rest of the world. The United States is the world's largest and most demanding market for spices. In 2016, about 12% of total United States imports of spices (HS09, was pepper, 1% was Ceylon cinnamon and cassia; 0.38% was nutmeg and cardamom and 0.16% was cloves. The United States market is seeing a consistent increase in spice and essential oil usage in the food processing industry and consumers are spending a larger share of their food budgets on prepared and processed foods and sauces.

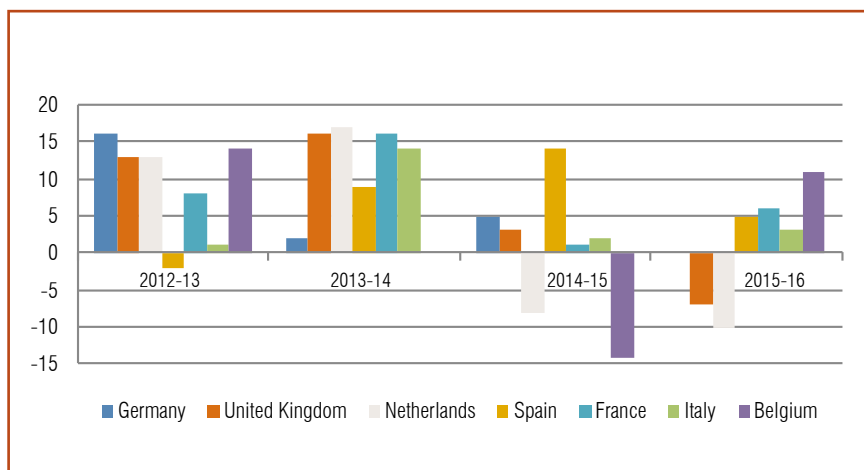
The fastest growing spice products in North America are onion powder, pepper and salt mixtures, jalapenos, Anaheim and ancho peppers, fennel, marjoram, savoury, tarragon, paprika, paprika oleoresin, cumin seeds, dried garlic, mint leaves, candied ginger root and cardamom. Of these, only pepper and cardamom are produced in commercial quantities in Sri Lanka. Sri Lanka's exports represent only a small portion of the market in all spices, except cinnamon.

In 2014, Europe was the largest market for seasonings and spices in terms of value; and the second largest in terms of volume. The European market for seasonings, spices, and herbs (Figure 3) is approximately 200,000 tons per year and is expected to grow at an annual rate of 4%, with 97% of its total import volume coming from developing countries.

Box 2: Cassia and cinnamon in North America

About 75% of cinnamon used in North America is cassia cinnamon. Most of this is imported from Indonesia. The remaining 25% that is consumed in North America is Ceylon cinnamon from Sri Lanka. Both the United States and Canada largely consume cassia cinnamon. Mexico, on the other hand, largely consumes Ceylon cinnamon.

Figure 3: Top European Union spice markets' growth (%)



Source: ITC calculations based on Comtrade data.

The EU is experiencing similar trends to those in North America. Particularly in the United Kingdom, France, Germany and Italy, highly flavoured ethnic foods, especially Asian food, is more popular and is increasing demand for essential and aromatic oils, dried or fresh herbs and spices. The EU is completely dependent on developing countries like India, Indonesia, Viet Nam and Sri Lanka for its supply of the necessary spices. Germany is the largest single market for spices in the EU.

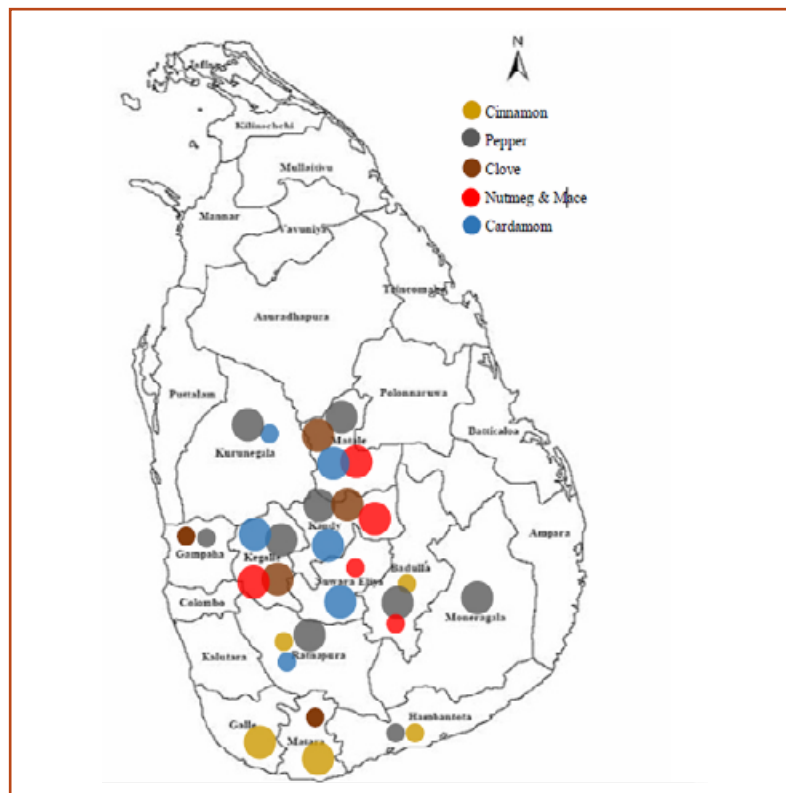
SRI LANKA – THE SPICE ISLAND

Sri Lanka, the 'Spice Island,' has always been renowned for its spices. The industry plays a valuable role not only in boosting export earnings, but also in enhancing the rural economy. Since ancient times, Sri Lankan spices have been renowned around the old world for their superior taste and quality. Cinnamon wood is mentioned as far back as 1,500 B.C. in Egyptian hieroglyphs and was traded through the silk route.

In more recent history, the Arab, Portuguese, Dutch and English engagements in Sri Lanka were closely related to the abundant and high-quality availability of exotic spices, such as cinnamon and pepper. Many spices in Sri Lanka have superior properties due to the country's fertile and

diverse soil types, varying micro climates and favourable temperature variations. For instance, in the case of pepper, Sri Lankan pepper has a piperine level of around 5% to 6% compared to 3% to 4% for pepper from other countries. Cinnamon (*Cinnamomum zeylanicum*), also known as Ceylon cinnamon or true cinnamon, is the primary spice of Sri Lanka, followed by pepper, cloves and nutmeg. Sri Lanka exports around 30,000 tons of various kinds of spices annually. Spices are a comparatively large component of the Sri Lankan export basket and contributes immensely to the country's economic growth. According to export performance data for fiscal year 2015-16, spices contributed about US\$270 million to Sri Lankan export earnings, with a share of over 2.5% in overall exports.

Figure 4: Spice production locations in Sri Lanka



Source: EDB.



Photo: (cc) pixabay

Table 1: Export value and share in Sri Lanka's exports of focus spices

HS chapter	HS 6-digit product	Value exported in 2016 (US\$)	Share in Sri Lanka's exports (%)
HS 0904: Pepper	HS 090411: Pepper of the genus <i>Piper</i> , neither crushed nor ground	68 052	25
	HS090412: Pepper of the genus <i>Piper</i> , crushed or ground	4 241	2
HS 0906: Cinnamon (Ceylon)	HS090611: Cinnamon <i>Cinnamomum zeylanicum</i>	154 693	57
	HS090620: Crushed or ground cinnamon and cinnamon-tree flowers	4 370	3
HS 0907: Cloves, whole fruit, cloves and stems	HS090710: Cloves, whole fruit, cloves and stems, neither crushed nor ground	12 823	5
	HS090720: Cloves, whole fruit, cloves and stems, crushed or ground	632	0
HS 0908: Nutmeg, mace and cardamoms	HS090811: Nutmeg, neither crushed nor ground	9 553	4
	HS090812: Nutmeg, crushed or ground	1 452	1
	HS090821: Mace, neither crushed nor ground	2 340	1
	HS090822: Mace, crushed or ground	119	0
	HS090831: Cardamoms, neither crushed nor ground	5 699	2

Source: ITC calculations based on Comtrade data.

The spice industry in Sri Lanka is composed of a large variety of products ranging from cinnamon to cumin seeds. For this export strategy, the industry selected the spices in Table 1 on which to focus.

The Sri Lankan spice sector is dominated by smallholder farmers, who farm over 70% of the cultivated land in plots ranging in size between 1/4 acres to 3 acres and with minimal chemical fertilizers and pesticides. Spices grow in the central and southern parts of the country and most smallholders cultivate spices for supplementary income. A representation of the areas of spice production is provided in Figure 4 while Figure 5 outlines the chosen spice products.

Figure 5: Sri Lanka – spice export profile

Share of Sri Lanka in world spice export basket



Source: ITC calculations based on Comtrade data.

Sri Lanka is currently the ninth most important exporter of spices (cinnamon, pepper, clove, cardamom and nutmeg) in the world and the spice sector is an important contributor to its export earnings, with a share of over 2.6% in overall Sri Lankan product exports. Total spice exports reached US\$273 million in 2016, down from US\$344 million in 2015. The annual fluctuations in export value are caused by variation in export volumes versus price fluctuation.

'TRUE CINNAMON'

Sri Lanka is the largest producer and exporter of 'true cinnamon' in the world and cinnamon is believed to have originated in the central part of Sri Lanka. However, cinnamon has subsequently been introduced to coastal areas and now most cinnamon cultivation is concentrated in the coastal areas of Galle and Matara Districts. Cinnamon tree bark is the major component used as a spice and leaves are used for oil distillation. Cinnamon quills, cinnamon powder, bark oil and leaf oil are the major products from the cinnamon tree. Cinnamon bark is used in Sri Lankan cooking as a spice.

Table 2: Major export destinations for Sri Lankan cinnamon in 2016

Importers	Export value (US\$ thousands)	Annual growth in value 2012-2016 (% per year)
Mexico	69 311	-1
United States	25 002	13
Peru	13 910	5
Colombia	7 506	1
Ecuador	7 286	8
Bolivia	5 768	11
India	4 344	7
Guatemala	4 067	2
Chile	3 384	18
Spain	2 957	-2

Source: ITC calculations based on Comtrade data.

Cinnamon is the largest spice export, reaching about 14,693 tons in 2016. However, Sri Lanka's exports in terms of quantity decreased at an annual average rate of 5% since 2012. Nearly 65% of Sri Lanka's cinnamon exports were destined for the South American market in 2016. The largest export destination in 2016 was Mexico, accounting for nearly 44% of Sri Lanka's cinnamon exports, followed by the United States, accounting for nearly 16% of exported cinnamon (Table 2).

PEPPER

Pepper is the second largest spice commodity in world trade after chilli and is the second most important spice crop grown in Sri Lanka. Pepper is cultivated in wet and

intermediate agro-ecological zones in the mid and low country regions, mostly by smallholders. Most of these smallholders grow pepper in their own small plots of land (home gardens), which are less than 20 acres. Black pepper is the main pepper product, while white pepper, pepper oleoresin, pepper oil, pepper souse and preserved pepper berries are some of the other pepper by-products.

Sri Lanka's pepper exports reached over 8,000 tons in 2016, having experienced an annual average decrease of 1.2% since 2012. In 2016, around 65% of pepper exports were destined for India, followed by 20% to the EU. Main destinations in the EU market were Germany (12.4%), Slovakia (2.2%) and Spain (1.6%). The United States accounts for 6.4% of Sri Lankan pepper exports (Table 3).

Table 3: Major Sri Lankan pepper export destinations in 2016

Importers	Export value (US\$ thousands)	Annual growth in value 2012-2016 (% per annum)
India	47 571	12
Germany	9 145	36
United States	4 693	18
Slovakia	1 639	-
Spain	1 205	-21
Russian Federation	1 147	-
United Kingdom	1 144	24
Netherlands	749	14
Ukraine	460	-
Maldives	394	34

Source: ITC calculations based on Comtrade data.

CLOVE

Clove in Sri Lanka is cultivated in areas with an average annual rainfall of 1,750 mm to 2,500 mm. Dried, fully matured, unopened flower buds is the product of the clove plant and clove oil is extracted from these dried flower buds. Sri Lankan exports of cloves were about 2,000 tons in 2016.

Around 34.7% of Sri Lankan clove exports were destined to India. The other main export markets in 2016 were the United States (14.5%), Germany (9.4%) and United Kingdom (5.1%).

Table 4: Major Sri Lankan clove export destinations in 2016

Importers	Export value (US\$ thousands)	Annual growth in value 2012-2016 (% per annum)
India	4 667	-22
United States	1 949	17
Germany	1 263	49
United Kingdom	689	21
Iraq	531	-
South Africa	404	150
Netherlands	379	18
Bahrain	342	-
Australia	279	8
Yemen	272	-

Source: ITC calculations based on Comtrade data.

NUTMEG

The nutmeg tree produces two spices, nutmeg (seed) and mace. It is cultivated in the same areas where clove is grown in Sri Lanka. Nutmeg oil is extracted from seeds while nutmeg husk can be used to produce jam, jelly and marmalade and can be preserved in sugar or salted and dried as a condiment.

Table 5: Major Sri Lankan nutmeg export destinations in 2016

Importers	Export value (US\$ thousands)	Annual growth in value 2012-2016 (% per annum)
India	8 029	-1
Viet Nam	2 553	-
UAE	1 849	-5
Germany	1 720	12
United States	742	-8
Pakistan	588	-6
Singapore	455	-18
Bangladesh	417	-15
Hong Kong, SAR	343	-
Egypt	318	-35

Source: ITC calculations based on Comtrade data.

Sri Lankan nutmeg exports peaked in 2016 at about 2,484 tons, which represented an annual increase of nearly 20% in relation to 2012. Around 42% of total Sri Lankan nutmeg exports were destined to India followed by 13.3% in Viet Nam and 9.6% in the United States (Table 5).

Although a mature sector, the spice and concentrates sector was shortlisted in the NES due to its global brand recognition and Sri Lanka's unique spice varieties, such as true cinnamon and pepper with high piperine content. The sector historically has contributed to socio-economic development

across the country and has further potential to export value added products such as essential oils or medicinal products, not just bulk products, which are mostly exported today.

This export strategy for the sector will focus on further promotion, branding and certification of Sri Lanka's indigenous spices to strengthen their international recognition and reputation. Most importantly, it is essential to define how the spice sector can satisfy the growing spice and concentrate needs of the Asian agro-food sector.

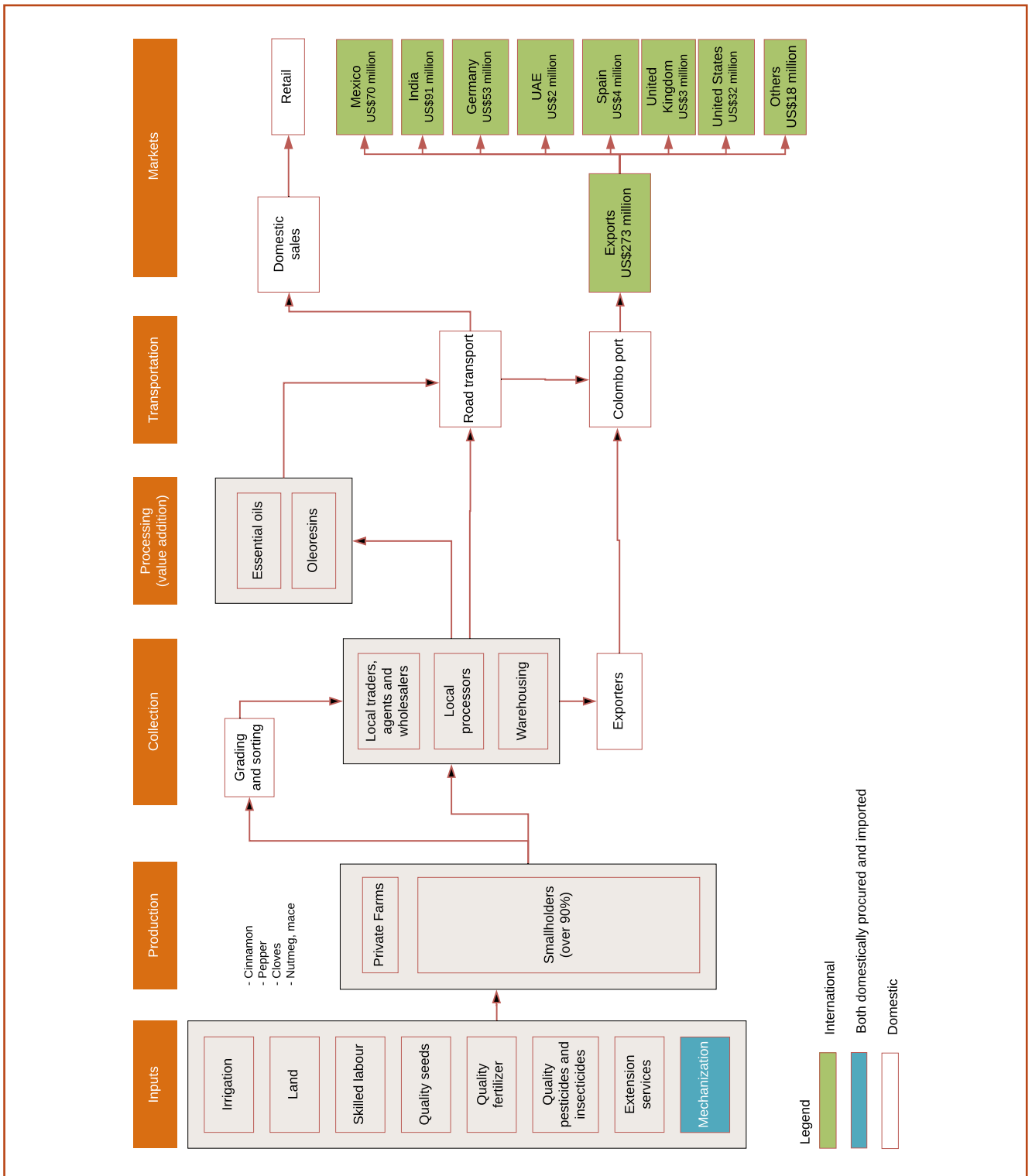


Photo: (cc) pixabay

THE VALUE CHAIN DIAGNOSTIC

The value chain analysis enables a better understanding of the dynamics and issues affecting industry performance.

Figure 6: Current spices value chain in Sri Lanka



Inputs	Production/collection	Processing	Market entry
<p>Limited availability of high-yielding planting stock/techniques causes slow productivity growth and low adoption of improved varieties.</p> <ul style="list-style-type: none"> • Low demand from small holders for high-yielding planting material. • Long certification process to import new planting stock. • Lack of accredited nurseries to supply seeds and planting materials. • Limited use of contract farming between processors and exporters. 	<p>Low productivity and low quality of spices leads to inconsistent supply of raw material for processing and exports.</p> <ul style="list-style-type: none"> • Limited adoption of new GAP techniques by farmers and planters. • Limited competition for provision of inputs (seeds, saplings, fertilizers, pesticides, etc.), leading to high costs for farmers. • Few training programmes, farmer field schools or business schools for spices. 	<p>Absence of standard processing and value addition processing units.</p> <ul style="list-style-type: none"> • Processors are not ready to invest with no visibility on their return. • Export channels are not well developed for entering the premium market. • Inadequate organization or opportunities for participation in international exhibitions. • Low R&D for oleoresin and essential oil technology. 	<p>Limited promotion of spice products in destination markets.</p> <ul style="list-style-type: none"> • Few commercial officers in missions and limited information on spices. • Inadequate organization or opportunities for participation in international exhibitions, etc.
<p>Insufficient postharvest storage infrastructure leads to post harvest losses of 20% to 25% in value.</p> <ul style="list-style-type: none"> • Absence of up-to-standard common user facilities in district level (hill country). • Drying services and storage facilities not available at farmer groups. • Few organized producer groups with the ability to establish such facilities. • No public-private partnership storage facilities operated as warehouse facilities established in partnership with processors or exporters. 	<p>Insufficient availability unskilled and skilled labour.</p> <ul style="list-style-type: none"> • Outdated labour regulations. • Limited availability of skills development programmes. • Social stigma. 	<p>Limited brand promotion.</p> <ul style="list-style-type: none"> • No common brand for the spice industry in Sri Lanka. • Limited common promotional material and outreach material readily available to promote the industry and its products in foreign markets. 	
<p>Low technology and mechanization adoption for smallholders in harvesting and postharvest processing.</p> <ul style="list-style-type: none"> • High cost of machinery for independent ownership. • Limited business management skills of smallholders lead to low awareness of return on investment for mechanization. • Limited R&D in farm mechanization due to weak coordination between industry, ITI and R&D centres. 	<p>Limited traceability along the value chain.</p> <ul style="list-style-type: none"> • Absence of a register of producers with ID numbers. • No Global Information System (GIS) mapping of spice farms and areas. • Few processors and exporters currently have traceability systems in place, mainly due to low awareness and limited capacities to implement. 	<p>Standards are up-to-date but only partially applied along the value chain.</p> <ul style="list-style-type: none"> • Few companies clearly apply price premium or discount procedures. • Absence of a spice farmers register leads to challenges in disseminating information. • Limited awareness of grades and standards by value chain operators. • Difficult application of standards through accredited laboratories. 	<p>Absence of good quality and export quality packaging facility leads to challenges in compliance.</p> <ul style="list-style-type: none"> • Sri Lanka Institute of Packaging does not properly serve the needs to the spice sector. • Expensive importation of quality packaging.
<p>Limited links and coordination between public and private sectors along the spices value chain</p> <ul style="list-style-type: none"> • Implementation of standards and code-of-conduct at production and processing level. • Limited use of contract farming between processors and exporters and producers and producer groups 	<p>Overlapping and outdated regulations increase costs of doing business.</p> <ul style="list-style-type: none"> • Challenging Sri Lanka Food Law, Act No.26 of 1980. • Limited enforcement of standard specification for Ceylon cinnamon. • Inefficient GI registration. • Outdated plant quarantine laws. 		

Legend:

Enterprise performance issues

Regulatory and policy issues

Institutional and coordination issues

FOCUSING ON THE MOST PRESSING ISSUES

To remain realistic and resource-efficient, the Strategy will not focus on all issues affecting the value chain. Instead, it makes an informed selection of the most important issues to be addressed. To assess this, criteria that are used are the level of disturbance (perceived by national stakeholders) and the ease of resolution (both in terms of cost and time involved).

TOP ISSUES TO BE ADDRESSED FOR INPUT PROVISIONS

Limited availability of high-yielding planting stock and planting techniques causes slow productivity growth and low adoption of improved varieties

The productivity level of spices in Sri Lanka is believed to be low compared to that of other countries. A major effort is needed to bridge this productivity gap. Several factors contribute to low productivity, including, but not limited to:

- Limited accredited nurseries (for supply of seeds and planting materials), soil testing labs, modern tissue culture labs, etc.
- Inadequate coordination between farmers, the Department of Agriculture (DoA) and related authorities in rural areas leading to lack of knowledge and technologies.
- Limited scientific process for the collection of production and yields.
- No reliable centralized database of growers in the country.
- Limited competition in provision of inputs (seeds, saplings, fertilizers, pesticides, etc.) leading to high costs for farmers if they want to use high yield planting material.

Spice industry stakeholders report that the government's quarantine requirements for imported planting material are onerous and deter importation of the best products. The industry and the government need to reach a compromise that balances the right of growers to be protected from diseases that could affect crops with the need of the spice industry to upgrade the quality and yield of exported spices.

This constraint is addressed through PoA: 1.2.3, 2.1.1, 2.1.2, 2.1.3, 2.2.2, 2.2.3.

Limited availability of good quality packaging and labelling services

Packaging plays a pivotal role in spice exports. Loss of aroma and flavour, bleaching of colour, loss of flow, microbial spoilage and insect infestation are the main deteriorative changes that can take place during the storage and transportation of spices. These can be addressed through good quality packaging.

Pre-cooked, semi-processed spices sold to consumers are required to adhere to strict quality norms in terms of labelling, presentation and branding. Limited availability of the latest world class packaging solutions around the country stops producers from meeting these strict quality norms and hinders exports. For example, spices to be used specifically for medicinal, food supplement and cosmetic uses require biodegradable and recyclable materials for packaging, but these are either difficult to procure or unavailable.

Furthermore, stakeholders mentioned that the existing packaging institutes find addressing the needs of the spice sector to be challenging. Several initiatives have been taken by industry and EDB to introduce packaging techniques to improve shelf-life and aroma of spices but these tend to be expensive and are only used by a few exporters.

This constraint is addressed through PoA: 2.2.1, 3.1.1.

TOP ISSUES TO BE ADDRESSED ON INPUT, PRODUCTION AND PROCESSING PROVISIONS

Insufficient skilled and unskilled labour, coupled with limited training opportunities

The Sri Lankan spice industry faces a shortage of labour and a lack of formal training to enhance the skills of its existing work force. There is a long-standing need to create value for spice sector employees so that more workers are attracted to the industry. There is limited interest in jobs in the spice sector due to outdated labour regulations, limited training in adhering to global standards and social stigma about the work and the sector's social status, especially for peelers, which is leading away young workers from traditional farming practices.

As the spice industry strives to add greater value, which commands a higher price, further training and professionalism will become mandatory, lifting workers to the next level of social standing.

This constraint is addressed through PoA: 2.2.1, 2.2.3.

Inadequate standards and codes-of-conduct to maintain optimum quality and traceability

There is no defined system to increase awareness about the guidelines for export quality for spices in value chain partners, and there is no mapped data on spice farms or areas and their extent. This leads to a lack of data on the exact extent of spice production in the country.

Moreover, there are a limited number of quality testing labs around the country that can comply with international standards. Access by small and medium producers-exporters to such facilities at an affordable cost is one of the biggest barriers to increasing the production of export quality spices. Producers and exporters need to be ready to respond to quality parameters that are not consistent and may change abruptly.

Furthermore, quality concerns should be raised across all value chain actors. At present, there many value chain issues, especially regarding quality loss and absence of traceability. The challenges include a limited awareness of grades and standards along the value-chain, absence of a register of producers and limited adoption of good agriculture practices (GAP) and good manufacturing practices (GMP) by farmers and planters.

This constraint is addressed through PoA: 2.2.3, 2.3.1, 2.3.2, 2.4.1, 2.4.2, 2.4.3.

Limited links between public and private sectors and poor dissemination of trade information and services

Data gathering channels are ineffective due to limited outreach by the Department of Export Agriculture (DoEA) to spice producers, especially those who operate a home garden. These small growers do not have opportunities to take advantage of DoEA offered benefits.

It is essential to identify all spice growers and farmers to provide them with the support they need. The support could also link farmers, growers and processors for channelled information dissemination.

This constraint is addressed through PoA: 1.2.2, 3.2.1.

Limited use of contract farming between processors and exporters and producers and producer groups

The total integration of value chain actors and activities can result in a seamless, efficient process flow, leading to quality outputs and optimal use of technology. However, there is no mechanism, legal or otherwise, to guide contract farming, especially if there is a default on a guarantee, and there is

no data on farmer groups that might wish to consider such contracts.

Contracts and third-party involvement can be exploitative for poorly resourced, small-scale farmers without appropriate regulations, and may affect poor farmers' income through low contract prices and marketing-related costs.

This constraint is addressed through PoA: 1.2.2, 1.2.4

TOP ISSUES TO BE ADDRESSED IN PRODUCTION AND PROCESSING PROVISIONS

Limited postharvest storage infrastructure leading to post harvest losses

There is limited postharvest storage infrastructure in the country, leading to a loss of 20% to 25% of production value. Facilities are not adequate in many spice processing areas and many producer-exporters cannot access them in timely manner.

Given the potential for growth in the sector, efforts need to be made to improve the present postharvest processing and storage systems and to educate farmers and traders on handling and processing produce in a hygienic manner. This will contribute to value retention for producers and processors.

This constraint is addressed through PoA: 2.3.2

Low technology and mechanization adoption

Technology used on farms, as well as in the small-scale processing sector, has remained relatively static and traditional. There is an increased need for investment in the development and adoption of the most appropriate and latest technology. Furthermore, there is limited R&D on farm mechanization due to weak coordination between industry and public sector R&D centres such as ITI. Use of technology in line with emerging trends for products and consumption patterns, such as the use of oleoresin and essential oil, is critical for future success. At present, the required technology is largely unavailable in the country.

This constraint is addressed through PoA: 2.2.1, 2.2.2, 2.2.3,

TOP ISSUES TO BE ADDRESSED FOR EXPORTS AND MARKET ENTRY

Limited promotion of spices in destination markets and inadequate brand promotion

Sri Lankan exporters rely heavily on the Indian market in Asia and on the Mexican market in North America, in addition to markets in the EU and the United States. However, limited efforts are made to target the changing and evolving scenarios in these markets. Moreover, there are few organized and adequate efforts to acquire a larger global market share while effectively competing in existing and new markets.

Most individual companies have their own campaigns to promote products. These promotional campaigns are sufficient for local marketing, but on the international market it is difficult to compete with other producing countries and it is necessary to compete under a common brand name. At present, there is limited common promotional material and outreach material readily available to promote the Sri Lankan

spice industry and its products in foreign markets. There is a need to create a Sri Lankan spices brand through special national branding initiatives. The SC has initiated a process to brand Ceylon spices in general –and Ceylon cinnamon in particular– by establishing a certification mark for Ceylon cinnamon and by obtaining a GI mark under the Agreement on Trade-Related Aspects of Intellectual Property Rights, commonly referred to as the 'TRIPS' agreement.

Furthermore, owing to fluctuations in the global economy, there is a need for the producer-exporters to remain agile, and to respond to changing market needs both in terms of products developed and in assessing the appropriate target market internationally. This calls for establishment of a national level, mature and globally networked, sector-specific information and intelligence gathering system. This will help domestic stakeholders not only avoid losses but also will help them make the best decisions in changing market conditions.

This constraint is addressed through PoA: 3.2.2, 3.2.3.



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THE WAY FORWARD

THE VISION

The S&C sector has significant potential to make socioeconomic contributions to Sri Lanka through export-led growth. To realize this potential, competitive constraints and structural deficiencies will be addressed and identified opportunities will be leveraged in this Strategy. The following is a delineation of the Strategy's proposed vision and strategic approach.

All stakeholders of the S&C sector value chain in Sri Lanka agreed on the following vision statement.

“ To be the leading exporter of high-quality, value added spices and concentrates meeting world standards ”

THE STRATEGIC OBJECTIVES

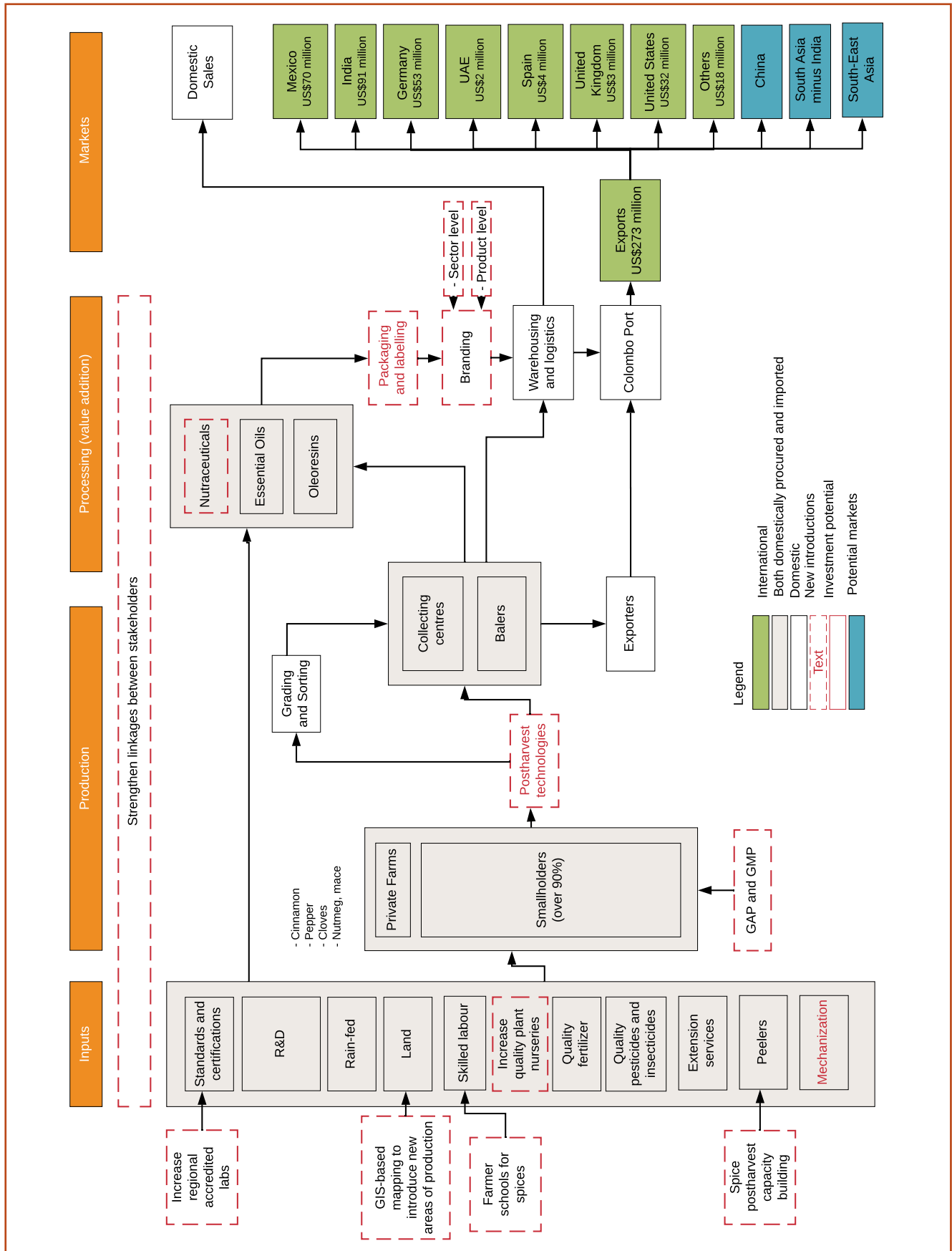
The PoA responds to this vision by addressing the sector's constraints and by leveraging opportunities in a comprehensive manner. To this end, specific efforts will be made along the following strategic directions (Figure 7):

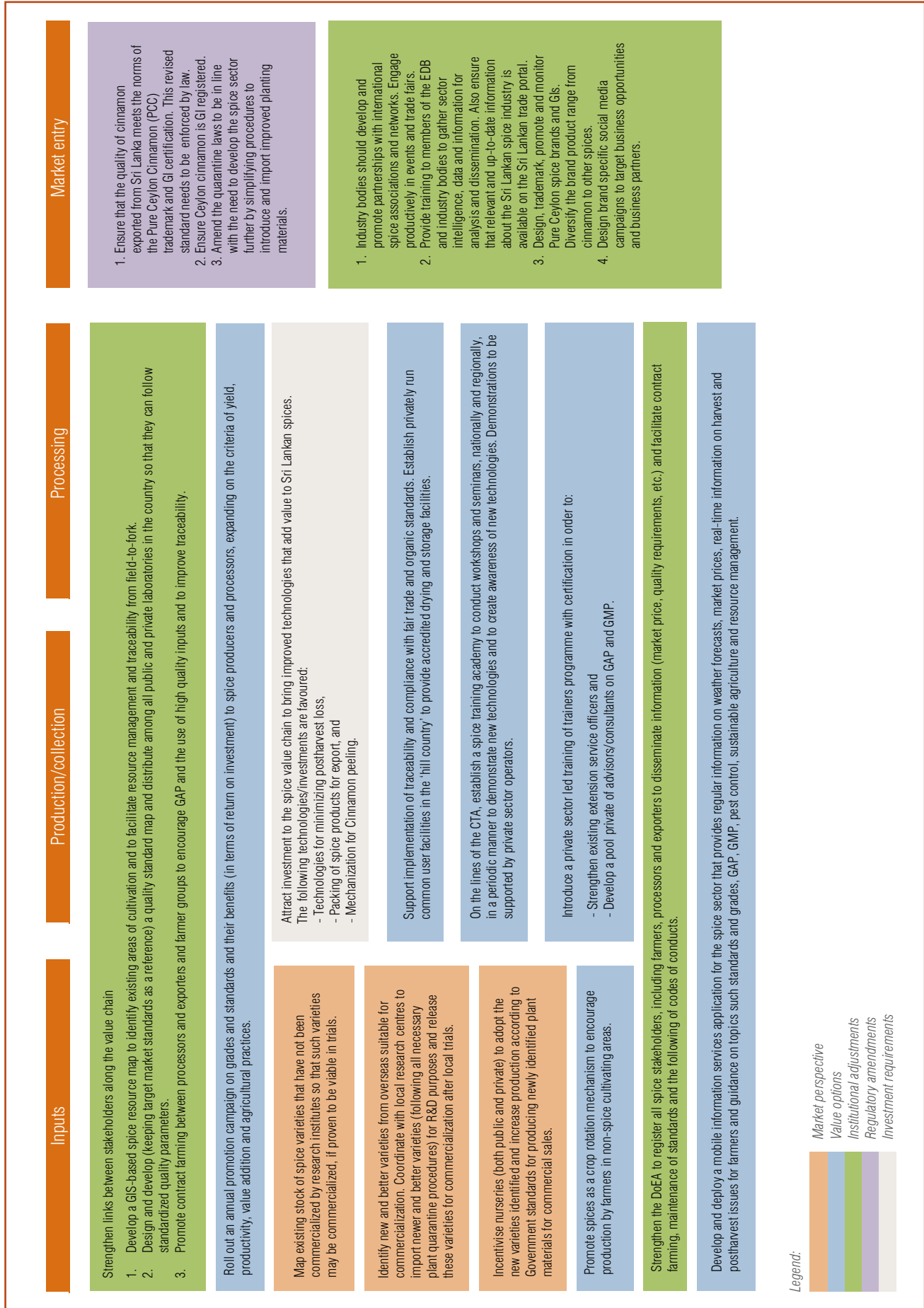
Figure 7: Strategic objectives of Sri Lanka for the S&C sector



THE FUTURE VALUE CHAIN

Figure 8: The future value-chain of the S&C strategy





OPPORTUNITIES FOR THE SPICES AND CONCENTRATES INDUSTRY

The future value chain of the S&C sector (Figure 8) is driven by its market development objectives, which effectively drive value chain enhancement and highlight focus areas for investment. There is great potential for S&C sector growth, expansion of existing products, development of new products and timely entry into new markets.

MARKET ORIENTATION

Based on global trends in the growing S&C sector, it is suggested that Sri Lanka set the following priorities, with short, medium and long-term goals. Short term is defined as immediately to one year, medium is one to three years and long term is beyond three years.

Short-term goals:

- Diversify into production of spice mixes and spice-based sauces.

Medium-term goals:

- Increase market penetration in existing markets by improving product quality, enhancing packaging and labelling and increasing production volumes.
- Diversify into new markets, as well as in existing ones, with spice mixes and spice-based sauces.

Long-term goals:

- Organize production of organic and Fair Trade spices and their extracts for existing and new markets.
- Encourage multinational pharmaceutical companies to invest in joint ventures with local enterprises for development of medicinal and high end food products.

Existing market penetration by improving quality, packaging and production volumes

Initially, as a medium-term initiative, exporters can increase sales in existing markets by improving product quality, enhancing packaging and labelling and increasing production by using technology. In accordance with Strategic Objective 2, about two years would be required to 'improve production and productivity of Sri Lanka's spices sector by ensuring quality control and safety compliances in accordance with global standards.' In the longer term, this can be expanded to new markets especially the EU, China, South

Asian markets besides India and fast-growing, South-East Asian markets such as Thailand, Malaysia, Indonesia and the Philippines.

Product diversification into ready-to-cook spice mixes and spice-based sauces

The ever-growing trend globally towards processed food and healthy eating habits has led to a market for more ready-to-cook and sauce products.³ Two products, spice mixes and spice-based sauces, are the proverbial 'low hanging fruit' in this market segment. The value addition from blending various spices and packaging the blend for export requires relatively low technology and minimal investment. Sales could start with existing markets in the short term. In the medium term, sales could expand to new markets such as China, South Asian markets besides India and fast-growing, South-East Asian markets such as Thailand, Malaysia, Indonesia and the Philippines. These spice mixes can be produced both for direct consumer consumption and for commercial sales in the food preservation industry.

Organic and fair trade spices and their extracts

According to Technavio in their report published in October 2017, the global organic spice market is expected to grow at a CAGR of 7.85% from 2017 through 2021.⁴ It is a niche product space but is still in a nascent stage of development. There are a few global and regional players in organic spices but the segment is growing fast, with an enormous market potential for new entrants. The demand is growing due to increased awareness about the health benefits of organic spices compared to regular non-organic spices, especially by consumers seeking to avoid health issues caused by pesticides, fertilizers, additives and other substances that are found in regular food items. Market demand for fair trade organic spices has also increased. Fair trade practices refer to compliance with measures that ensure social and economic welfare, sustainable development and fair policies in trade for the entire value chain.

3.– Skelly, Jack (2015). Variety is the Spice of Life: Global Growth in Chili Sauces, 13 February. Available from <https://blog.euromonitor.com/2015/02/variety-is-the-spice-of-life-global-growth-in-chili-sauces.html>.

4.– Businesswire (2017). Global Organic Spices Market 2017-2021 by Application, Distribution and Products, 3 October. Available from <https://www.businesswire.com/news/home/20171003006383/en/Global-Organic-Spices-Market-2017-2021-Application-Distribution>.

The industry has identified that demand from the food processing industry will be a major factor in increasing the growth of the organic spice market. In terms of geography, organic products are gaining popularity in Europe, the Middle East and the Asia-Pacific region, while for fair trade products there is an increasing demand in the EU. In the South Asia region, demand for organic spices has experienced manifold in the past five years, specifically in India.

There is ample scope for the Sri Lankan spice industry to increase production in organic spices and add value to them by producing spice extracts for the European and Asia-Pacific markets. As mentioned earlier, smallholders cultivate about 70% of spices, using minimal chemical fertilizers and pesticides, so favourable conditions exist to shift to organic growing. The immediate possible success for this sector is to export certified organic whole spices and essential oils to buyers in India. The India-Sri Lanka Free Trade Agreement could be beneficial to this effort.

The main challenge for this market segment globally is the premium pricing of organic S&C and the premium pricing of finished goods made from organic spices, compared with those made from regular spices. This is due to the heavy costs incurred in organic farming cultivation, which makes use of new technology and techniques.

VALUE OPTIONS

Increase efficiency of value chain through contract farming

Increasing integration between value chain actors via contract farming helps with quality control and production traceability. It also assures a seamless, real time flow of information, technology, knowledge and experiences across the value chain. Contract farming practices in Sri Lanka at present are not adequately evolved and have no appropriate legal framework. Small and marginal farmers are being brought into the fold to increase the production base and quality assurance. The authorities may want to introduce a mechanism to assure fair deals for all the stakeholders.

Organize an annual award for companies/organizations adherence to quality

Competing on both quality and price is challenging. For organizations to be globally competitive, they need to balance quality and price. This may be achieved by motivating and encouraging private sector players to be more focused on quality and be competitive by offering best of the products to the market. This can be promoted by recognizing the best performers with annual awards.

Develop a GIS-based spice resource map

GIS mapping of spice production across the country can be very effective in optimally planning the production base of various spices. With the use of GIS mapping, spices like nutmeg and cinnamon can be exploited for intensive agriculture under mixed farming systems, along with other horticultural crops. GIS based spice resource maps can also help address specific agro-ecological situations and contribute to land use planning in relation to climate change. Nanotechnology-enabled devices like stand-alone nano-sensors linked into a GPS system can also be used for real-time monitoring of soil conditions and crop growth. This could further help create field-to-fork traceability of the produce. Investment for creating such a resource map could come from governmental resources or thorough bilateral and multilateral donor agencies.

Develop and deploy a mobile information service that provides regular real-time information

Led by the private sector, a mobile application could be developed and introduced that could be easily accessible and provide daily information to all stakeholders, especially producers. This application could provide essential information in real-time and gather and disseminating regular information such as weather forecasts and patterns, market prices, demand and supply data, harvest and postharvest information and guidance on topics such as standards and grades, GAP, GMP, pest control, sustainable agriculture and resource management. This must be an entirely private sector initiative, supported by telecom service providers.

Foster a nationwide pool of certified or accredited GAP and GMP consultants or service providers

Globally, buyers are requesting that agriculture suppliers provide more tangible, transparent and effective food processing and production safeguards and protocols to ensure product quality and safety. In North America and Europe, buyers are increasingly reluctant to accept products from suppliers without a food safety program and proof of certification from either an independent third-party verifier or certification body. These certifications or audits and market requirements cover GAP, GMP, sanitation, hygiene, food security, pest management and environmental topics. To insure the necessary requirements are met, it is advisable to train a pool of certified or accredited GAP and GMP consultants or service providers nationally. These trained service providers can assist both public and private stakeholders ensure efficient documentation of good practices and possibly could assist in improving spice exports. This pool of certified and accredited consultants can be trained through funding from the private sector as a profitable business venture.

Design support materials to promote Sri Lankan spices, including brand specific social media campaigns

Sri Lankan spices need to be branded to create global appeal and attract consumers to all the country's spice products. This effort should include periodic and organized brand promotion and brand consciousness events in target countries. An annual calendar of events might be developed for such international events in target countries. Promotional materials for all kinds of brand offerings need to be developed and distributed in a periodic manner so that promotion continues between events. Social media platforms should be used continuously to attain the widest reach. The SC can take lead in running such social media campaigns.

Incentivize public and private nurseries to adopt better varieties of planting materials for commercial sale

To increase spice production in the country and to increase Sri Lanka's worldwide spice exports, productivity enhancement is needed. Small and marginal farmers should also

be encouraged to produce quality spices. Both public and private nurseries should stock improved varieties of spices and promote their cultivation. The nursery industry needs to be made attractive so that more private players cater to the needs of spice farmers or producers. There should be provisions for periodic quality accreditation of nurseries, thus motivating them to continuously stock better quality materials.

INSTITUTIONAL ADJUSTMENTS

The development of the S&C sector depends significantly on the functions and roles of trade and investment support institutions and overall inter-institutional coordination. These institutions are divided into four main categories: policy support, trade support, business support, and academia and civil society. They are the drivers for future S&C sector growth, but capacity and resource issues must be addressed to ensure their effective support for the sector. The organizations that directly affect this sector are listed in a detailed analysis of trade and investment support institutions for the sector, with inputs from stakeholders, is appended in Annex 4.

Box 3: Support institutions in Sri Lanka for the S&C sector

Policy support	<ul style="list-style-type: none"> • MoA • DoEA • Ministry of Industry and Commerce (Department of Commerce) • Ministry of Science, Technology and Research • MoPI • Ministry of Plantation Industries (MPI) • MoDSIT • Ministry of Finance (Trade and Investment Policy Division) • Ministry of Labour
Trade support	<ul style="list-style-type: none"> • EDB • Sri Lanka Customs
Business support	<ul style="list-style-type: none"> • SLSI • ITI • Board of Investment of Sri Lanka (BOI) • SC • Ceylon Chamber of Commerce • Federation Chamber of Commerce and Industry Sri Lanka • SAPPTA • National Chamber of Commerce of Sri Lanka • National Chamber of Exporters • Exporters Association of Sri Lanka • National Agribusiness Council • National Intellectual Property Office
Academia, research and civil society	<ul style="list-style-type: none"> • State universities • CTA • Ceylon Cinnamon Association (CCA) • Hector Kobbakaduwa Agrarian Research and Training Institute

Strengthen the DoEA

To create a country-wide database of producers, processors and exporters, the DoEA needs institutional strengthening and the requisite resources. This will enable DoEA to maintain an updated database of all stakeholders nationwide, especially producers. The DoEA needs to be equipped with modern IT tools to analyse data and disseminating information to stakeholders on a real-time basis via the DoEA website. If required, skills for DoEA employees should be upgraded.

Promote industry bodies to develop and partner with international spice associations

To identify and locate new markets, a concentrated effort must be made by the SC, the industry body, to develop or improve partnerships with similar bodies globally. This would help in networking at global level, identifying new opportunities worldwide, and increasing significant knowledge transfer in both formal and informal ways. Associations operating in target countries can be an effective vehicle in influencing policy decisions in favour of Sri Lankan suppliers. Joint brand promotion exercises, market research for consumer trends, training and capacity building programmes can be developed in a cost-effective manner for mutual benefit.

Establish a spice training academy by upgrading the CTA

A spice training academy like the CTA should be developed to improve the skill sets of stakeholders in other spices. This could be accomplished by upgrading the existing CTA, which is preferable, or by investing in a new academy to support other spices. These academies not only would provide training to workers but also would help improve their living standards. By recognizing and certifying their skill-set, such an academy would offer them dignified labour and social acceptance, which has been an issue in spice production. The spice academy is essential to help update producers on emerging technologies and appropriate new skills, etc. Moreover, the proposed academy can serve as an integrated hub to disseminate market related expertise, information and services to value chain actors. The academies can be funded directly by the government or can be promoted on a private-public partnership basis.

REGULATORY AMENDMENTS

Enforce SLSI standards for cinnamon

At present, SLS 81:2010 is the national Sri Lankan standard specification for Ceylon cinnamon. The standard was

published in Gazette No. 1813/15 dated 5 June 2013 and was amended on 1 April 2014. These SLSI standards have not been enforced, but it is essential to enforce them to ensure the quality of cinnamon exported from Sri Lanka under the Pure Ceylon Cinnamon (PCC) trademark.

Follow up on ensuring GI registration for Sri Lankan spice products

The cinnamon industry has been lobbying the Government to GI register 'Ceylon cinnamon.' Due to the lack of intellectual property protection locally and the absence of a local registrar for GI, the registration could not take place. In October 2016, the cabinet approved amendments to the Intellectual Property Act of 2003 to enable Ceylon cinnamon to obtain a GI locally, and to be included in a GI register. EDB has been authorized by the Government to be the holder and defender of the PCC certification trademark and the GI. The application for a GI has been forwarded to the appropriate authorities and a response is awaited. Comprehensive follow-up is required to conclude the application as soon as possible. Similarly, GI can be applied for Pepper and other spices which have high intrinsic value.

Amendment to plant quarantine laws

To provide farmers access to new, improved, high-yielding varieties and varieties that are in demand globally, it is recommended that the plant quarantine laws be amended. The main amendment would be to facilitate the import of legally approved planting materials to ensure local farmers are able to obtain new varieties and to ensure there is stock when local planting materials are in short supply.

INVESTMENT REQUIREMENTS

The following value chain investments in the value chain are seen as key focus areas to achieve a positive outcome for the S&C sector.

Promote and attract investment to the spice value chain to bring improved technologies

Small scale mechanization and training services

Land and labour productivity on farms depends greatly on the availability and use of agricultural mechanization. In addition to its contribution to multiple cropping and diversification of agriculture, mechanization also enables efficient use of inputs. In the case of spices, mechanization is key to efficiently drying, sorting and crushing spices. To overcome the existing barriers of poor farm mechanization and

outdated technology in the spice processing industry, especially among small and medium-sized enterprises, there is an immediate requirement to create technology awareness among value chain actors. Investments specifically need to be made in spice essence extractors, dryers and other agribusiness services.

This could also include automation of processing cinnamon and other spices to ensure minimum wastage and seek solutions for the issue of skilled labour scarcity.

Temporary storage and common user facilities

To preserve the quality of a spice after it leaves the farm or factory gate, quality assurance in services like storage, packaging and transportation are of paramount importance. Effective infrastructure development in these segments is therefore equally important. At present, a significant gap

exists in investment in these segments on both the technology and human capital fronts. These services need to be developed across the country and especially in connection with the rural and other hill areas, where spice production is intensive. Investment in this space can be attracted mainly through the private sector.



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MOVING TO ACTION



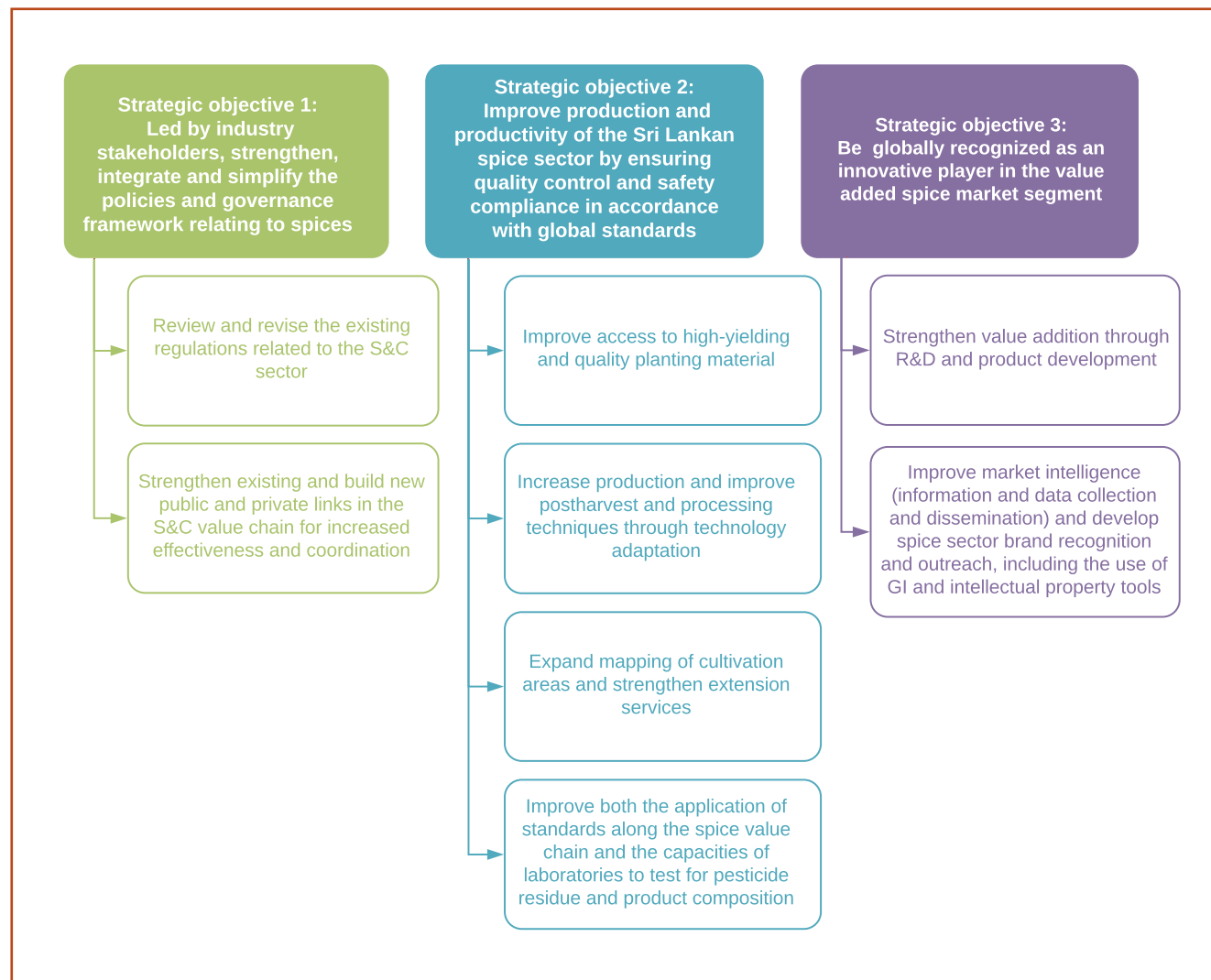
Photo: (CC BY-SA 2.0) flickr, Adam Jones, Spices - Negombo

IMPLEMENTATION FRAMEWORK

The strategic objectives delineated for the S&C sector define the main thrusts that will guide the Strategy's implementation to achieve the vision laid out by the industry. The PoA flows from the operational objectives that respond to the vision by addressing the sector's constraints and by leveraging opportunities in a comprehensive manner. To this end, specific efforts will be made along the following strategic directions (Figure 9):

- Led by industry stakeholders, strengthen, integrate and simplify the policies and governance framework relating to spices.
- Improve production and productivity of Sri Lanka's spices sector by ensuring quality control and safety compliance in accordance with global standards.
- Become globally recognized as an innovative player in value added spice market segments such as pharmaceuticals, nutraceuticals, food flavours and fragrances.

Figure 9: Strategic and operational objectives



The main market orientations for sectoral growth are to improve existing market penetration by improving quality, packaging and production volumes; to diversify product into ready-to-cook spice mixes and spice-based sauces and, in the long-term, to venture into organic and fair trade spices and their extracts in existing and new markets and to improve the market share of true cinnamon globally with an approved GI marking.

MANAGING FOR RESULTS

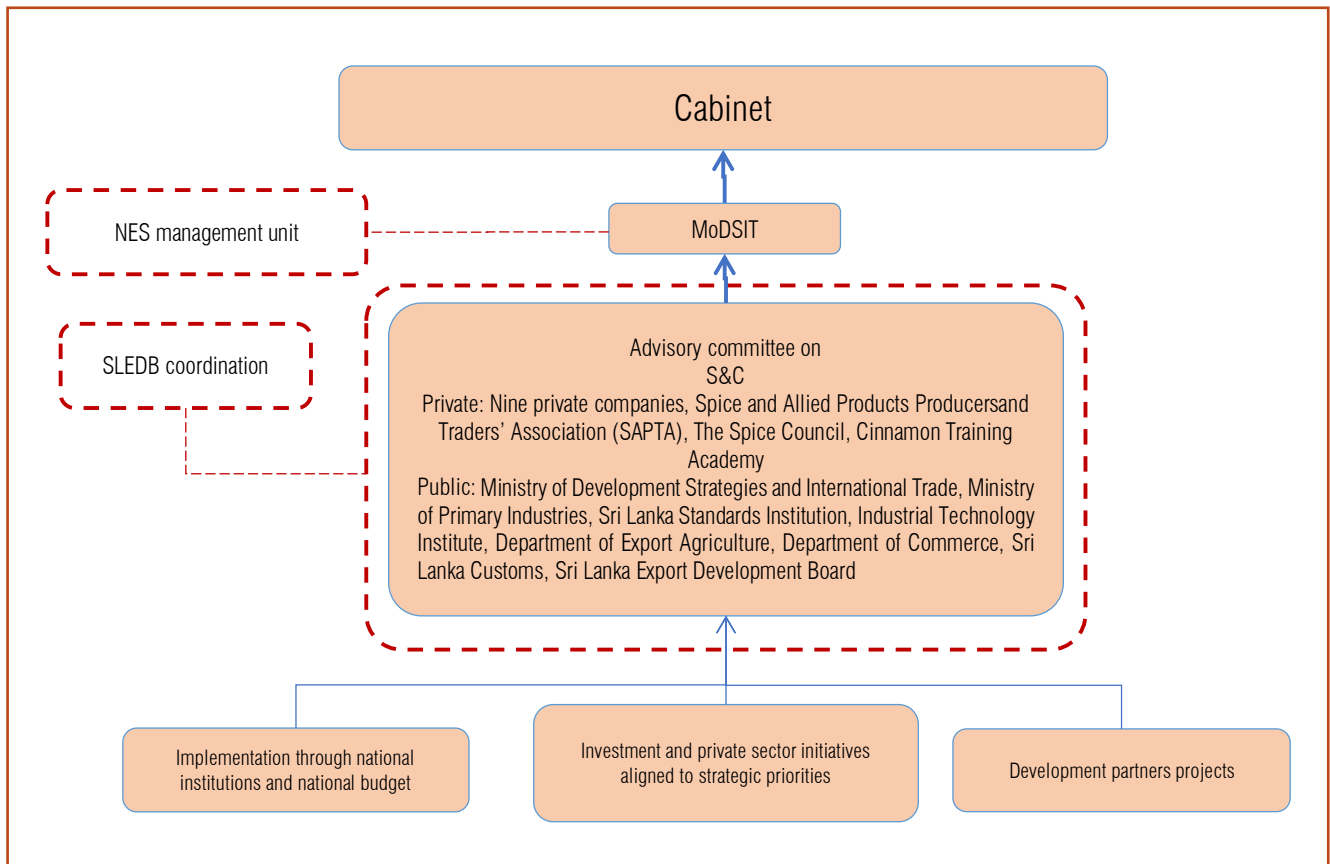
It is the actual translation of priorities into implementable projects that will contribute to achieving the substantial increase in export earnings and export competitiveness envisaged under this Strategy. These will be driven by reforming the regulatory framework, optimizing institutional support to exporters and strengthening private sector capacities to respond to market opportunities and challenges. Allocation

of human, financial and technical resources is required to efficiently coordinate, implement and monitor overall implementation (Figure 10).

Success in executing activities will depend on stakeholders' abilities to plan and coordinate actions in a tactical manner. Diverse activities must be synchronized across public and private sector institutions to create sustainable results, and it is important to foster an enabling environment and create an appropriate framework for the Strategy's implementation.

Key to achieving the targets will be coordinating activities, monitoring progress and mobilizing resources for implementation. Industry representatives recommended that a public-private advisory committee for the S&C sector be rapidly established, operationalized and empowered. The S&C advisory committee would be responsible for overall coordination, provision of policy guidance and monitoring of industry development in relation to the Strategy.

Figure 10: Institutional framework for S&C sector development



Spices and concentrates advisory committee

The Export Development Act (1979) grants the EDB the power to 'On the advice from the Board, the Minister may, by Order in the Gazette, establish advisory committees for the development and promotion of certain products, product groups and commodities as well as functional aspects of trade.' Additionally, 'each such advisory committee shall have the power to fix and regulate its own procedure, including the power to determine the number of members necessary to form a quorum at its meeting.' The advisory committees have the function 'to advise the Board on any or all of the matters which the Minister considers necessary for the purposes of carrying out of giving effect to the principles and provisions of this act.'

A S&C committee was established by the Minister of MoDSIT in February 2018 and effectively organized by EDB to give capacity to the industry to steer their development strategically.

Industry representatives recommend that the S&C advisory committee be composed of the following members:

Private:

- Nine private companies
- Spice and Allied Products Producers and Traders' Association (SAPTA)
- The Spice Council
- Cinnamon Training Academy

Public:

- Ministry of Development Strategies and International Trade
- Ministry of Primary Industries
- Sri Lanka Standards Institution
- Industrial Technology Institute
- Department of Export Agriculture
- Department of Commerce
- Sri Lanka Customs
- Sri Lanka Export Development Board

The advisory committee is empowered to meet quarterly and implement the following functions:

- i. Create a shared understanding of key market challenges and opportunities facing the sector;
- ii. Set goals and targets that, if achieved, will strengthen the sector's competitive position and enhance Sri Lanka's overall capacity to meet the changing demands of markets;
- iii. Propose key policy changes to be undertaken and promote these policy changes among national decision makers;
- iv. Support the coordination, implementation and monitoring of activities in the sector by the Government, private sector, institutions or international organizations to ensure alignment to goals and targets and, as required, contribute to resource identification and alignment.

KEY SUCCESS FACTORS FOR EFFECTIVE IMPLEMENTATION

The S&C advisory committee's oversight of the implementation of the Strategy is a key factor for, but it is not sufficient to effectively drive the strategy implementation.

Private sector support and participation in implementation

The private sector clearly expressed its willingness to contribute, directly or in partnership with public institutions, to the implementation of the Strategy. Their implementation efforts can range from providing business intelligence to institutions to contributing to project design, promotion, branding, policy advocacy, etc. The private sector's practical knowledge of business operations is essential to ensuring the strategy remains aligned to market trends and opportunities.

Proactive networking and communication

The key implementing institutions detailed in the PoA need to be informed of the content of the Strategy and the implications for their 2018–2022 programming. This networking and communication is essential to build further ownership and to provide institutions with the opportunity to confirm the activities they can implement in the short-to-long term. It will be important for the EDB, MoDSIT and members of the S&C advisory committee to reach out to relevant institutions nationally to create awareness and support for spice industry development.

Resources for implementation

The S&C advisory committee, in collaboration with the EDB and the trade policy and export strategy secretariat at MoDSIT, will need to leverage additional support for efficient implementation. Effective planning and resource mobilization is indispensable in supporting Strategy implementation. Resource mobilization should be carefully planned and organized.

As the S&C sector is a priority of the NES, the Government of Sri Lanka should define annual budget allocations and support to drive S&C industry growth. This commitment will demonstrate clear engagement to strengthening the sector and will encourage private partners to support development. In addition to national budget support, resource identification will require the BOI to effectively target foreign investors in line with the priorities of the Strategy. Investment flows to Sri Lanka should also be considered as a valuable driver of Strategy implementation and overall industry development.

The various implementation modalities detailed herewith will determine the success of Strategy implementation. However, high-level support from the Government, in collaboration with strong championship by the private sector, will be the real driver of successful Strategy implementation.

To achieve the Strategy's vision and strategic objectives, a robust, actionable, realistic and strategic PoA is required. This is provided in the section below, and constitutes the core of this Strategy.

The PoA is structured along the strategic and operational objectives described above. For each of these objectives, the PoA outlines detailed activities and their implementation modalities, which include:

- **Priority level:** priority 1 being the highest and 3 the lowest.
- **Start/end dates:** the desired timeframe of the activity.
- **Targets:** quantifiable targets which allow monitoring of activity completion during the implementation stage.
- **Lead implementation partners:** one single accountable lead institution per activity. The institution can restrict its participation to oversight and coordination or it also can have a technical role.
- **Supporting implementation partners:** any institution that should be involved at any stage of the activity's implementation.
- **Existing programmes or potential support:** existing initiatives ongoing in the specified area of the activity.
- **Indicative Cost (US\$):** an estimate of the activity's cost for the entire implementation period.

PLAN OF ACTION 2018–2022

To achieve the vision and strategic objectives that have been discussed, a robust, actionable and realistic strategic PoA is required. This is provided in the section below, and effectively constitutes the heart of this Strategy.

Strategic objectives	Operational objectives	Activity	Priority	Start date	End date	Targets	Leading implementing partners	Supporting implementing partners	Indicative costs (USD)	
1: Led by industry stakeholders, strengthen, integrate and simplify the policies and governance frameworks relating to spices.	1.1: Review and revise the existing regulations that are related to the S&C sector.	<p>1.1.1 Revise SLSI standards for cinnamon published under Extraordinary Gazette No. 1813/15, dated 5 June 2013. The revision will ensure that the quality of cinnamon exported from Sri Lanka meets the norms of the PCC trademark and GI certification. It is necessary that this revised standard be enforced by law.</p> <p>1.1.2 Follow up on Ceylon cinnamon GI registration, which already has been submitted. To maintain the quality of cinnamon, is essential to register Ceylon cinnamon under the PCC trademark and GI.</p>	3	01/04/2018	31/12/2018	<p>Amendment of the said standards and enforcement of the standards.</p>	Ministry of Primary Industries	Sri Lanka Standards Institution (SLSI); Spice Council; Department of Agriculture; Department of Export Agriculture	15,000	
		<p>1.2.1 Organize a quarterly meeting of the S&C advisory committee, led by the private sector, to:</p> <ul style="list-style-type: none"> • Confirm strategic market orientation of the industry. • Plan annual implementation of the strategic directions. • Track implementation progress by lead implementing partners. • Assess the need to establish adequate support mechanisms (policy, regulations, institutions, etc.) <p>1.2.2 Strengthen the Department of Export Agriculture (DEA) ability to register all spices stakeholders including farmers, processors and exporters with the aid of Geographic Information System (GIS) based spice resource map to identify existing areas of cultivation and to facilitate resource management and traceability from field-to-fork and to disseminate information (market price, quality requirements, etc.) and facilitate contract farming, maintaining standards and following of codes of conducts</p>	2	01/04/2018	31/12/2018	<ul style="list-style-type: none"> • GI for Ceylon cinnamon will be registered. • Quarterly meeting of committee to discuss industry progress. • Outcomes of such meetings implemented by lead agencies. 	Ministry of Development Strategies and International Trade	Export Development Board; Spice Council; Department of Export Agriculture	25,000	
		1.2: Strengthen existing and build new links, both public and private, along the spice value chain for increased effectiveness and coordination.	<p>1.2.3 In a public-private partnership with the Spice Council and SAPTA, develop and deploy a mobile information services application for the spice sector that provides regular updates on weather forecasts, market prices, real-time information on harvest and postharvest issues for farmers, and guidance on topics such standards and grades, GAP, GMP pest control, sustainable agriculture and resource management. Link to other Agriculture information system.</p> <p>1.2.4 Promote contract farming between processors and exporters and farmer groups to encourage GAP and the use of high quality input materials and to improve traceability. The following actions may be required:</p> <ul style="list-style-type: none"> • Create a standardized promotion campaign to encourage contract farming. • Develop sample contract for easy use. • Base promotion on gains for processors, exporters and farmers group. 	1	01/04/2018	31/12/2022	<ul style="list-style-type: none"> • Registration of all stakeholders in the spice value chain. • Data made available on DoEA and SC website to registered members. • Monitoring and facilitation as may be needed. • GIS Resource Map of Spices plantations in Sri Lanka 	Export Development Board	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Export Agriculture	50,000
			<p>1.2.3 In a public-private partnership with the Spice Council and SAPTA, develop and deploy a mobile information services application for the spice sector that provides regular updates on weather forecasts, market prices, real-time information on harvest and postharvest issues for farmers, and guidance on topics such standards and grades, GAP, GMP pest control, sustainable agriculture and resource management. Link to other Agriculture information system.</p> <p>1.2.4 Promote contract farming between processors and exporters and farmer groups to encourage GAP and the use of high quality input materials and to improve traceability. The following actions may be required:</p> <ul style="list-style-type: none"> • Create a standardized promotion campaign to encourage contract farming. • Develop sample contract for easy use. • Base promotion on gains for processors, exporters and farmers group. 	2	01/01/2019	31/12/2019	<ul style="list-style-type: none"> • An operational mobile application. • 15,000 subscribers in three years. 	Department of Export Agriculture	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Export Agriculture	100,000
			1	01/06/2018	31/12/2022	<p>Framework defined for easy implementation:</p> <ul style="list-style-type: none"> • Standardized promotion campaign for contract farming. • Sample contracts readily accessible. • 50% of processors and exporters use the contract farming concept in three years. 	Department of Export Agriculture	Ministry of Primary Industries; Spice Council; Department of Agriculture	50,000	

Strategic objectives	Operational objectives	Activity	Priority	Start date	End date	Targets	Leading implementing partners	Supporting implementing partners	Indicative costs (USD)
2: Improve production and productivity of Sri Lanka's S&C sector by ensuring quality control and safety and compliance in accordance with global standards.	2.1: Improve access to high yield, high quality planting material.	2.1.1 Map existing stock of spice varieties that have not been commercialized by research institutes, so that such varieties may be commercialized, if proven to be viable in trials.	1	01/04/2018	31/12/2018	<ul style="list-style-type: none"> Mapping of all existing stocks, commercialized and not commercialized, completed. This data made available on the SC and DoA websites. 	Department of Export Agriculture	Spice Council; University of Colombo; Department of Agriculture	50,000
		2.1.2 In a public-private partnership with the Spice Council and SAPTA, identify new and better varieties from overseas suitable for commercialization. Coordinate with local research centres to import better varieties (while following all necessary plant quarantine procedures) for R&D purposes and release for commercialization after local trials.	1	01/01/2019	31/12/2020	<ul style="list-style-type: none"> Improved varieties made available in the local market. List made available on SC and DoA websites. 	Ministry of Primary Industries	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Ministry of Science, Technology and Research; Department of Agriculture; Department of Export Agriculture	50,000
	2.2: Increase production and improve postharvest and processing techniques through technology adaptation.	2.2.1 In a public-private partnership with the Spice Council and SAPTA, establish a spices training academy like the CTA to conduct workshops and seminars, nationally and regionally, in a periodic manner to demonstrate new technologies and to create awareness of new technologies. Demonstrations to be supported by private sector operators.	2.1.3 Incentivize nurseries (both public and private) to adopt the better varieties identified and increase production according to standards for newly identified planting material for commercial sale. The following actions shall be undertaken: <ul style="list-style-type: none"> Plant nurseries supplying new and improved planting materials will be registered with the DoA under a special status. Promote these nurseries to members of SC, SAPPTA and associations so that members source their planting material from them. By random sampling, monitor sale of planting material to see if they meet established standards. Provide initial discounts to buyers of new and improved planting material. 	2	01/04/2018	31/12/2022	<ul style="list-style-type: none"> Plant nurseries selling improved varieties are promoted. Members of the spice industry associations get better quality planting materials at discounted prices, at least initially. 	Department of Export Agriculture	Ministry of Plantation Industries; Spice Council; Department of Agriculture
2.2.2 In a public-private partnership with the Spice Council and SAPTA, promote spices as a crop rotation mechanism to encourage production by farmers in non-spice cultivating areas.			2	01/01/2019	31/12/2022	<ul style="list-style-type: none"> Spice training academy established and made operational. New technologies in the industry introduced. Improved awareness about the sector. Increased awareness of spice sector as a crop rotation opportunity. Spice production increased by 10% overall in two years. 	Ministry of Primary Industries	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Agriculture; Department of Export Agriculture	30,000

Strategic objectives	Operational objectives	Activity	Priority	Start date	End date	Targets	Leading implementing partners	Supporting implementing partners	Indicative costs (USD)	
2: Improve production and productivity of Sri Lanka's S&C sector by ensuring quality control and safety compliance in accordance with global standards.	2.2: Increase production and improve postharvest and processing techniques through technology adaptation.	2.2.3 In a public-private partnership with the Spice Council and SAPTA, introduce a private sector-led training of trainers programme with certification in order to: <ul style="list-style-type: none"> strengthen the existing extension service officers and develop a pool private of advisors/consultants on GAP and GMP. These officers and consultants shall: <ul style="list-style-type: none"> organize further trainings and demonstrations regionally, provide business management skills to smallholders concerning return on investment and provide information on mechanization. 	2	01/04/2018	31/12/2022	<ul style="list-style-type: none"> Annual training of DoEA extension officers facilitated by private sector. Support material provided by private sector. Pool of third party GAP and GMP training providers available. Two training programmes per year completed in all key regions. 	Department of Export Agriculture	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Agriculture	100,000	
	2.3: Expand mapping of cultivated areas and strengthen extension services.	2.3.1 In a public-private partnership with the Spice Council and SAPTA, establish a privately run, common user facilities in the hill country to provide accredited drying and storage facilities.	2	01/01/2020	31/12/2022	Establishment of two accredited user facilities for drying and storage in two years.	Ministry of Primary Industries	Sri Lanka Standards Institution (SLSI); Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Agriculture	100,000	
	2.4: Improve both the application of standards along the spice value chain and the capacities of laboratories to test for pesticide residue and product composition.	2.4.1 Roll out an annual promotion campaign on grades and standards and their benefits (in terms of return on investment) to processors and spice producers (expand on criteria to include yield, productivity, value addition and agricultural practices). Before rolling out a new campaign, conduct an assessment of results of previous such projects.	2.4.2 Compile a ranking of companies and organizations that effectively apply price premium and discount procedures based on quality and grade of their products, then reward (in terms of an award) the best three companies/organizations. This will motivate and encourage competition on quality instead of price and ensures traceability of products according to international standards.	2	01/01/2019	31/12/2022	<ul style="list-style-type: none"> Promotion campaign executed. Campaign gives information on profitability of the spice sector along, with benefits of moving up the value chain and following best agricultural practices. 	Spice Council	Ministry of Primary Industries; The Spices & Allied Products Producers' and Traders' Association SAPTA	20,000
	2.4.3 In a public-private partnership with the Spice Council and SAPTA and using target market standards as a reference, design and develop a quality standard map and distribute to all public and private laboratories in the country so that they can follow standardized quality parameters. This aims to also ensure sanitary and phytosanitary compliance of export products in line with international requirements. Nominate a private institution to oversee strengthening of the national laboratory infrastructure.	2.4.2	3	01/01/2019	31/12/2022	<ul style="list-style-type: none"> Register of quality suppliers of premium and discount products developed. Annual quality award instituted. Competition encouraged on quality as compared to price. 	Department of Export Agriculture	Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Agriculture	80,000	
		2.4.3	01/04/2018	31/12/2020	<ul style="list-style-type: none"> Harmonized quality parameters across private and public laboratories. An increase of 15 accredited laboratories. 	To be finalized by Ministry of Science, Technology and Research	Sri Lanka Standards Institution (SLSI); Industrial Technology Institute (ITI); The Spices & Allied Products Producers' and Traders' Association SAPTA; Department of Agriculture; Department of Export Agriculture	100,000		

Strategic objectives	Operational objectives	Activity	Priority	Start date	End date	Targets	Leading implementing partners	Supporting implementing partners	Indicative costs (USD)
3: Become globally recognized as an innovative player in the value added spice market segment.	3.1: Strengthen value addition through R&D and product development.	3.1.1 Attract investment to the spice value chain through Joint Ventures to bring improved technologies for adding value to Sri Lankan spices. The following technologies or investments are favoured: <ul style="list-style-type: none"> • Technologies for minimizing postharvest loss. • Packing of spice products for export. • Mechanization for cinnamon peeling. 	1	01/01/2019	31/12/2022	<ul style="list-style-type: none"> • New technologies for mechanization of harvesting and postharvest. • Improved packaging technologies. 	Board of Investment (BOI)	Export Development Board; Exporters Association of Sri Lanka; Spice Council; Department of Commerce	10,000
		3.1.2 Industry bodies develop and promote partnerships with international spice associations and networks. Engage proactively in events and trade fairs and subscribe to online publications and magazines.	2	01/04/2018	31/12/2022	<ul style="list-style-type: none"> • Minimum of two partnerships developed per year. • Minimum of two subscriptions shared with members of the industry bodies per year. 	Spice Council	Export Development Board; The Spices & Allied Products Producers' and Traders' Association SAPTA	30,000
		3.2: Improve market intelligence (information and data collection and dissemination) and develop spice sector brand recognition and outreach, including the use of GI and intellectual property tools.	1	01/01/2019	31/12/2022	<ul style="list-style-type: none"> • Two market reports are published yearly on the S&C sector. • Latest information, analysis and requirements are available on trade portal. 	Export Development Board	National Agribusiness Council; Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA	25,000
		3.2.1 Provide training to members in the EDB and industry bodies on gathering sector intelligence, data and information for analysis and dissemination. Also, ensure that relevant and up-to-date information on Sri Lanka spice market is available on the export promotion portal.	2	01/04/2018	31/12/2019	<ul style="list-style-type: none"> • Four brands of different spices to be established in two years, including one GI. • Tag line, image, brochure, website, etc. produced. • Annual report on the progress of the established brands. 	Export Development Board	Spice Council	100,000
		3.2.2 Request the Brand Promotion Advisory Committee in the EDB (already established) to design, trademark, promote and monitor the Pure Ceylon spice brands and GI. Diversify the brand product range from only cinnamon into other spices.	2	01/04/2018	31/12/2022	<ul style="list-style-type: none"> • Spice products marketed across the world • Increase of spice market share in revenues • Linked to the Trade Portal 	Export Development Board	Export Development Board; Spice Council; The Spices & Allied Products Producers' and Traders' Association SAPTA	50,000
		3.2.3 In a public-private partnership with the Spice Council and SAPTA, design brand specific social media campaigns to target business opportunities and business partners.							



APPENDIX 1: LIST OF PARTICIPANTS IN THE PUBLIC–PRIVATE CONSULTATIONS

No.	Name	Designation	Name of Institute
1	Dr. Sarath Ranaweera	Chairman	Bio Foods (Pvt) Ltd
2	Mr. Sudath Jayasekera	Assistant Director	Board of Investment (BOI)
3	Mr. Sarada de Silva	Chairman	Cinnamon Training Academy
4	Prof. Jayasiri Lankage	Managing Director	Cinnamon Training Academy
5	Mr. Ananda Kularathna	Managing Director	Citro Essencial Oil (Pvt) Ltd.
6	Ms. A.P.P. Disna	Director - Regulation	Department of Export Agriculture
7	Mr. I.V.A.D.C. Induruwa	Assistant Director	Department of Export Agriculture
8	Mr.K.T.N. Nambukara	Head Quarters Extension Officer	Department of Export Agriculture
9	Ms. Dilanthi Piyadigama	Research & Development Assistant	Dept. of Export Agriculture, Galle
10	Mr. C.A. Suneth Lochana	Additional GA	District Secretariat, Hambantota
11	Mr. Gamini Bandara	Proprietor	Dumbara Lanka Spice
12	Mr. A.I. Nagahawatta	Operations Manager	Ferrow Chemicals (Pvt) Ltd
13	Ms. Priyadarshani Halpe	General Manager	G D P Silva & Sons International (Pvt) Ltd.
14	Mr. S. Muththusamy	Chairman	Green Field Bio Plantation (Pvt) Ltd
15	Mr. Fazal Mushin	Chief Executive Officer	Green Field Bio Plantation (Pvt) Ltd
16	Ms. Yamuna Perera	Director - Exports	Impex Corporation
17	Ms. Renuka Damayanthi	Director - Exports	Impex Corporation
18	Dr. P. Ranasinghe	Senior Deputy Director - Herbal Technology Section	Industrial Technology Institute (ITI)
19	Mr. Nanda B. Kohona	Director	International Commodity Traders (Pvt) Ltd
20	Mr. Sujeeva Godage	General Manager - Capital Development & Sustainability	Kahawatta Plantation PLC
21	Mr. Janaka Gunawardena	-	Kahawatta Plantation PLC
22	Mr. Dinesh Wijesiri	-	Kaneel Cinnamon & Spice Export - Kandy
23	Mr. K.L. Karunarathne	Managing Director	L.B. Spicies Trading (Pvt) Ltd
24	Mr. W.G. Gunasena	Chairman	Lakrandi Cinnamon Oil
25	Mr. Christopher Fernando	Executive Director	Malwatte Valley Plantation PLC
26	Mr. E.H.G. Prasanga	Asst. Secretary	Ministry of Agriculture & Trade (SP)
27	Ms. Prasadini Bominiyaarachchi	Asst. Secretary	Ministry of Fisheries & Aquatic Recourses Development (SP)
28	Mr. Rohan Jayatilaka	Director	Ministry of Industry & Commerce
29	Dr. Kumudini Gunasekara	Agri Business Specialist	Ministry of Primary Industries
30	Mr. Ransilu Watawala	Deputy Director	Ministry of Primary Industries
31	Mr. Sachithra Weerasinghe	Manager	National Chamber of Exporters
32	Ms. Keshani Witanage	-	National Chamber of Exporters
33	Mr. G.G. Jayasinghe	Deputy Director (R)	National Cinnamon Research & Training Centre

No.	Name	Designation	Name of Institute
34	Mr. Jaliya Wickramasurendra	Director	PTC Holdings
35	Mr. M.W. Tiron Premajith	Export Manager	Rathna Producers Cinnamon Exports (Pvt) Ltd
36	Mr. H.M.P. Bandara	-	Ruhunu Foods (Pvt) Ltd
37	Mr. A.G. Indrajith	Accountant	SDS Spices (Pvt) Ltd
38	Mr. Vernon Abeyratne	Chairman	Spices & Allied Products Producers' and Traders' Association (SAPPTA)
39	Mr. S. Mahesan	Director (Exports)	Sri Lanka Customs
40	Mrs. M.I.S. Jayasekera	Director (Standardization)	Sri Lanka Standard Institution (SLSI)
41	Mr. M.K. Samaraweera	Asst. Tea Commissioner	Sri Lanka Tea Board
42	Mr. D.A. Perera	Chairman	The Spice Council
43	Mr. Dhammika Gunasekara	Hon Secretary	The Spice Council
44	Mr. Jude Fernando	Secretary	The Spice Council
45	Mr. T.P.L. Raj	Treasurer	The Spice Council
46	Mr. M.Z.M. Farhad	National Sector Specialist	UNIDO EU/ITC/UNIDO Project Sri Lanka
47	Dr. (Mrs) Eresha Mendis	Senior Lecturer - Department of Food Science & Technology	University of Peradeniya
48	Mr. W.T.G. Samantha	Senior Lecturer/ Faculty of Engineering	University of Ruhuna
49	Prof. Achini De Silva	Lecturer- Faculty of Agricultural Sciences	University of Sabaragamuwa Sri Lanka
50	Ms. Malani Baddegamage	Director – Export Agriculture	Export Development Board
51	Ms. Gayani Wijayathilaka	Assistant Director	Export Development Board
52	Ms. Nilmini Wanaginghe	Assistant Director	Export Development Board
53	Ms. Nipuni Munasinghe	Export Promotion Officer	Export Development Board



Photo: ITC

APPENDIX 2: LIST OF SPICES

Spice name	Variety and Scientific name	Definition and remarks
Pepper	Black, white pepper (<i>Piper nigrum</i>); long pepper (<i>Piper longum</i>)	Perennial climbing vines. Includes whole, crushed or ground berries. Black pepper is produced from partially ripe berries, while white pepper is from fully ripe berries which have had the outer hull removed.
Pimento	Red and cayenne pepper, paprika, chillies (<i>Capsicum frutescens</i> ; <i>Capsicum annuum</i>); allspice, Jamaica pepper (<i>Pimenta officinalis</i>)	Uncrushed or unground fresh pimentos are considered vegetables.
Vanilla	<i>Vanilla planifolia</i> ; <i>Vanilla pompona</i>	The fruit (or bean) of a climbing plant of the orchid family. Includes whole, crushed or ground.
Cinnamon	Ceylon cinnamon (<i>Cinnamomum zeylanicum</i>); Chinese, common cinnamon, cassia (<i>Cinnamomum cassia</i>)	The inner bark of young branches of certain trees of the <i>Laurus</i> family. Includes cinnamon- tree flowers, cinnamon fruit and cinnamon waste (chips), whether whole, crushed or ground.
Cloves	<i>Eugenia caryophyllata</i> ; <i>Caryophyllus aromaticus</i>	The whole fruit of the clove tree, including the flowers picked before maturity and dried in the sun, and the stems of the clove flowers.
Nutmeg, mace, cardamons	Nutmeg, mace (<i>Myristica fragrans</i>); cluster cardamon (<i>Elettaria cardamomum</i>); other cardamons (<i>Aframomum angustifolium</i> ; <i>Aframomum hambury</i> ; <i>Amomum aromaticum</i> ; <i>Aframomum cardamomum</i>); Malaguetta pepper, grains of paradise (<i>Aframomum melegueta</i>)	Nutmeg is the inner brown kernel of the fruit of the nutmeg tree. Mace is the net-like membrane between the outer shell and the kernel. Cardamon seeds are enclosed in the capsule produced by perennial herbs of the <i>Zingiberaceae</i> family.
Anise, badian, fennel	Anise (<i>Pimpinella anisum</i>); badian or star anise (<i>Illicium verum</i>); caraway (<i>Carum carvi</i>); coriander (<i>Coriandrum sativum</i>); cumin (<i>Cuminum cyminum</i>); fennel (<i>Foeniculum vulgare</i>); juniper berries (<i>Juniperus communis</i>)	Seeds and berries from the various plants listed. They are normally used as spices, but also have industrial (e.g. in distilleries) and medicinal applications.
Ginger	<i>Zingiber officinale</i>	Rhizome of a perennial herb. It also is used for making beverages. Includes fresh, provisionally preserved or dried, whereas ginger preserved in sugar or syrup is excluded.
Other spices	Bay leaves (<i>Laurus nobilis</i>); dill seed (<i>Anethum graveolens</i>); fenugreek seed (<i>Trigonella foenum-graecum</i>); saffron (<i>Crocus sativus</i>); thyme (<i>Thymus vulgaris</i>); turmeric (<i>Curcuma longa</i>)	Other spices that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report spices under this heading that are classified individually by FAO. This heading also includes curry powder and other mixtures of different spices.

Source: FAO, 1994⁵.

5.– FAO (1994). Definition and classification of commodities, 17 July. Available from <http://www.fao.org/waicent/faoinfo/economic/faodef/fdef10e.htm>

APPENDIX 3: CEYLON CINNAMON – A GIFT FROM SRI LANKA

A small player in the global spice market, Sri Lanka is the leading exporter of Ceylon cinnamon, also known as true cinnamon. Ceylon cinnamon is country's third largest agricultural export crop, supporting the livelihood of over 70,000 smallholder growers and providing employment to over 350,000 people. (UNIDO, 2016). In 2011, Sri Lanka launched a brand for cinnamon aiming to build an image like its main export, Ceylon tea.

Ceylon cinnamon faces competition from the similar but lower-priced cassia largely supplied by China and Indonesia.

Scientific name	<i>Cinnamomum Zeylanicum</i>	<i>Cinnamomum Burmanni</i>	<i>Cinnamomum Loureiroi</i>	<i>Cinnamomum Aromaticum</i>
Popular names	Ceylon Cinnamon or True Cinnamon	Korintje Cinnamon, Padang Cassia or Indonesian Cinnamon	Saigon Cinnamon, Vietnamese Cassia or Vietnamese Cinnamon	Cassia Cinnamon or Chinese Cinnamon
Origin	Sri Lanka	Indonesia	Viet Nam	China
Color	Light to medium reddish brown	Dark reddish brown	Dark reddish brown	Dark reddish brown
The good	Ultra low coumarin levels, softer and subtle taste, crumbly	Spicy Cinnamon flavor	Strong and spicy, high levels of oil content	Cheap
The bad	Expensive	High coumarin levels	High coumarin levels	High coumarin levels

HOW IS CEYLON CINNAMON DIFFERENT FROM OTHER GLOBAL CINNAMONS?

Ultra low coumarin levels: Ceylon Cinnamon has low coumarin levels of 0.02% compared to 0.4% – 0.8% of other Cinnamon types from the world over. Coumarin is considered unhealthy for the liver. However, Ceylon Cinnamon can be consumed regularly without much concern.

Type of Cinnamon	Coumarin content
Ceylon Cinnamon or True Cinnamon	0.017 g/kg
Korintje Cinnamon, Padang Cassia or Indonesian Cinnamon	2.15 g/kg
Saigon Cinnamon, Vietnamese Cassia or Vietnamese Cinnamon	6.97 g/kg
Cassia Cinnamon or Chinese Cinnamon	0.31 g/kg

Flavor: Ceylon Cinnamon is softer and subtle taste, tends to be slightly sweet with notes of citrus and cloves while the other types of Cinnamon are mostly spicy and strong.

Fragrance: Ceylon Cinnamon has a characteristic fragrance and aroma due to the presence of a compound called Cinnamaldehyde.

Crumbly: Ceylon Cinnamon sticks are rolled like a cigar with slivers of paper thin Cinnamon bark. It is easy to grind and powder compared to other forms of Cinnamon which are harder.

Oil extraction: It is difficult to extract oil from Ceylon Cinnamon as the oil resides in the inner bark of the tree. The bark has to be peeled carefully and steam distilled.

APPENDIX 4: SPICE PRODUCT TREE

HS 0904: Pepper of the genus <i>Piper</i>; dried or crushed or ground fruits of the genus <i>Capsicum</i> or of the genus <i>Pimenta</i> Value US\$73.65 million					
HS 090411 Pepper of the genus <i>Piper</i> , neither crushed nor ground Value US\$68.05 million	HS 090412 Pepper of the genus <i>Piper</i> , crushed or ground Value US\$4.24 million	HS 090420 Fruits of the genus <i>Capsicum</i> or of the genus <i>Pimenta</i> , dried or crushed or ground (No export)	HS 090421 Fruits of the genus <i>Capsicum</i> or of the genus <i>Pimenta</i> , dried, neither crushed nor ground Value US\$0.55 million	HS 090422 Fruits of the genus <i>Capsicum</i> or of the genus <i>Pimenta</i> , crushed or ground Value US\$0.81 million	
HS 0906: Cinnamon and cinnamon-tree flowers Value US\$159.11 million					
HS 090610 Cinnamon and cinnamon-tree flowers (excluding crushed and ground) (No export)	HS 090611 Cinnamon <i>Cinnamomum zeylanicum</i> 'Blume' (excluding crushed and ground) Value US\$154.70 million	HS 090619 Cinnamon and cinnamon-tree flowers (excluding <i>Cinnamomum zeylanicum</i> 'Blume' and crushed and ground cinnamon) Value US\$0.48 million	HS 090620 Crushed or ground cinnamon and cinnamon-tree flower Value US\$4.37 million		
HS 0907: Cloves, whole fruit, cloves and stems Value US\$13.46 million					
HS 090700 Cloves, whole fruit, cloves and stems (No export)	HS 090710 Cloves, whole fruit, cloves and stems, neither crushed nor ground Value US\$12.82 million	HS 090720 Cloves, whole fruit, cloves and stems, crushed or ground Value US\$0.63 million			
HS 0908: Nutmeg, mace and cardamoms					
HS 090810 Nutmeg (No export)	HS 090811 Nutmeg, neither crushed nor ground Value US\$9.55 million	HS 090812 Nutmeg, crushed or ground Value US\$1.45 million	HS 090820 Mace (No export)	HS 090821 Mace, neither crushed nor ground Value US\$2.3 million	HS 090822 Mace, crushed or ground Value US\$0.12 million
HS 33019030 Extracted oleoresins; concentrates of essential oils in fats, fixed oils, waxes and the like, obtained by enfleurage or maceration; terpenic by-products of the deterpenation of essential oils; aromatic aqueous distillates and aqueous solutions of essential oils. Other, of cinnamon leaf. Cinnamon oil. Value US\$6.22 million					

APPENDIX 5: TRADE AND INVESTMENT SUPPORT INSTITUTION ANALYSIS FOR THE S&C SECTOR

POLICY SUPPORT INSTITUTIONS

Name of institution	Coordination of interventions in sector	Human and financial capacity	Influence on sector development
	High, medium or low	High, medium or low	High, medium or low
Ministry of Industry and Commerce (Department of Commerce)	L	L	M
Ministry of Science, Technology and Research	L	L	L
MoA	L	L	M
MoPI	H	H	H
MPI	M	M	M
MoDSIT	H	H	M
Ministry of Finance (Trade and Investment Policy Division)	H	H	H
Ministry of Labour	H	H	H
Ministry of National Policy and Economic Affairs	L	L	L
Ministry of Health	L	L	L
Ministry of Law and Order	L	L	L
SLSI	M	M	M
ITI	M	M	M
DoA (quarantine, pesticide registration)	H	L	L
DoEA	H	L	H

TRADE SERVICES INSTITUTIONS

Name of institution	Coordination of interventions in sector	Human and financial capacity	Influence on sector development
	High, medium or low	High, medium or low	High, medium or low
EDB	H	H	H
SLSI	H	M	M
ITI	H	L	M
BOI	L	L	L
Sri Lanka Customs	H	L	H

BUSINESS SUPPORT INSTITUTIONS

Name of institution	Coordination of interventions in sector	Human and financial capacity	Influence on sector development
	High, medium or low	High, medium or low	High, medium or low
SC	H	L	H
Ceylon Chamber of Commerce	H	H	H
Federation Chamber of Commerce and Industry Sri Lanka	H	M	L
SAPPTA	H	L	H
National Chamber of Commerce of Sri Lanka	H	L	H
National Chamber of Exporters	H	L	H
Exporters Association of Sri Lanka	H	L	H
National Agribusiness Council	L	L	L
National Intellectual Property Office, under Ministry of Industry and Commerce	L	L	L

ACADEMIC, INNOVATION AND RESEARCH SUPPORT INSTITUTIONS

Name of institution	Coordination of interventions in sector	Human and financial capacity	Influence on sector development
	High, medium or low	High, medium or low	High, medium or low
State universities	M	M	M
CTA	H	M	H
CCA	H	L	H
Hector Kobbakaduwa Agrarian Research and Training Institute	L	L	L

REFERENCES

- American Spice Trade Association (2017). Website. Available from www.astaspice.org.
- Businesswire (2017). Global Organic Spices Market 2017-2021 by Application, Distribution and Products, 3 October. Available from www.businesswire.com/news/home/20171003006383/en/Global-Organic-Spices-Market-2017-2021-Application-Distribution.
- Center for the Promotion of Imports, Ministry of Foreign Affairs of the Netherlands (2017). What requirements should spices or herbs comply with to be allowed on the European market?, 12 December. Available from www.cbi.eu/market-information/spices-herbs/buyer-requirements.
- De Silva, Sarada (2012). Supply challenges for spice producers. Presentation at the World Spice Congress. Pune, February. Available from worldspicecongress.com/uploads/files/34/sess04-c.pdf.
- Ethnic Foods Europe (2017). Website. Available from www.ethnicfoodseurope.com.
- European Spice Association (2015). Available from <http://www.esa-spices.org/download/esa-qmd-rev-5-september-2015-sc-update-as-per-esa-tc-27-10-15.pdf>.
- Fairtrade International (2017). Spices and Herbs. Available from <https://www.fairtrade.net/products/spices-and-herbs.html>.
- FAO (1994). Definition and classification of commodities. Available from www.fao.org/waicent/faoinfo/economic/fao-def/fdef10e.htm.
- Food and Agriculture Organization of the United Nations (2017). FAOSTATS Crops. Available from <http://faostat3.fao.org/browse/Q/QC/E>. Accessed 17 November 2017.
- Skelly, Jack (2015). Variety is the Spice of Life: Global Growth in Chili Sauces, 13 February. Available from <https://blog.euromonitor.com/2015/02/variety-is-the-spice-of-life-global-growth-in-chili-sauces.html>.
- United Nations Development Programme (2016). *Trade Winds of Change: Women Entrepreneurs on the Rise in South Asia – Background country study Sri Lanka*. Available from <http://www.asia-pacific.undp.org/content/rbap/en/home/library/sustainable-development/trade-winds-of-change.html>.
- UNIDO (2016). *Enhancing Capacity in the Cinnamon Value Chain In Sri Lanka*. Available from http://www.standardsfacility.org/sites/default/files/PG_343_Mapping_VC_Cinnamon.pdf.
- UNIDO and FAO (2005). Herbs, spices and essential oils. 2005. Vienna and Rome. Available from <http://www.fao.org/3/a-ad420e.pdf>.
- Wiyarari, Janaka (2017). Come Together: Raising Standards in the Sri Lankan Pepper Industry, 5 May. Available from <http://www.ips.lk/talkingeconomics/2017/05/05/come-together-raising-standards-in-the-sri-lankan-pepper-industry/>.



Ministry of Development Strategies
and International Trade



Sri Lanka Export Development Board



International
Trade
Centre



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