Opportunity analysis of agriculture products in Sri Lanka

Measuring markets and feasibility

Ministry of Primary Industries - Agriculture Sector Modernization Project
Harvard Center for International Development

Introduction

- **The Purpose:**
  - To find the best products/s to be focused by ASMP-MOPI project
  - Select the best product/s for value chain analysis
  - Find our the demanded market for different agricultural products.
  - Analysis the most feasible products in Agriculture Sector
  - Understand the current strength of the export of Agricultural products.
  - Identify the new area of expansion of the Agricultural products considering the poverty.

Introduction

- **The Team:**
  - Tim O'Brien : Harvard University
  - Daniel Stock :Harvard University
  - Paula Marra :Entrepreneur in USA
  - D.C.A Gunawardana :MOPI /ASMP
  - Sapumal Kapukotuwa :MOPI /ASMP
  - Nandani Siriyalatha :Statistician in MOPI

Selected Sectors in Agriculture

- Spices: Cinnamon, Pepper, Vanilla, Ginger, Turmeric, Clove, Nutmeg, Cardamom
- Aquaculture: Shrimp, Cuttle Fish, Octopus, Bivalves, Sea Cucumber & Urchins
- Floriculture: Foliage, Branches, Cut Flowers
- Fruits: Plantains, Banana, Mango, Guava, Soursop, Pineapple, Passion Fruit, Jackfruits
- Vegetables: Bell Pepper, Cassava, Cucumber, Gherkins, Tomatoes

Why these crops?

- Most relevant to Ministry's current work
- Mix of current and new crops for Sri Lanka
- Representative of different types of agriculture

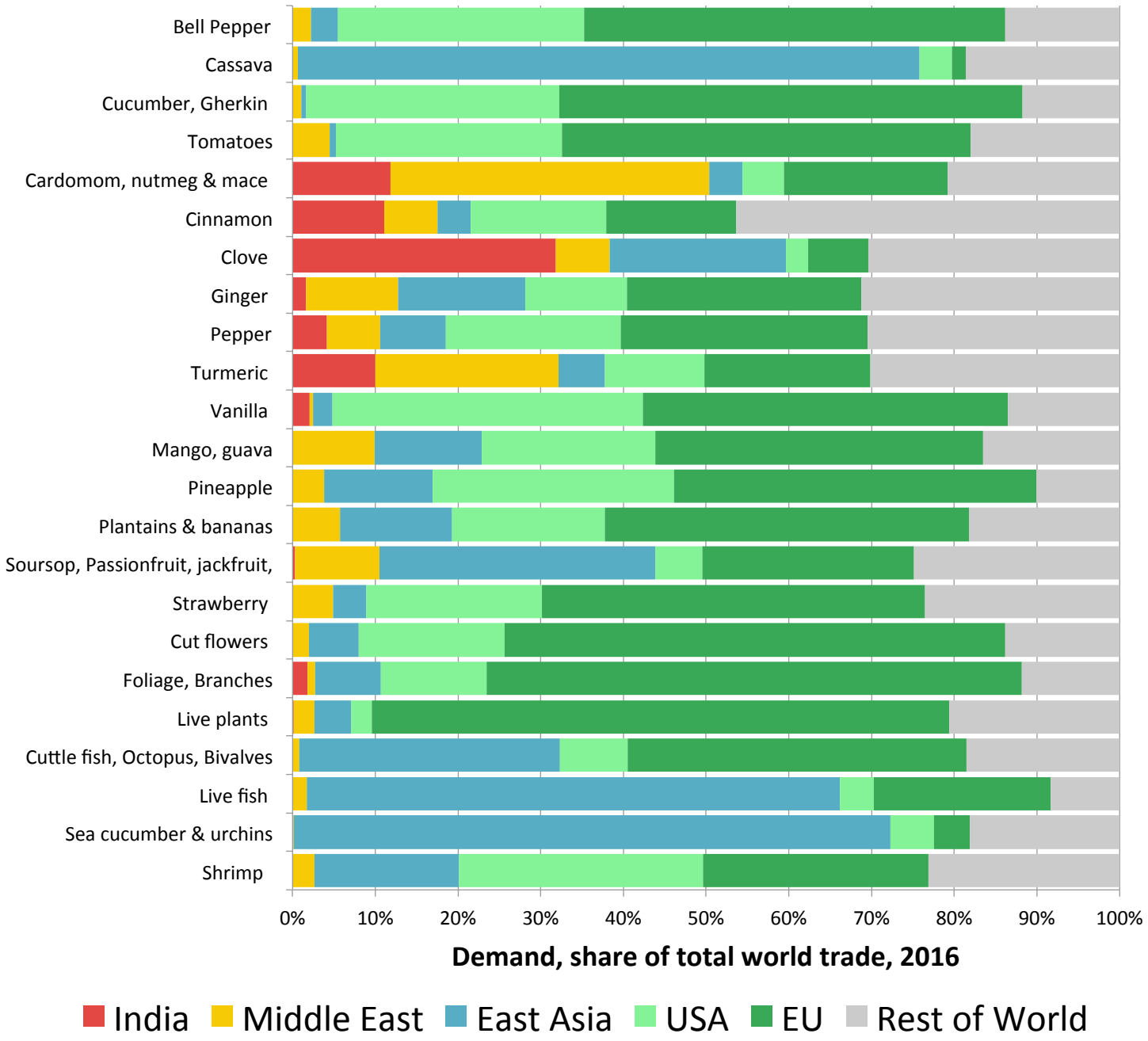
Market Demand

Key Markets for Selected Sectors, 2016

MARKETS	IMPORTS, 2016 (USD, bn)	IMPORTS, 2016 (% of world)
EU Market	40.6	42.0%
USA Market	18.2	18.8%
Middle East Market	3.7	3.8%
East Asian Market (China, Japan, South Korea, Singapore, Hong Kong)	14.9	15.4%
Indian Market	0.6	0.6%
Total	**78.0**	**80.7%**
Rest of the World	18.6	19.3%

Why these markets?

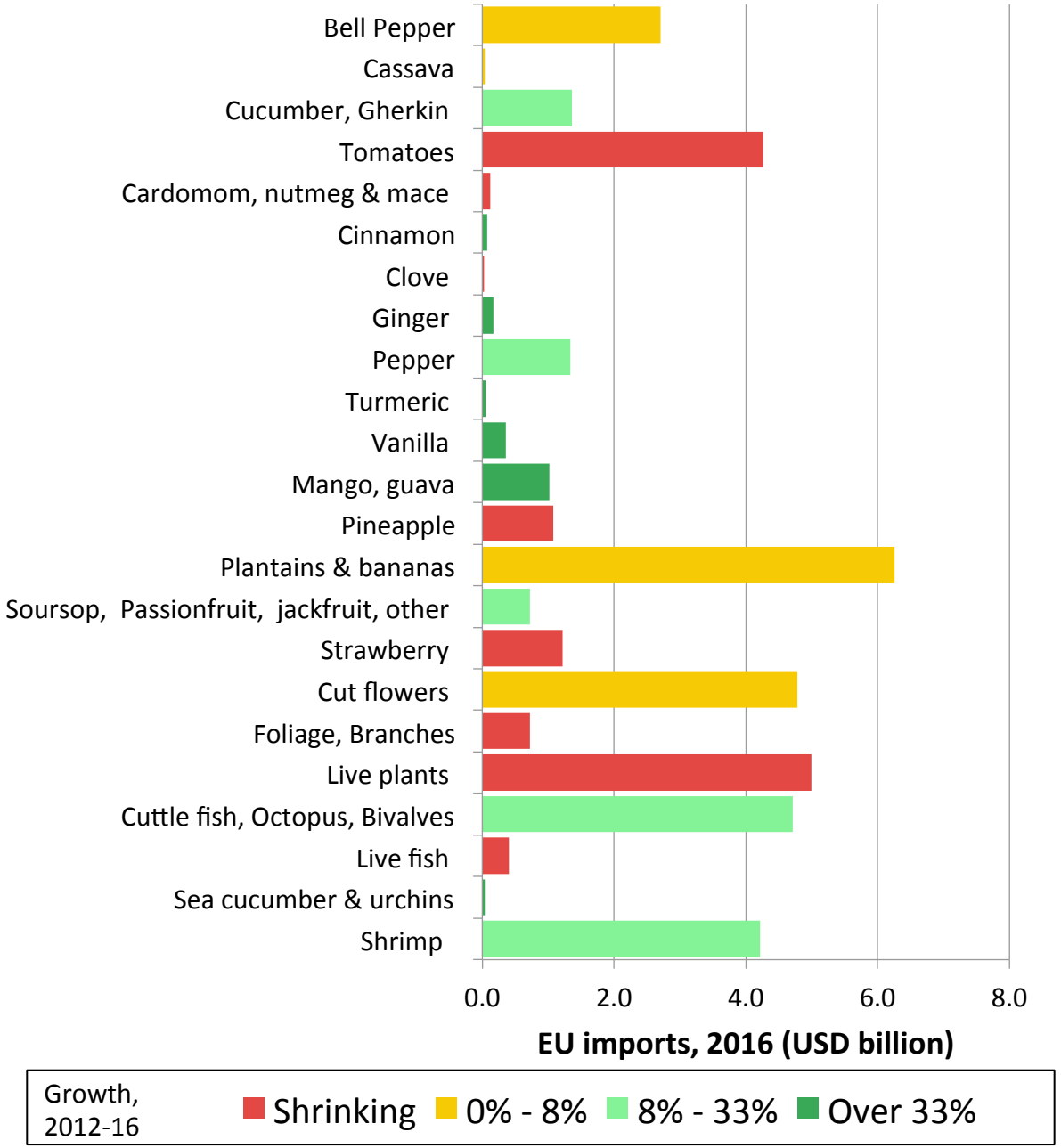
- Mix of regional and global demand
- Mix of high, mid and low income economies
- Represents 80.7% of total world trade



Import share by region

- **EU & USA:** Almost all the products have their largest markets in the EU & USA
- **East Asia:** Cassava, Live Fish, and Sea Cucumber
- **Middle East:** Cardamom, Nutmeg & Mace, and Turmeric
- **India:** Clove and Turmeric, as well as other spices
- Cinnamon is mainly **Mexico**

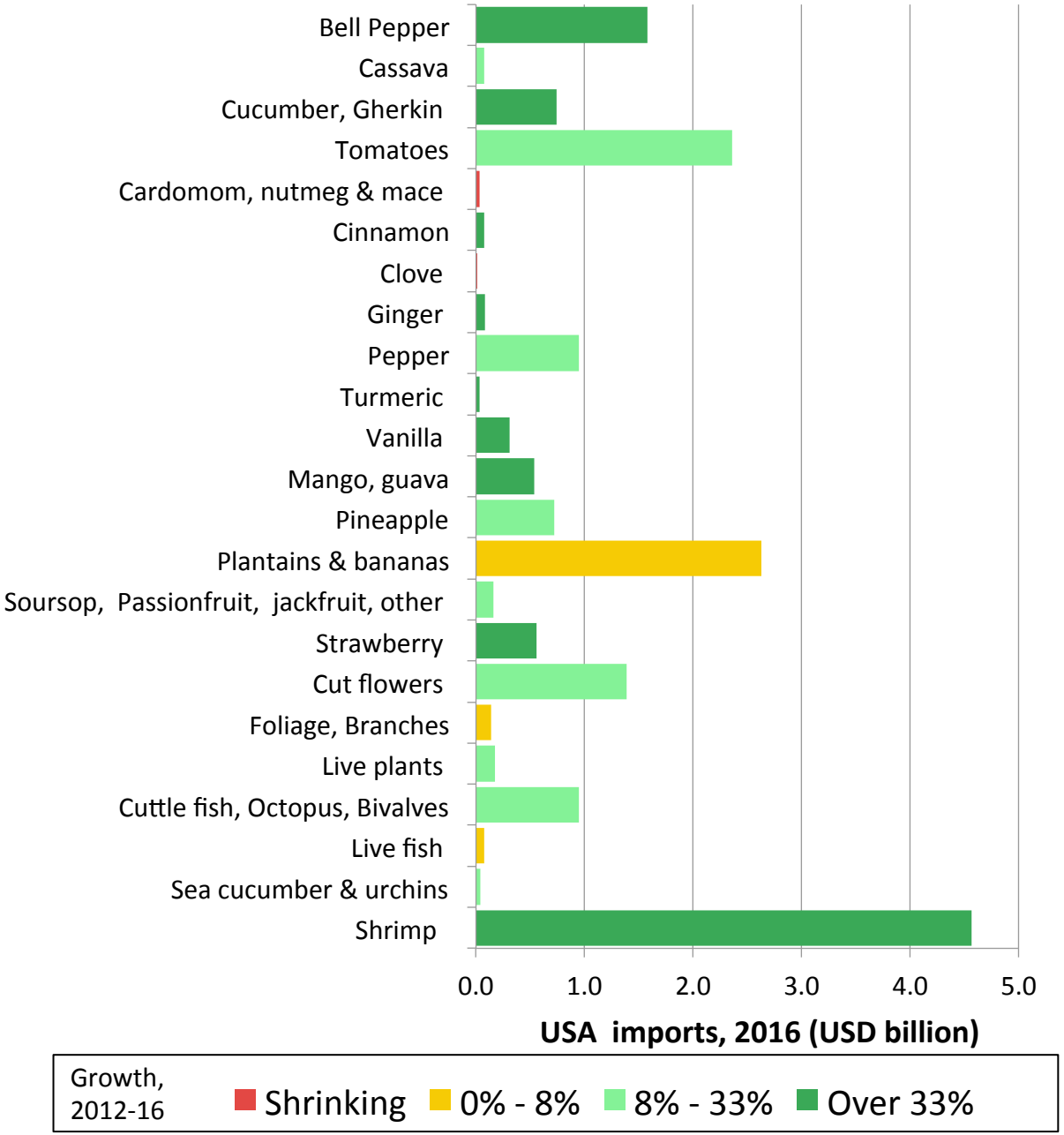
Source: ITC, calculations from MoPI



Demand by region:
EUROPEAN UNION

- Mango , Vanilla , Ginger, Turmeric, and Cinnamon have the highest growth rates in the EU market.
- Shrimp and Cuttle Fish, Octopus & Bivalves have large markets in the EU with high growth rates.
- Plantains & Bananas, Bell Pepper, and Cut Flowers have large markets but lower growth rates.

Source: ITC, calculations from MoPI

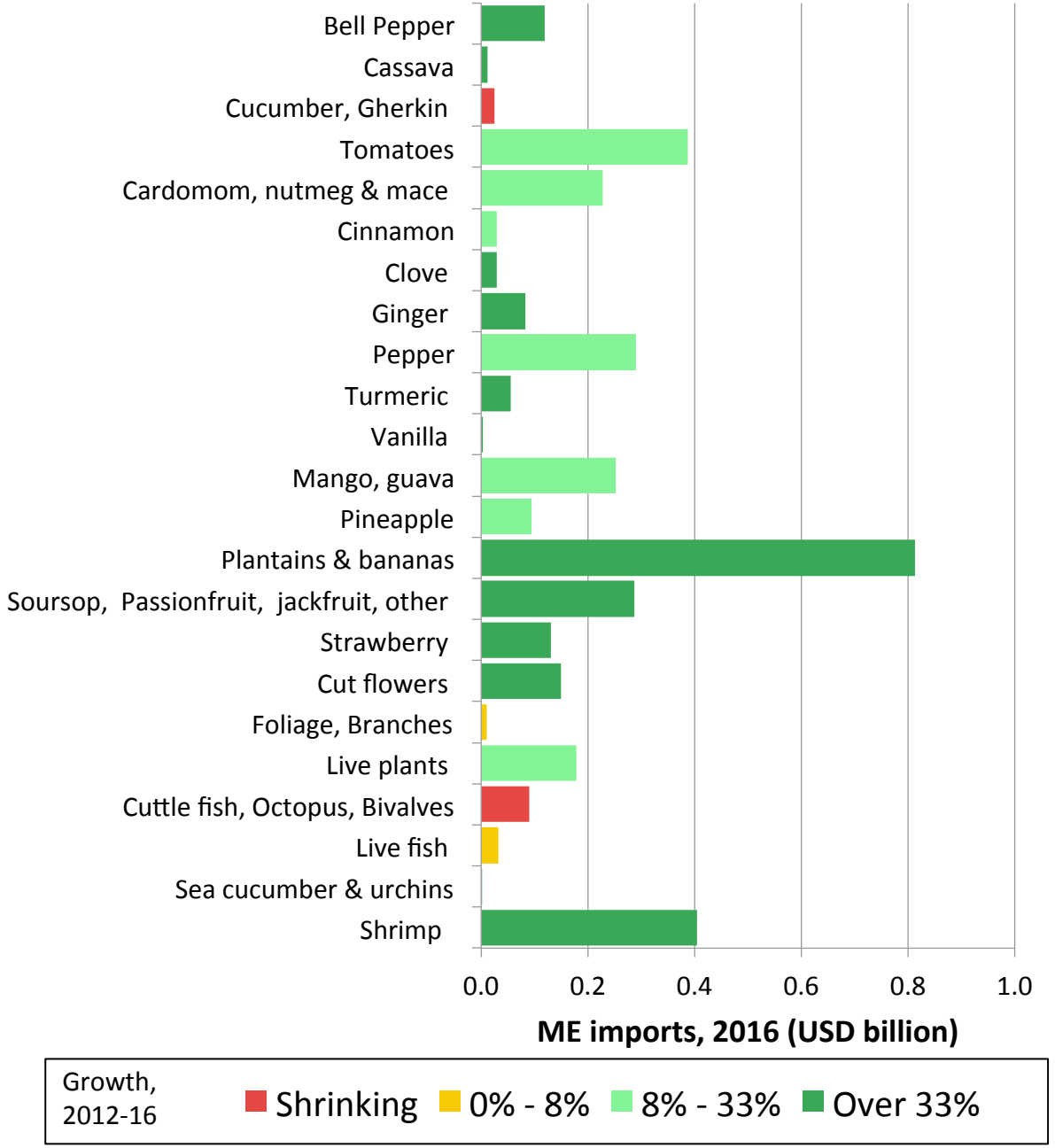


Demand by region: USA

- Most of the products have high or very high growth rates in the US market. MoPI has to consider the US market and implement a specific program to expand Sri Lanka's market share in the USA.

- In particular, Shrimp, Tomatoes, Bell Pepper, Cut Flowers, and Plantains & Bananas have very large markets in the US.

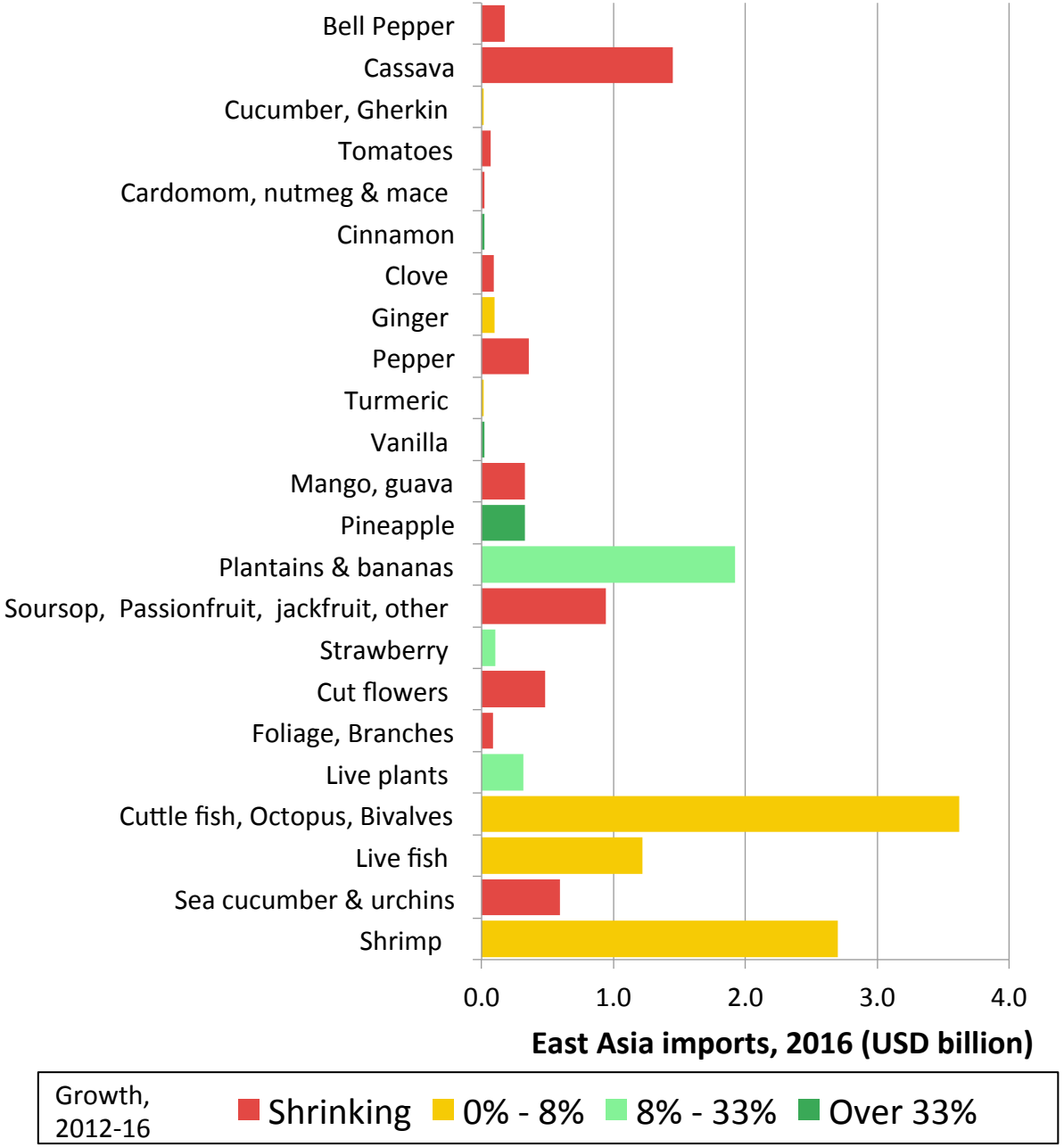
Source: ITC, calculations from MoPI



Demand by region:
MIDDLE EAST

- Most off the selected products are growing rapidly in the Middle East market.
- Comparatively, Tomatoes, Plantains & Bananas, and Shrimp have the highest market opportunities in the Middle East.
- However, the Middle East market is smaller overall than the other markets (US,EU,EA).

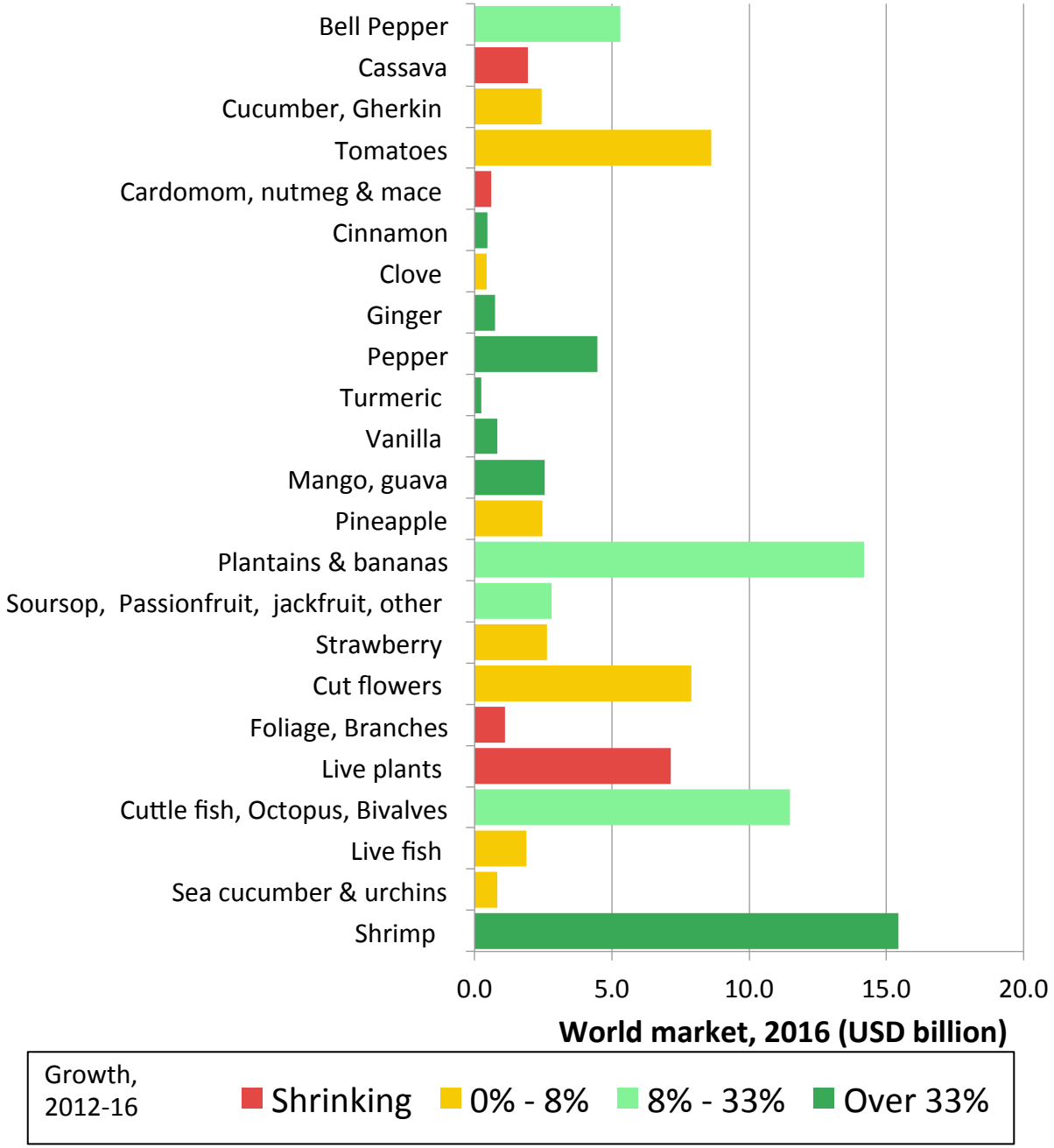
Source: ITC, calculations from MoPI



Demand by region:
EAST ASIA

- The largest East Asian markets are for Shrimp and Cuttle Fish, Octopus & Bivalves.
- While Pineapple, Cinnamon, Vanilla, Plantains & Bananas, Live Plants, and Strawberries have the highest growth rates.
- MoPI targeted the development of the Sea Cucumber projects for the East Asian market. However, this product has a shrinking market in East Asia, which should be considered.

Source: ITC, calculations from MoPI

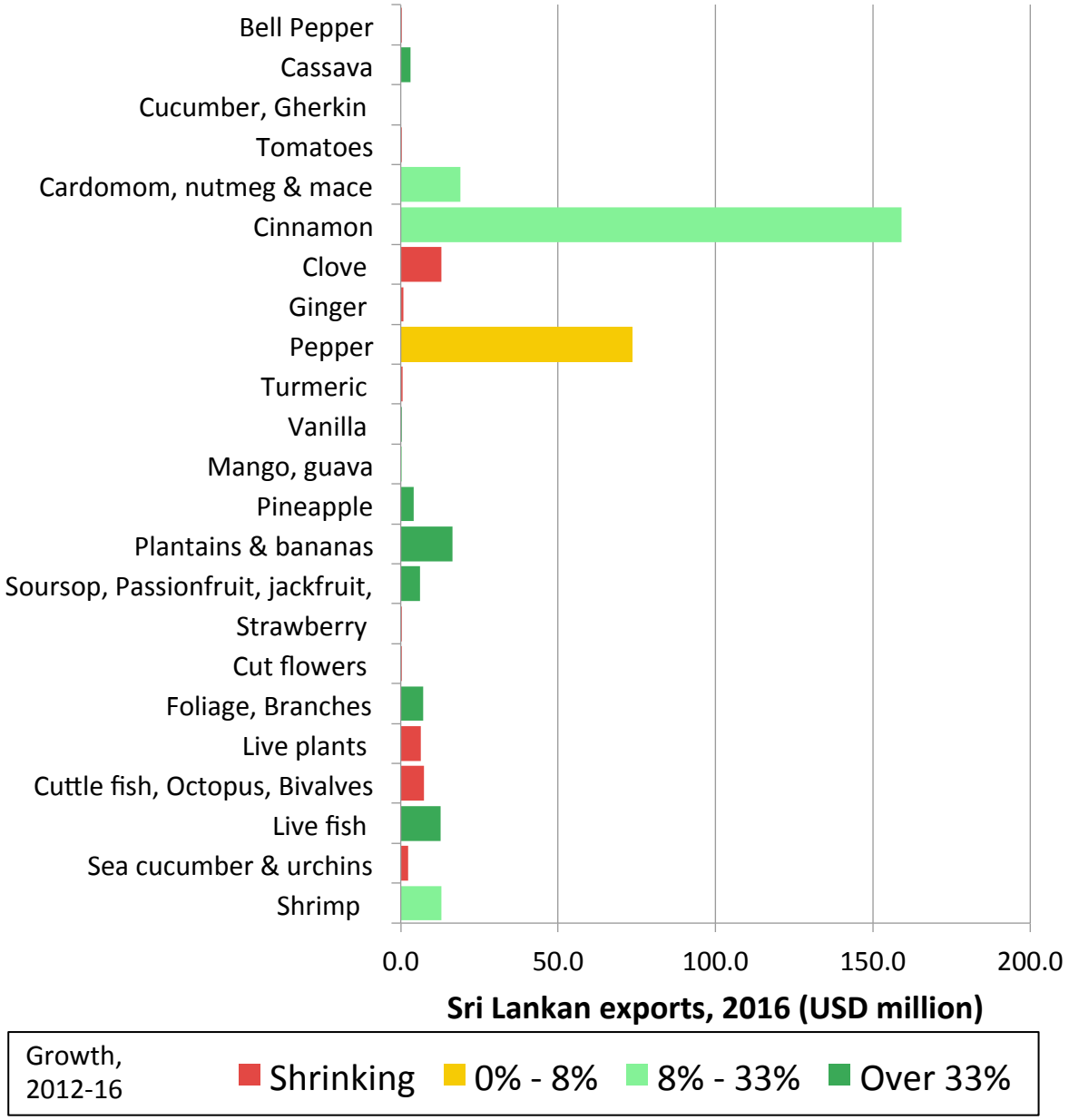


World Market Size and Growth

- Largest markets are: Shrimp (15 Bn, Plantains 14 Bn, Cuttle Fish/Bivalves 11 Bn, and Tomatoes 8.5 Bn)
- Shrimp, Pepper, Mango, Vanilla, Ginger & Cinnamon have the highest growth rates
- Cuttle Fish, Octopus & Bivalves , Plantains & Bananas, Soursop & Passion Fruits, Bell Pepper are also growing in the world market
- Cucumber & Gherkin, Tomatoes, Clove, Pineapple, Strawberry, Cut Flowers, Live Fish, Sea Cucumber have more limited growth
- Cardomom, Nutmeg & Mace, Cassava, Live Plants, Foliage & Branches have shrinking markets

Source: ITC, calculations from MoPI

Current Strength



Sri Lankan Exports and Growth

- Largest exports are Cinnamon and Pepper. Both are growing, but Cinnamon is growing faster.
- Cardamom and Cloves are smaller spice exports. Cardamom exports are growing; Clove exports are not.
- Most of the fruit exports are smaller in scale but growing very fast.
- Others, including vegetables, seafood, and floriculture, have low volumes and varying growth rates.

Source: ITC, calculations from MoPI

Feasibility

Analysing feasibility

- This study considers 17 dimensions of feasibility:
  - From cultivation to processing to marketing, and stages in between.
  - Includes the costs, skills, and other barriers involved with each.
- While these dimensions would ideally be measured with data, not enough was available at the time of study.
- Instead, a 5-point qualitative scoring scale was devised:
  - 1 = most feasible, 5 = most challenging
- To assign scores, the team consulted private sector representatives for multiple crops and value chain segments.
  - The judgement and experience of MoPI officers was also used.

Feasibility criteria used

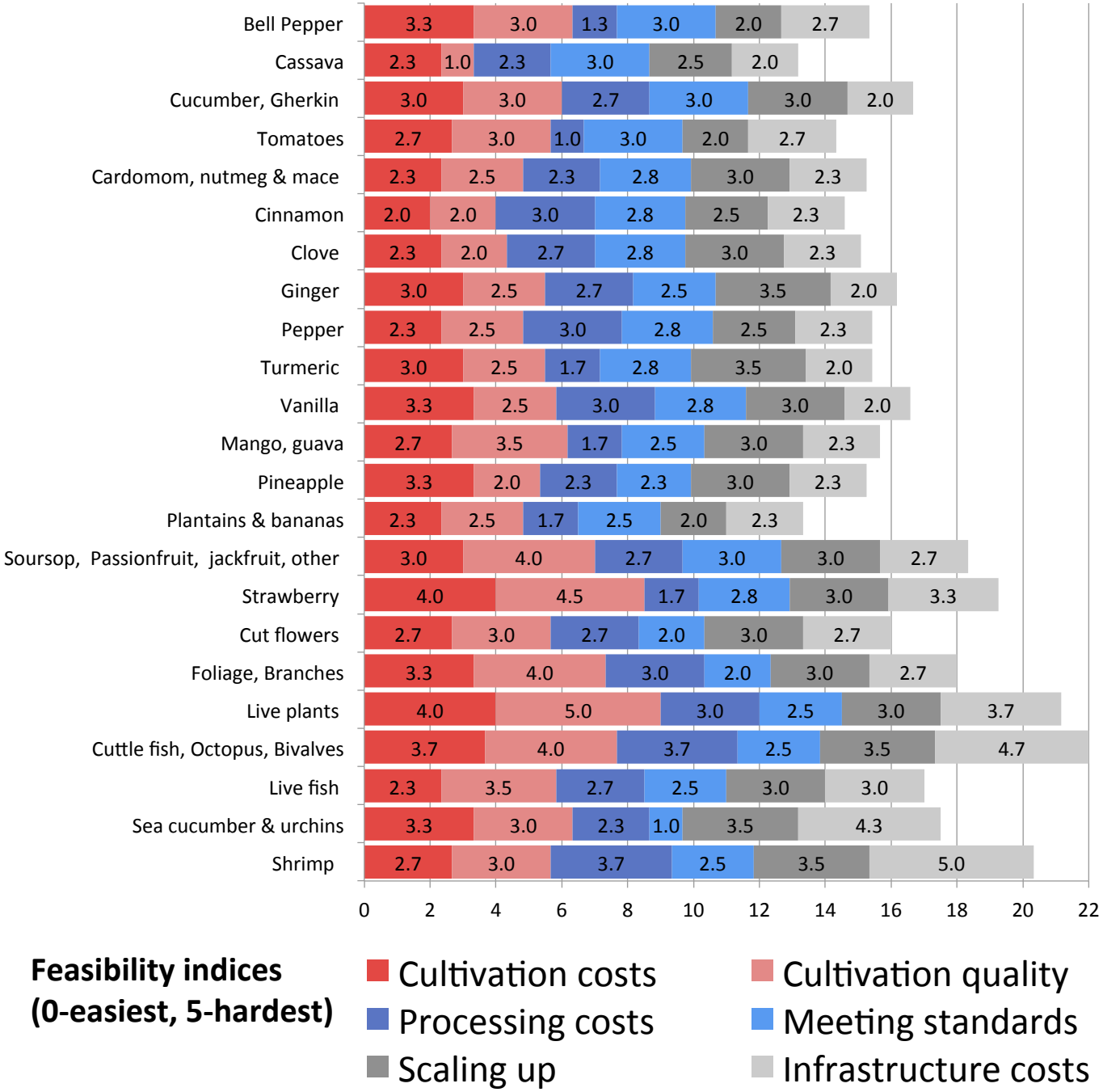
	Example of **low-scoring** product (***very easy***)	Example of **high-scoring** product (***very difficult***)
1. CULTIVATION COSTS: skills, money, technology needed for cultivation		
Skills / special knowledge needed for cultivation	Cassava	Live Plants, Strawberry
Equipment / technology needed for cultivation and harvest (including tractors, greenhouses, drip irrigation, etc.)	Spices	Bell Pepper, Strawberry
Labour needs for cultivation (estimate)	(Similar qualitative values across products, still collecting data)	
2. CULTIVATION QUALITY: difficulties for high-quality cultivation (finding inputs & successfully growing)		
Difficulty to get inputs for cultivation (including planting materials, seed varieties, etc.)	Cassava, Cut Flowers, Shrimp & some spices	Live Plants, Strawberry
Difficulty reaching adequate quality by farmers (including vulnerability to damage during cultivation)	Vanilla	Shrimp
3. PROCESSING COSTS: skills, money, technology needed for processing		
Skills for processing	Bell Pepper, Tomatoes	Octopus, Bivalves
Money needed for processing	Bell Pepper, Tomatoes	Octopus, Bivalves
Technology needed for processing	Bell Pepper, Tomatoes	Octopus, Bivalves, Shrimp

Note: Feasibility criteria and qualitative scores developed by MoPI

Feasibility criteria used

	Example of **low-scoring** product (***very easy***)	Example of **high-scoring** product (***very difficult***)
4. MEETING STANDARDS: for processed crops / foods (ISO, FDA, etc.)		
Indian market standards	Most products	No products
Middle East markets standards	Spices	Fruits and Vegetables
US market standards	Floriculture	Fruits, Vegetables, Spices, and Aquaculture
EU market standards	Floriculture	Fruits, Vegetables, Spices, and Aquaculture
5. SCALING UP: difficulty getting high-quality supply		
Difficulty for processors to get enough supply	Cinnamon, Pepper, Plantains & Bananas	Vanilla, Turmeric, Ginger
Difficulty reaching adequate quality by processors and exporters	Vanilla, Pineapple	Spices, Fruits, Vegetables
6. INFRASTRUCTURE COSTS: assets needed across the entire value chain		
Water	Spices	Shrimp
Electricity	Floriculture	Shrimp, Octopus, Cuttle Fish
Transportation infrastructure	Cassava	Aquaculture, Live Plants

Note: Feasibility criteria and qualitative scores developed by MoPI



Measuring Feasibility

- Plantains & Bananas have the highest feasibility (easiest) based on the index.
  - However, they may also have the highest competition with low income/low-wage countries.
- Cassava and Tomatoes also have high feasibilities (easy products) based on the index.
- Cuttle Fish, Octopus & Bivalves, Live Plants, Shrimp, and then Strawberries are the most challenging.

Note: Feasibility criteria and qualitative scores developed by MoPI

Poverty Considerations

District	Province	Poverty Headcount Index		
		2016	2012-13	average
Mullaitivu	Northern	13%	29%	21%
Kilinochchi	Northern	18%	13%	16%
Batticaloa	Eastern	11%	19%	15%
Moneragala	Uva	6%	21%	13%
Mannar	Northern	1%	20%	11%
Badulla	Uva	7%	12%	10%
Trincomalee	Eastern	10%	9%	10%
Ratnapura	Sabaragamuwa	7%	10%	9%
Jaffna	Northern	8%	8%	8%
Kegalle	Sabaragamuwa	7%	7%	7%
Nuwara Eliya	Central	6%	7%	7%
Galle	Southern	3%	10%	6%
Kandy	Central	6%	6%	6%
Matale	Central	4%	8%	6%
Matara	Southern	4%	7%	6%
Anuradhapura	North Central	4%	8%	6%
Kurunegala	North Western	3%	7%	5%
Polonnaruwa	North Central	2%	7%	5%
Ampara	Eastern	3%	5%	4%
Puttalam	North Western	2%	5%	4%
Hambantota	Southern	1%	5%	3%
Kalutara	Western	3%	3%	3%
Vavunia	Northern	2%	3%	3%
Gampaha	Western	2%	2%	2%
Colombo	Western	1%	1%	1%

Poverty and ASMP

- The poorest districts appear to be in the Northern, Eastern, Uva, and Sabaragamuwa Provinces.
- Central & Southern Provinces come next.
- For this reason, we should make sure that ASMP includes projects in these districts.
- Colombo (and Western Province) is the least poor. However, more MoPI ASMP projects are there.
- Note: poverty statistics are based on surveys, with large changes between 2016 & 2012/13. Thus averages are used.

Source: DCS Household income and Expenditure Surveys

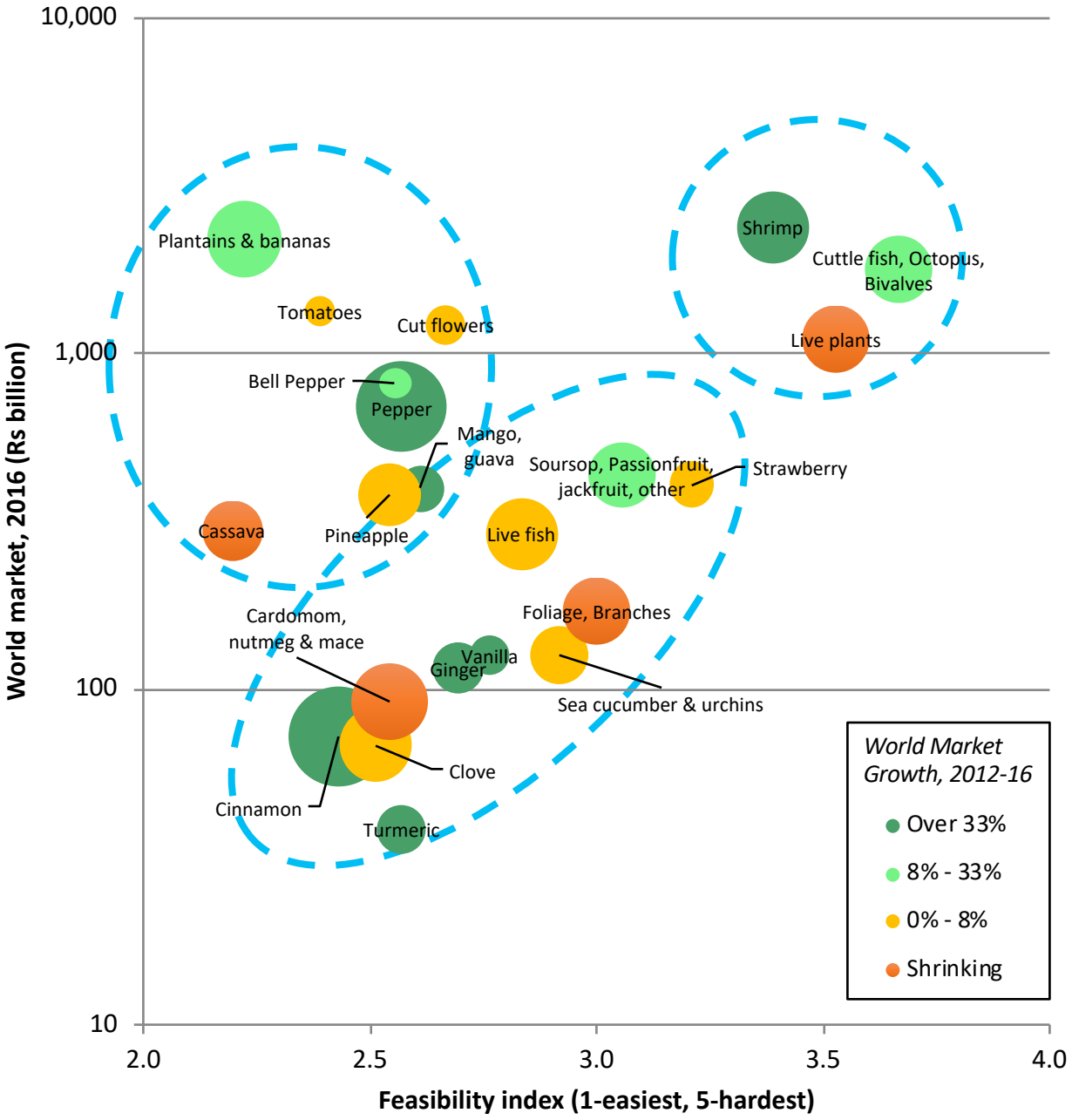
Crop	Crop Category	in Northern and Eastern provinces	in Uva and Sabara-gamuwa provinces
Cinnamon	Spices	✓	✓
Pepper	Spices	✓	✓
Ginger	Spices		✓
Turmeric	Spices		✓
Cardomom, nutmeg & mace	Spices		✓
Clove	Spices		✓
Vanilla	Spices		✓
Mango, guava	Fruits	✓	✓
Strawberry	Fruits		✓
Plantains & bananas	Fruits	✓	✓
Pineapple	Fruits		✓
Soursop, Passionfruit, jackfruit	Fruits	✓	✓
Tomatoes	Vegetable	✓	✓
Cucumber, Gherkin	Vegetable	✓	✓
Bell Pepper	Vegetable	✓	✓
Cassava	Vegetable	✓	✓
Foliage, Branches	Floriculture		✓
Cut flowers	Floriculture		✓
Live plants	Floriculture		✓
Shrimp	Aquaculture	✓	
Live fish	Aquaculture	✓	✓
Sea cucumber & urchins	Aquaculture	✓	
Cuttle fish, Octopus, Bivalves	Aquaculture	✓	

Poverty and Crop Selection

- In the Northern and Eastern Provinces, all aquaculture and vegetables under this study appear to be possible. Also, some fruits and spices, but no floriculture.
- In Uva and Sabaragamuwa, most of the products studied are possible. The exception is aquaculture.

Source: Ministry of Primary Industries evaluation

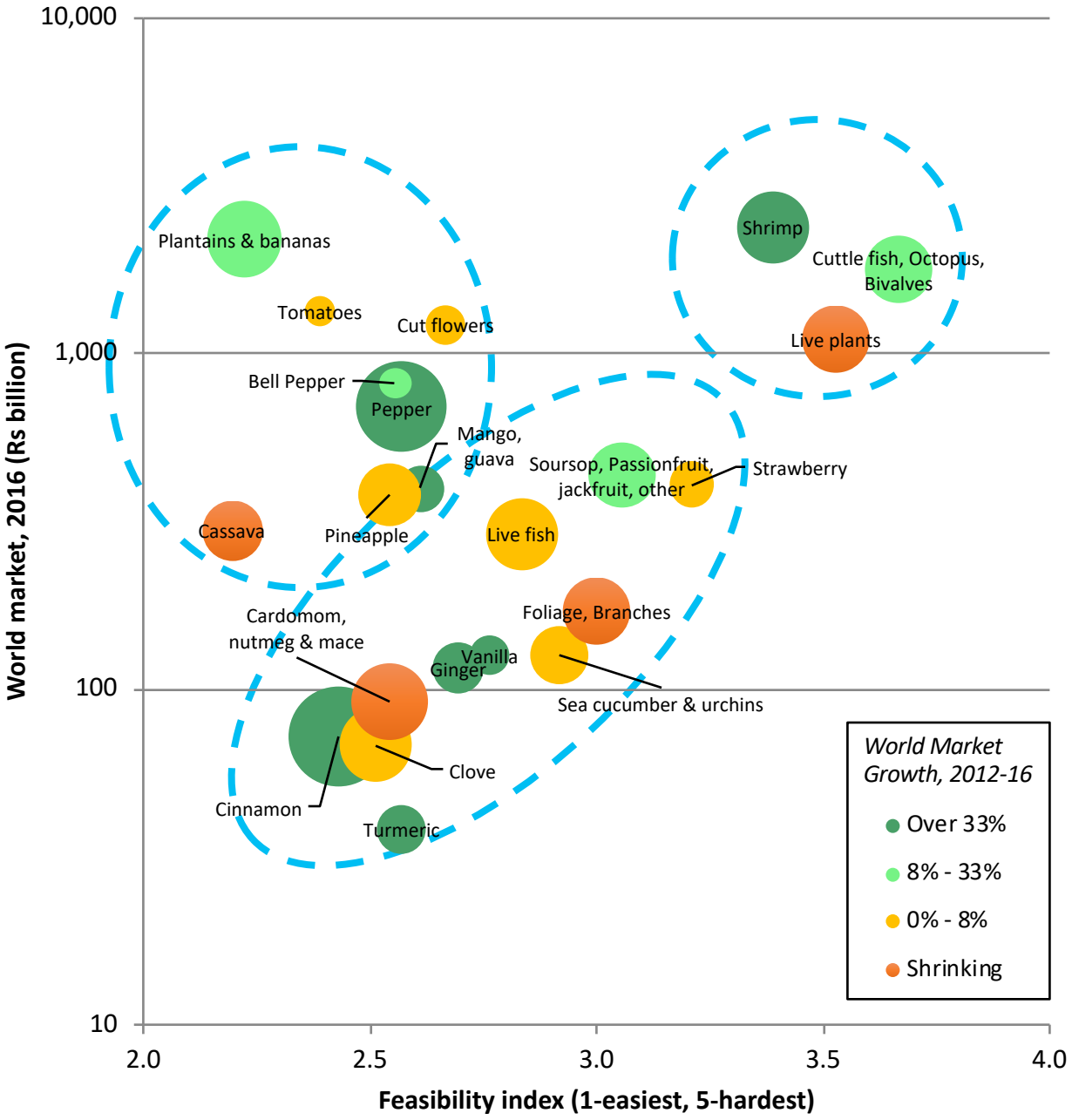
Combining the Analysis



Feasibility, Market Opportunity and Current Exports

- Position in graph is determined by feasibility (x-axis) and world market size (y-axis)
  - Upper-left: Products are high feasibility and high market opportunity
    - However, given low feasibility, there might be competition from low-wage countries.
  - Upper-right: High market opportunity but more challenging products
  - Lower-left and centre: Low-to-moderate market opportunities coinciding with low-to-moderate difficulty
- Circle size shows current Sri Lankan exports
- Circle colour shows world market growth

Source: MoPI calculations & ITC data
Note: Circle size represents 2016 exports from Sri Lanka



Feasibility, Market Opportunity and Current Exports
Some Noteworthy Products

- **Pepper:** Feasibility is easy, world market opportunities are high and growing fast, and current exports are large.
  - Cinnamon & some other spices are similar, but much smaller world market as of today
- **Shrimp:** Somewhat difficult, however good opportunity in world market and growing, and exports are already considerable.
  - Similar for Cuttle Fish, Octopus & Bivalves
- **Plantains & Bananas:** Very easy, large and growing market, high current exports.

Source: MoPI calculations & ITC data
Note: Circle size represents 2016 exports from Sri Lanka

Noteworthy Sectors: *Pepper and other spices*

Pepper:

- Moderate size and high-to-moderate growth in EU, US, ME
- Shrinking in EA
- Low-to-moderate difficulty
- Large current exports from Sri Lanka & growing
- Possible in Northern & Eastern and Uva & Sabaragamuwa provinces

Other spices:

- High world market growth but lower volumes
- Highest growth rates in EU and US and ME, but small market volumes
- Low-to-moderate difficulty
- (Cinnamon) large current exports from Sri Lanka & growing fast
- Possible in Uva & Sabaragamuwa provinces (but not Northern & Eastern, except for Cinnamon)

Noteworthy Sectors: *Aquaculture*

Shrimp:

- Growing fastest and has a very large world market
- In East Asia, large market but slow growth
- In EU, US and ME, larger market and considerable growth rate
- More challenging, due to costs for infrastructure
- Possible in Northern & Eastern provinces (but not Uva & Sabaragamuwa)

Cuttle Fish / Octopus / Bivalves:

- Growing moderately fast with large market
- In East Asia, large market but slow growth
- In EU, large market and considerable growth rate
- Smaller in US, with moderate growth
- More challenging, due to costs for infra-structure and quality control difficulties
- Possible in Northern & Eastern provinces (but not Uva & Sabaragamuwa)

Noteworthy Sectors: *Fruits and Vegetables*

Plantains & Bananas:

- Growing moderately fast with a very large world market
- In East Asia, moderate growth and moderate market size
- In EU & US, large market but slow growth
- In Middle East, large market and high growth
- Least challenging—high feasibility (but perhaps also high international competition)
- Possible in Northern & Eastern as well as Uva & Sabaragamuwa provinces

Bell Pepper:

- Moderate market sizes in EU, US and globally; most growth coming from US
- Low-to-moderate difficulty, easier to process
- Possible in all of the poorest provinces

Tomatoes:

- Large world market but low growth (moderate in US and shrinking in EU)
- Low-to-moderate difficulty, easier to process
- Possible in all of the poorest provinces

Other fruits and vegetables:

- Smaller world market, mixed growth rates (highest in Middle East)
- Mixed difficulty (strawberry is highest)
- Low Sri Lankan exports but growing very fast
- Possible in all of the poorest provinces

Conclusions and Next Steps

Conclusions

- Based on consideration of **market opportunity** (size and growth rate), **feasibility**, **current exports** and **potential in high-poverty districts**, some of the most noteworthy growth opportunities are:
  - Pepper
  - Shrimp
  - Plantains & Bananas
- Also noteworthy are the following sectors:
  - Cinnamon and other spices
  - Cuttle Fish, Octopus & Bivalves
  - Bell Pepper, Tomatoes, and other fruits and vegetables
- MoPI ASMP could include a special focus on these products.
- Beyond the ASMP, MoPI should explore other support mechanisms to help high-poverty areas better connect to existing value chains for these products.

Next Steps (on expanding analytical work)

Additional variables for this analysis:

- Need to add analysis of international competition
  - For Plantains & Bananas, do other, poorer countries compete on price to an extent that will keep farmers poor?
- Should also consider tariff barriers
- For products of interest, an analysis of comparative advantages should be completed, including the potential for Sri Lanka to deliver high quality products to niche markets.

New value chain analyses:

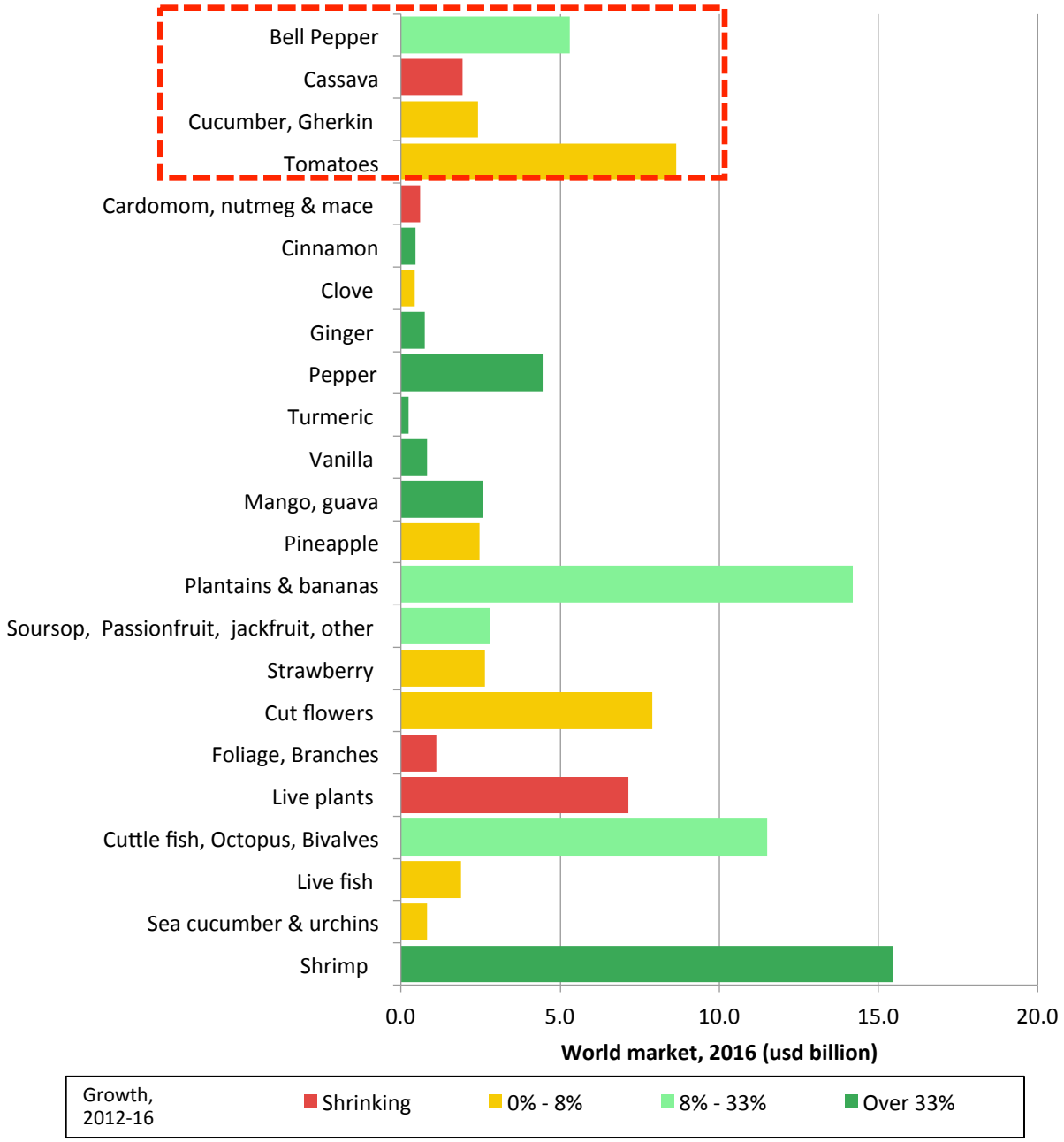
- Value chain analysis for the top sectors (pepper, shrimp, maybe plantains)
  - Analysis on shrimp sector already finalized; sector has dedicated project budget
  - Pepper is a priority
  - Plantains and other fruits and vegetables are also priorities
- MoPI plans to hire a specialist that can devote dedicated resources to this.
- Value chain analyses must be conducted in close collaboration with value chain actors and must produce clear action steps.

THANK YOU

Appendix

Subsectors studied:

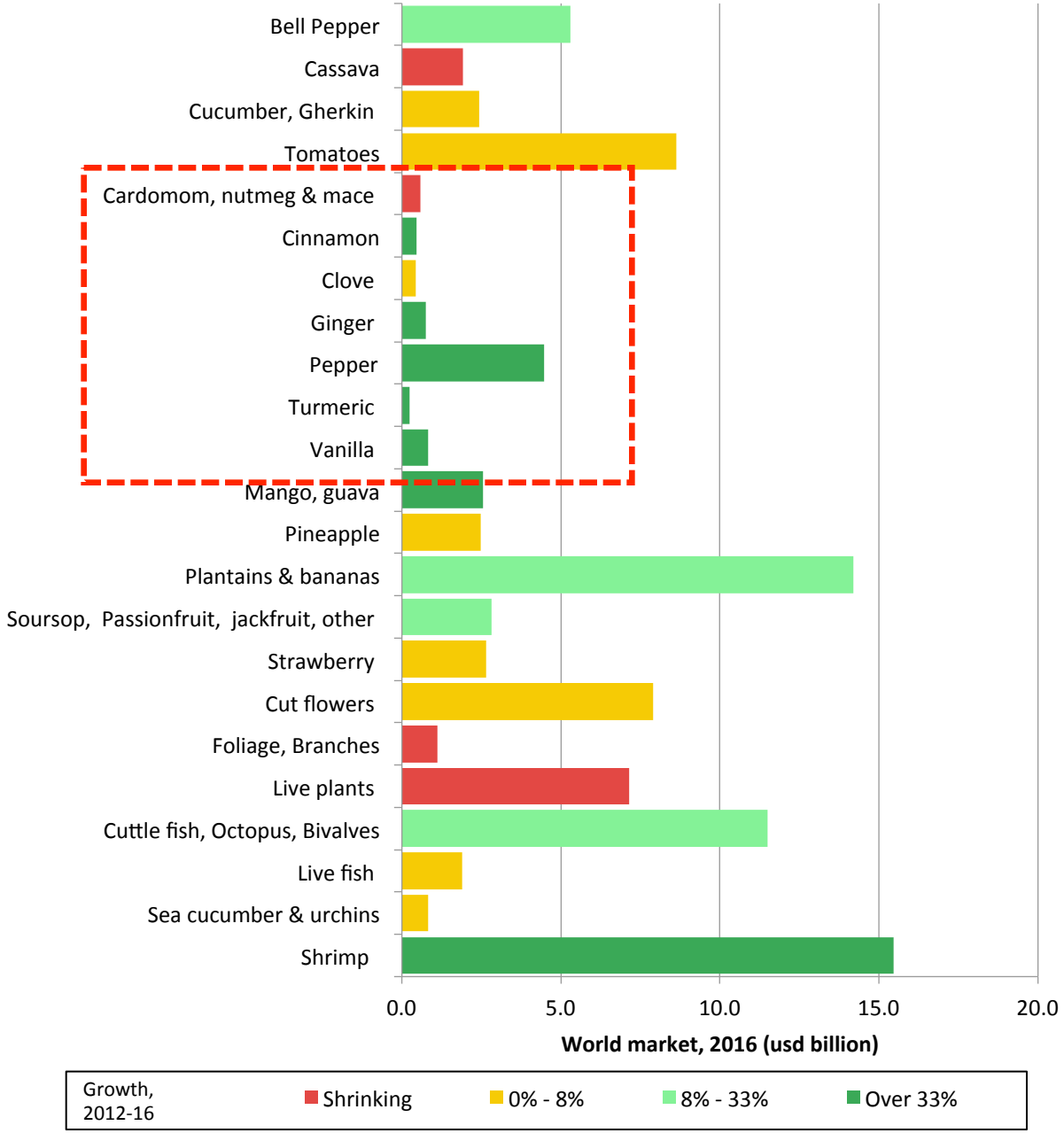
Crop	HS codes	Full HS description (ITC website)
Cinnamon	0906	Cinnamon and cinnamon-tree flowers
Pepper	0904	Pepper of the genus Piper; dried or crushed or ground fruits of the genus Capsicum or of the genus Pimenta
Ginger	091011 &12	Ginger, neither crushed nor ground (091011); Ginger, crushed or ground (091012)
Turmeric	091030	Turmeric "curcuma"
Cardomom, nutmeg & mace	0908	Nutmeg, mace and cardamoms
Clove	0907	Cloves, whole fruit, cloves and stems
Vanilla	0905	Vanilla
Mango, guava	080450	Fresh or dried guavas, mangoes and mangosteens
Strawberry	081010	Fresh strawberries
Plantains & bananas	0803	Bananas, incl. plantains, fresh or dried
Pineapple	080430	Fresh or dried pineapples
Soursop, Passionfruit, jackfruit, other	081090	Fresh tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit, carambola, pitahaya and other edible fruit
Tomatoes	0702	Tomatoes, fresh or chilled
Cucumber, Gherkin	0707	Cucumbers and gherkins, fresh or chilled
Bell Pepper	070960	Fresh or chilled fruits of the genus Capsicum or Pimenta
Cassava	071410	Fresh, chilled, frozen or dried roots and tubers of manioc "cassava",
Foliage, Branches	0604	Foliage, branches and other parts of plants
Cut flowers	0603	Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes
Live plants	0602	Live plants incl. their roots, cuttings and slips; mushroom spawn
Shrimp	030617	Frozen shrimps and prawns, even smoked, whether in shell or not
Live fish	0301	Live fish
Sea cucumber & urchins	0308	Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted
Cuttle fish, Octopus, Bivalves	0307	Molluscs, fit for human consumption, even smoked, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine



World Market Size & Growth: Vegetables

- Tomatoes and Bell pepper have the largest global markets and have considerable market growth.
- Cassava and Gherkin have comparatively smaller global markets. The cassava market is shrinking.

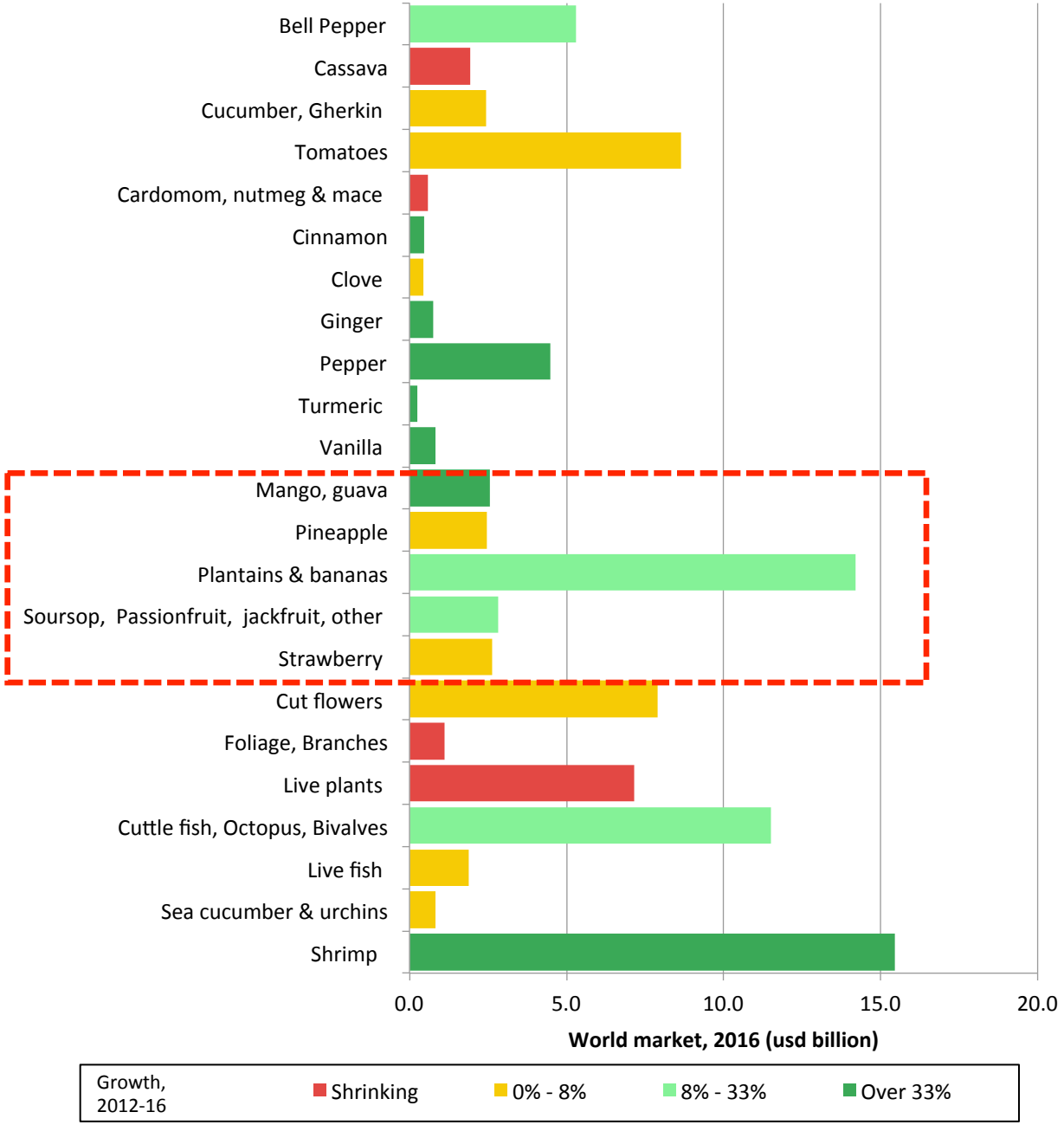
Source: ITC, calculations from MoPI



World Market Size & Growth: Spices

- Pepper, Cinnamon, Ginger, Vanilla, Turmeric have growing world markets.
- However, Pepper has the largest overall market by a substantial amount.
- Cardamom, Nutmeg & Mace has negative overall growth in global markets.
- Clove is growing slowly on the world market while also having a low global volume.

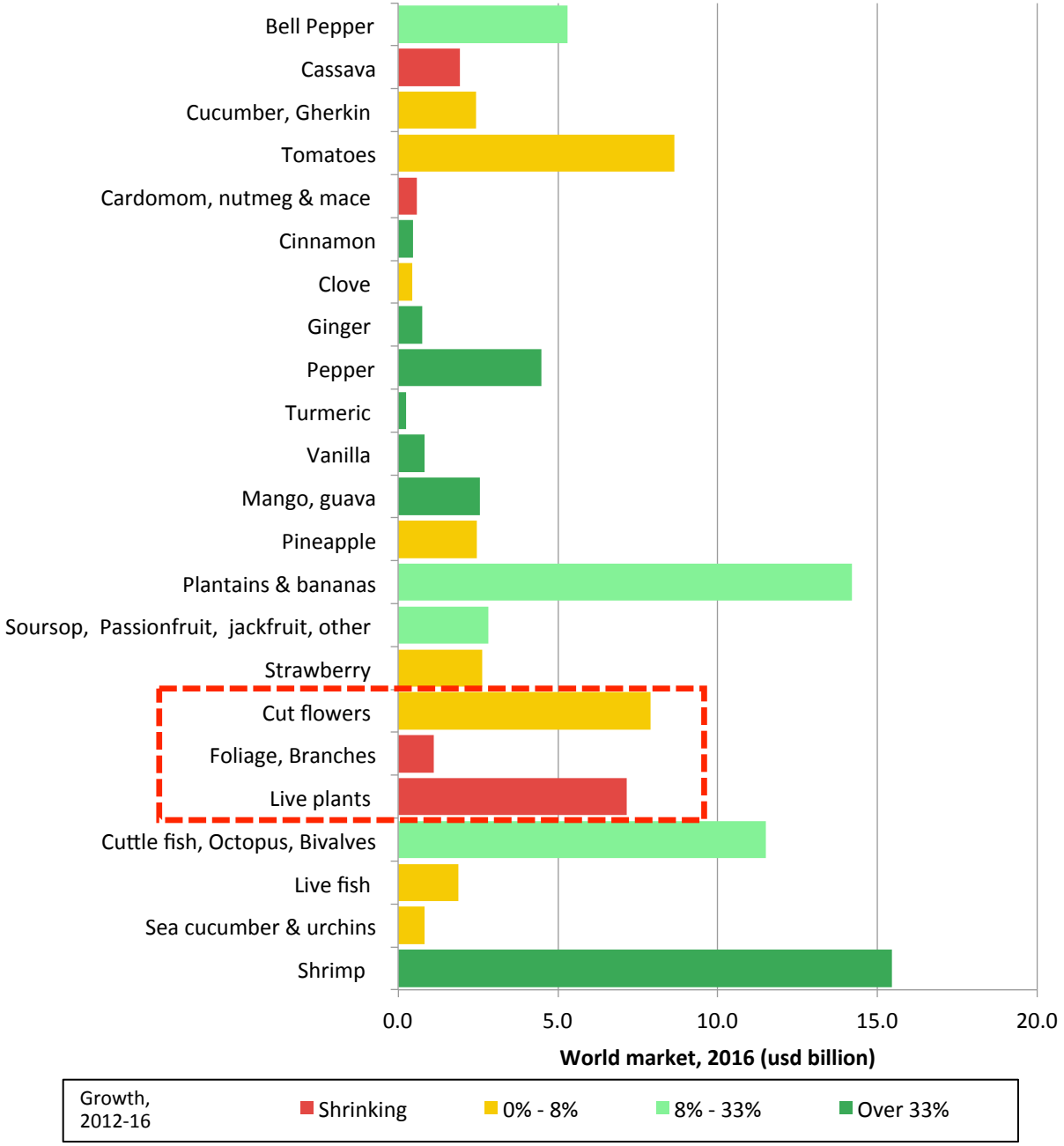
Source: ITC, calculations from MoPI



World Market Size & Growth: Fruits

- Plantains & Bananas have the largest market and the market is growing at a considerable growth rate. Soursop & Passion Fruit has a smaller market that is also growing strongly.
- Mango & Guava have a higher growth rate of the world market, but comparatively lower market size.
- Strawberry and Pineapple have less growth in the world market and market sizes that are similar to the other fruits except for Plantains & Bananas.

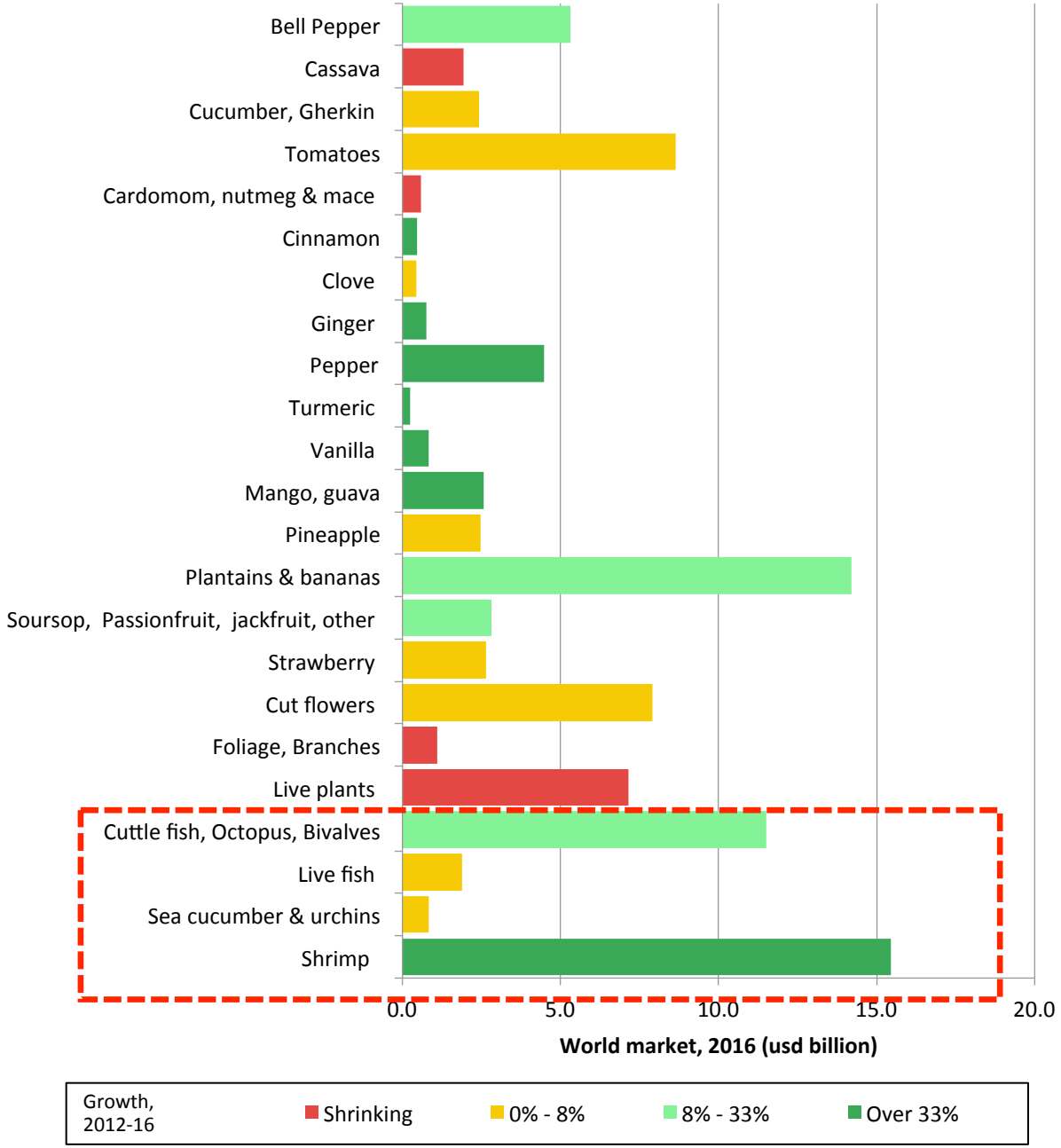
Source: ITC, calculations from MoPI



World Market Size & Growth: Floriculture

- Live Plants and Foliage are shrinking on the world market.
- Cut Flowers have a significant market size and low market growth.

Source: ITC, calculations from MoPI



World Market Size & Growth: Seafood

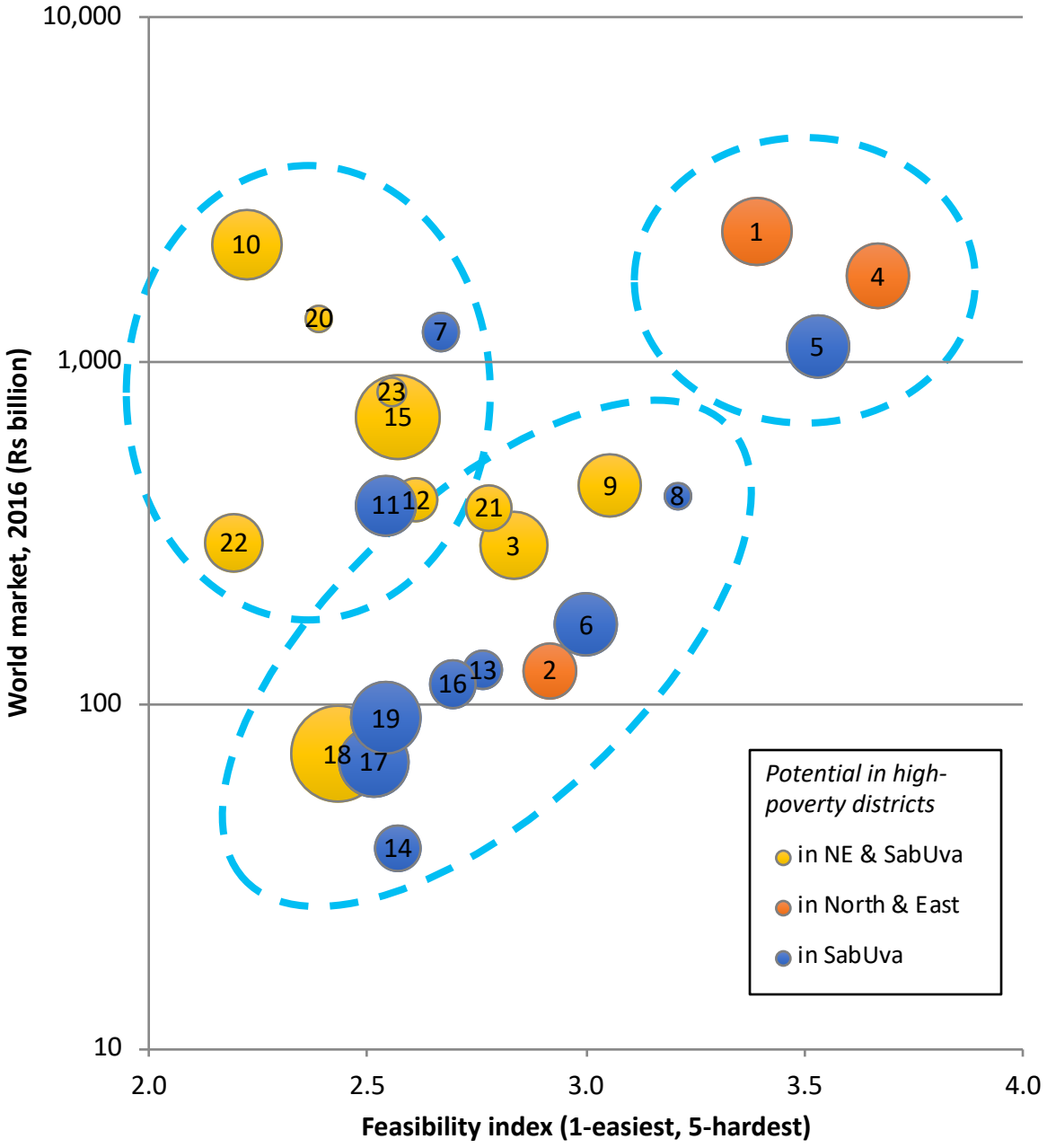
- Shrimp has the highest market opportunity given its very large market and fast growth.
- Cuttle Fish, Octopus & Bivalves also have a large market and promising growth.
- Live Fish and Sea Cucumbers & Urchins have smaller world markets with limited growth.

Source: ITC, calculations from MoPI

Feasibility criteria

Scores:

	1 (low)	2	3 (medium)	4	5 (high)
1. CULTIVATION COSTS skills, money, technology needed for cultivation					
Skills / special knowledge needed for cultivation	No need of special awareness for soil or planting. Very little specialized knowledge -- just throw seeds. Nearly all of farmers in Sri Lanka puluwan. Easy to learn.		most or all farmers can do it, but not all are aware of the right planting materials / varieities, but can easily teach them. Techniques are relatively easy to follow.		Needs special awareness for soil / planting. Different from other crops -needs very specialized knowledge -- only applies to that specific crop. Very few people or companies know how to grow it, very few are aware. Harder to learn.
Equipment / technology needed for cultivation (cultivation equipment or harvest equipment (e.g. tractors for paddy), greenhouses, or drip irrigation	none of this equipment		some of the equipment (e.g. drip irrigation) would be useful, but not yet common in Sri Lanka , paddle whele for shrimp farming etc		all of the equipment is needed (drip irrigation, greenhouse, high tech cultivation or harvest eqiupment e.g. tractor)
labour need for cultivation (estimate)	no need labor for cultivation.		additional labors need for the cultivation which home labor not sufficient		high labor intensive cultivation & equipment can't replace
2. CULTIVATION QUALITY difficulties for high-quality cultivation (finding inputs & successfully growing)					
difficulty to find inputs for cultivation (inc planting materials, quality, varieties)	Very low cost, easy-to-get inputs		Planting materials are low cost; shortage of planting materials for some variety		Key inputs or varieties are banned (due to Seed Act or other) or are prohibitively expensive.
difficulty reaching adequate quality by farmers (inc. vulnerability to damage)	Little-to-no quality prremium; no special treatment needed during growing, harvest and transport; hard to damage		High quality premium and care needed to reach quality during growing and harvesting and during transport		Buyers need extremely high quality and product is vulnerable to damage; very high costs to protect the product during transport
3. PROCESSING COSTS skills, money, technology needed for processing					
Skills for processing	products are not processing and no skill required		high skill required for pocessing		skill labor is not available in the country
Money needed for processing	no product processing and no money need for proceessing		monery need for primary processing (e.g.drying, value addition)		high investment required for change the entire set up of the processing. (biosecurity farm for shrimp production)
Technology needed for processing	no technolgoy applicable for processing		advance technolgy required for processing which is availble in local context		technology is only available in developed countries and can't transferred.
4. MEETING STANDARDS for processed crops / foods (ISO, FDA, etc)					
Indian market standards	Virtually no regulations.		Relatively simple regulations / standards. Many (but not all) companies can meet them.	__	Most strict / difficult standards / regulations. Only the top Sri Lankan companies can meet them.
Middle East markets standards					
US market standards					
EU market standards					
5. SCALING UP difficulty getting high-quality supply					
difficulty for processors to get enough supply	adequate supply for processing (e.g. pepper)		supply is not adequate for pocessing (e.g. Gherkin)		supply is not available for processing (e.g. Vanilla)
difficulty reaching adequate quality processors and exporters	qualit is not consider as importanta factor for processors and exporters e.g vanilla		quality can be enhace by limited processing (tomatoes , bell peppers)		quality is extreamly bad which is rejected by the processors and exporterse and more advance processing and required (E.g. Prawns product which has not gain adequat weight)
6. INFRASTRUCTURE COSTS assets needed across the entire value chain					
water	drought resistance for some agriclutural products / procesing (E.g. lemmon grasss)		water required for cultivation /procesing (most of the crops)		Water is must for cultivation /procesing (E.g Shrimp, sea cucumber)
electricity	no need electricity for enire value chian/minor cost incur		avarage cost incur through out the value chain		due to the cost factor electricity can't be supply through out the value chain - e.g Shrimp
transportation infrastructure	quality does not deteriorate by transporttion e.g dry products		requried extrac attention with low cost - mango		high tech transportation facilities required when transportation and effect to deteriorate quality due to very sensitive e.g. shrimp



Aquaculture
- 1 Shrimp
- 2 Sea cucumber & urchins
- 3 Live fish
- 4 Cuttle fish, Octopus, Bivalves

Floriculture
- 5 Live plants
- 6 Foliage, Branches
- 7 Cut flowers

Fruits
- 8 Strawberry
- 9 Soursop, Passionfruit, jackfruit
- 10 Plantains & bananas
- 11 Pineapple
- 12 Mango, guava

Spices
- 13 Vanilla
- 14 Turmeric
- 15 Pepper
- 16 Ginger
- 17 Clove
- 18 Cinnamon
- 19 Cardomom, nutmeg & mace

Vegetable
- 20 Tomatoes
- 21 Cucumber, Gherkin
- 22 Cassava
- 23 Bell Pepper

Feasibility, Market Demand and Current Exports

- Position in graph is given by feasibility (x-axis) and world market size (y-axis)
- Upper-left: Products are high feasibility and high market opportunity
- Upper-right: High market opportunity but more challenging products
- Lower-left and centre: Low-to-moderate market opportunities coinciding with low-to-moderate difficulty.
- Circle size shows current Sri Lankan exports

Source: MoPI calculations & ITC data
Note: Circle size represents 2016 exports from Sri Lanka