

Packaging Business in Thailand

Pattra Maneesin, Ph.D

**Thailand Institute of Scientific
and Technological Research (TISTR)**

Online roundtable meeting

**“Opportunities and Investment Support
Measures for Packaging Business in Thailand”**

9th September 2021

www.tistr.or.th

Thai Packaging Centre



Research & Development



Activities

- Research and Development in packaging area
- Testing of packaging materials and containers with modern equipments and standard test methods
- Disseminating of packaging knowledge and conducting seminars and training programmes on packaging

Member : APF, IAPRI, WPO, ISTA



Promotion & Training



Testing & Consultancy

PACKAGING TESTING SERVICE ACHIEVED
ISO 9001 : 2015 CERTIFICATION
TIS 17025 : 2548 (ISO/IEC 17025 : 2005)



Material Biodegradation Testing Laboratory

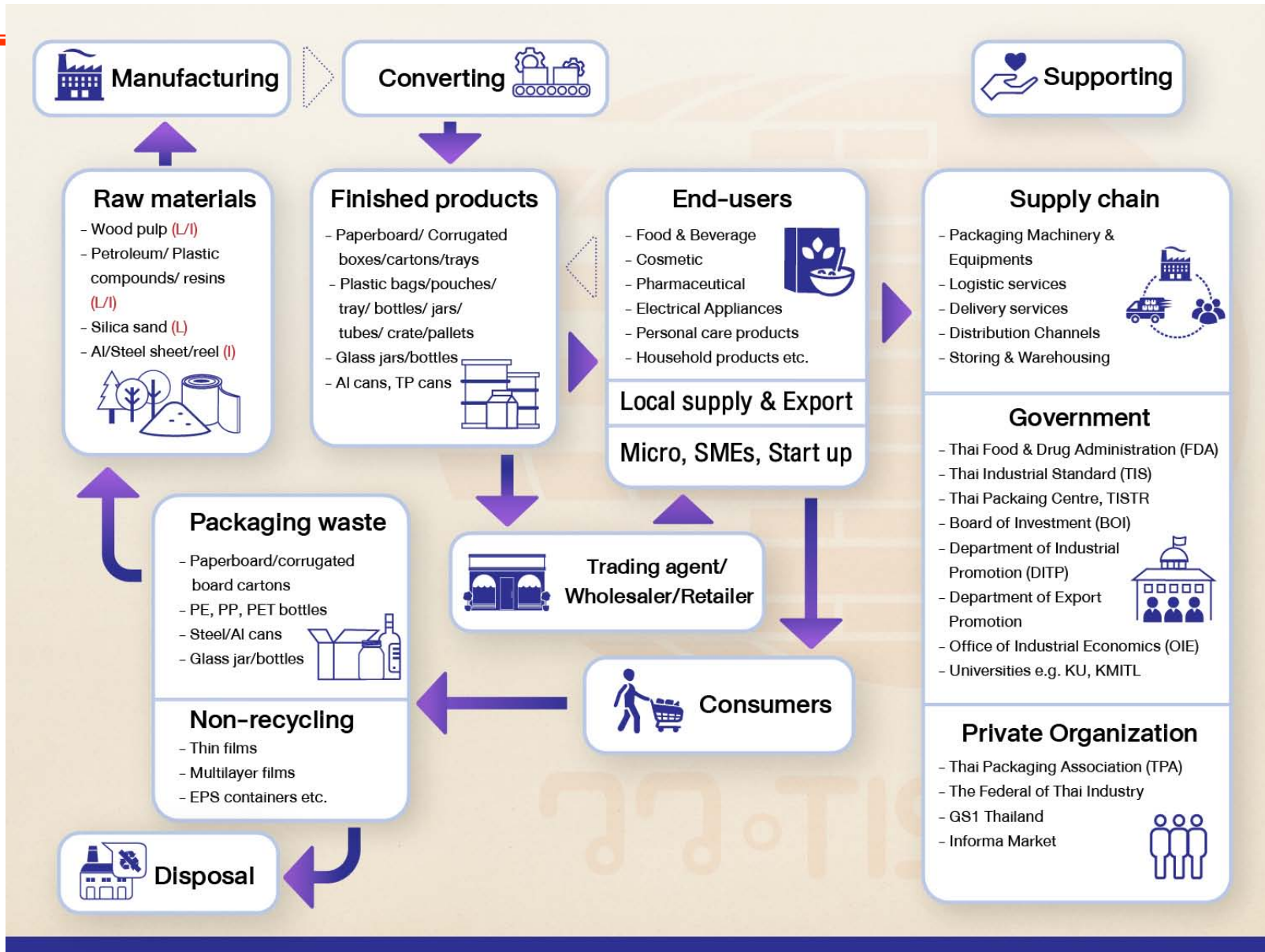
Service
contract
research



Biodegradable Testing Center

- ❖ Compostable Plastic Test
- ❖ Ready Biodegradability Test
- ❖ Preliminary Biodegradation Test
- ❖ Pesticides Bioremediation

Thailand Packaging Business



Global Packaging Industry

- Global packaging volume is approximately USD110,985.7 Million in 2021 (1st Quarter)
 - 13% increase in comparison to 2020
 - Growing rate has expected about 7.5% per year (2019-2027)
- Thailand is the largest exporter in Asean which accounts about USD844.8 Million (11.2% increase). Its strength due to application of high technology and production of high quality products.
- Major importers are US (14.6%), Japan (14.5%), Vietnam (9.3%), Indonesia (8.6%), China (6%)
- 78.2% of export value are plastic packaging which accounts about 1.7% of global market share.

Thailand Packaging Industry

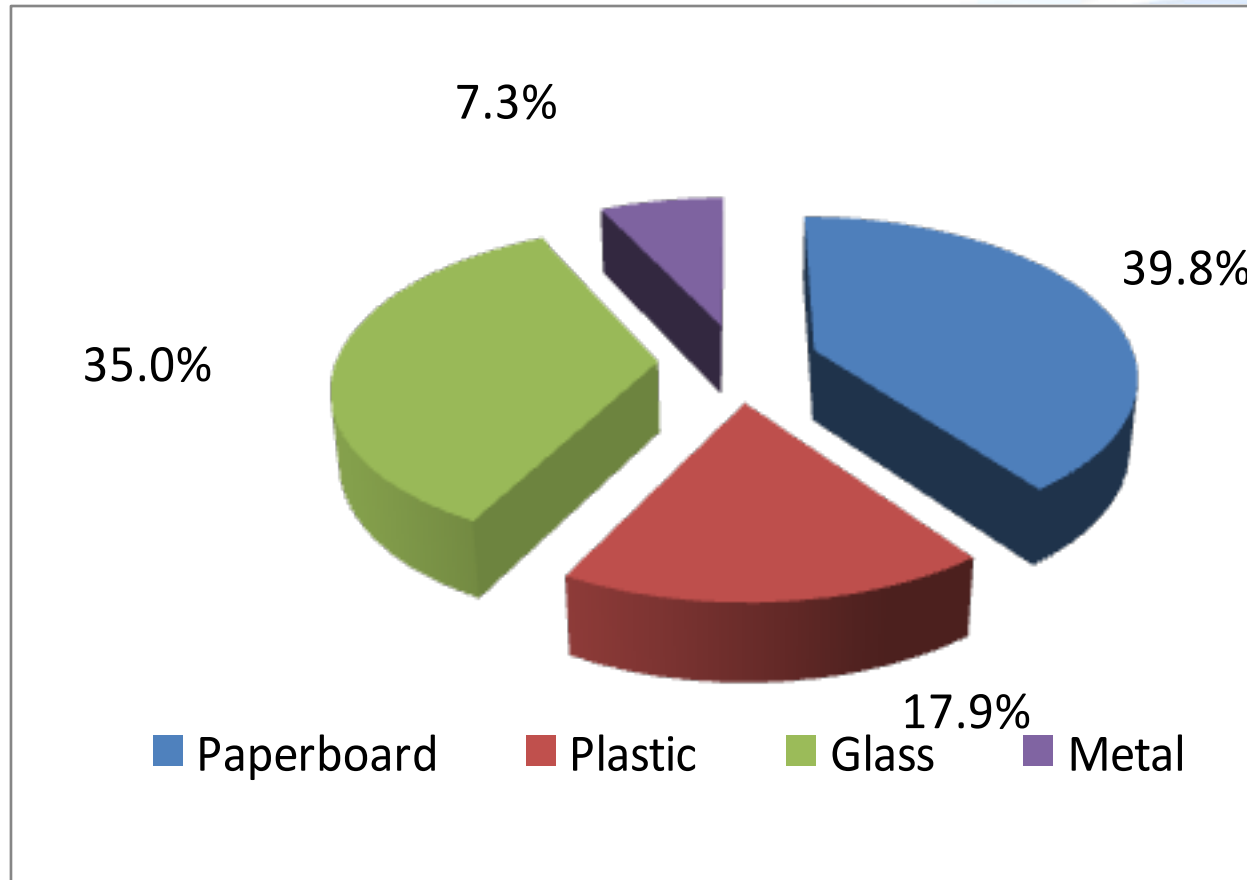
- Packaging volume in Thailand is approximately 5.61 Million Tonnes in 2020 (excluding pkg machinery)
 - Growing rate has expected about 2-5% per year (2021-2027)
- Growth may be due to
 - Domestic consumption expansion especially e-commerce packaging due to Covid-19 and lock-down policy
 - Increase of export values especially in Asean
 - Packaging demand for safety and wellness including medical device
- Environment issue will also affect the use of packaging esp. for plastics

Thailand's Packaging Industry: 2020

Material	Production, Tonnes	Consumption, Tonnes	Export, Million Baht	Import, Million Baht
Paperboard	2,215,701.0	2,200,343.0	7,521.40	6,243.62
Plastics	1,388,728.7	988,677.8	40,041.48	25,531.35
Glass	1,566,619.8	1,932,930.9	2,087.01	1,604.29
Metal	437,268.4	402,781.9	8,851.49	4,914.76
Total	5,608,317.9	5,524,733.6	58,501.38	38,294.02

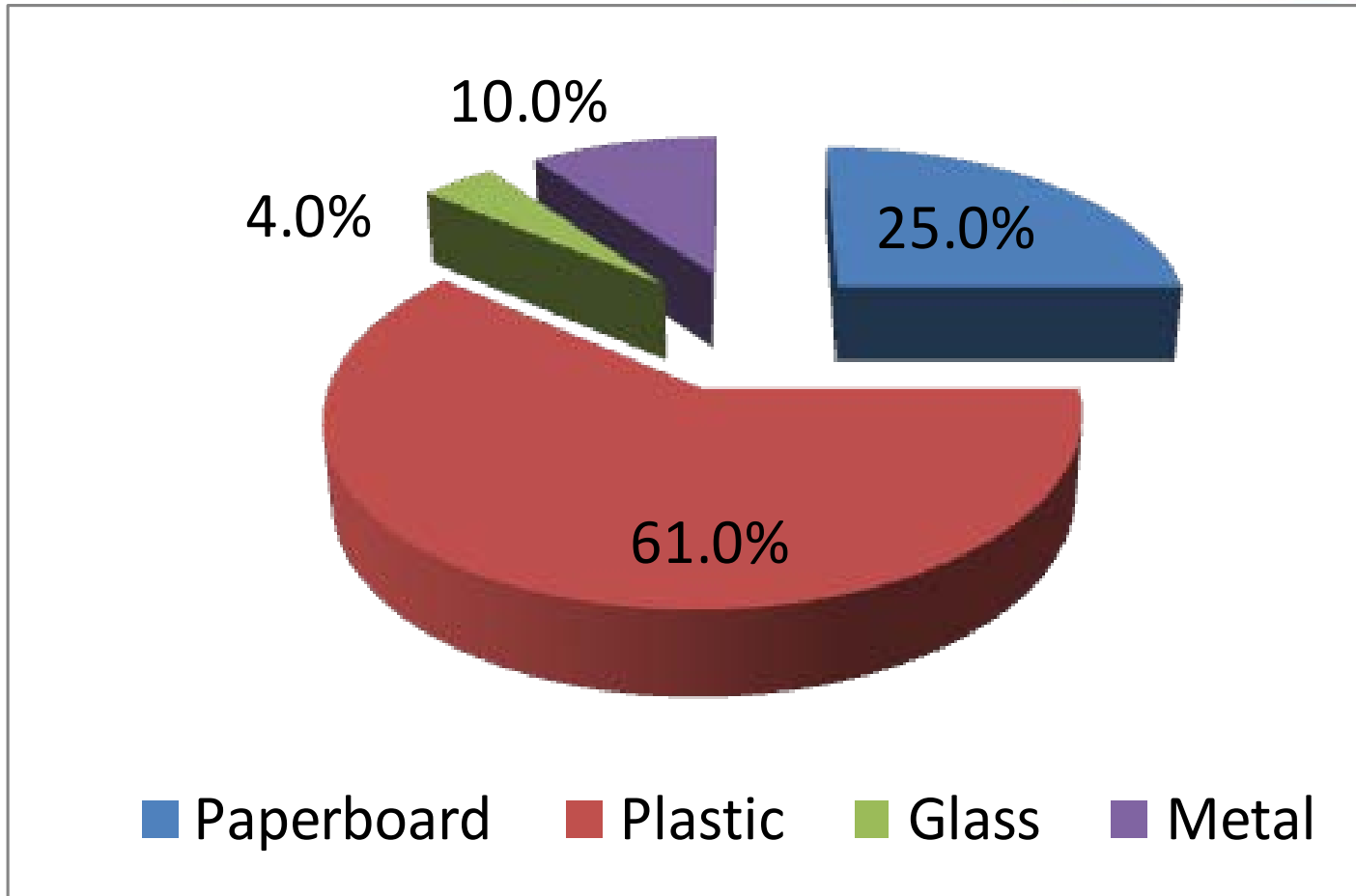
Source: <https://packaging.oie.go.th/>

Packaging consumption by materials



Source: <https://packaging.oie.go.th/>

No. Packaging manufacturers in Thailand



Source: <https://packaging.oie.go.th/>

No. Packaging manufacturers in Thailand

Material		No. of company	Note
Paperboard		403	SCG packaging is leading
	Corrugated fiberboard box	157	
	Paperboard	154	
	Others e.g. paper bags	92	
Plastics		998	Approx. 70% is SMEs Large manufacturers are Thai owners or joint-ventures with foreigners
	Flexible packaging	435	
	Semi-rigid packaging	493	
	Others e.g. plastic sack	124	
Glass		74	Low no. due to high investment
	Glass bottles/jars	44	
	Others	30	
Metal		166	
	Metal cans	72	
	Others	94	
Total		1,641	

Top 4 Big Glass Manufacturers

No.	Company	Capacity, Tonnes
1	Bangkok Glass Co., Ltd.	3,735 Tonnes/day 12,000 Million Baht
2	Berli Jucker Ltd. (BJC)	3,035 Tonnes/day 18,900 Million Baht (including Aluminum can)
3	Siam Glass Industry Co., Ltd.	600 Tonnes/day
4	Asia Pacific Glass Co., Ltd.	620 Tonnes/day

Source: <https://positioningmag.com/1144216>

Paperboard Packaging (2019-2020)

Item	2019	2020	Growth rate, %
Production, Tonnes	2,254,032	2,215,701	-1.7
Consumption, Tonnes	2,235,465	2,200,343	-1.57
Import, Million Baht	5,122.93	6,243.62	21.88
Export, Million Baht	8,139.72	7,521.40	-7.59

Production and consumption decreased about 1.5-1.7% which may be due to Covid-19 and lock down and consumers want packaging to ensure safety. In addition, export decreased due to reduction of export goods especially food products.

Source: <https://packaging.oie.go.th/>

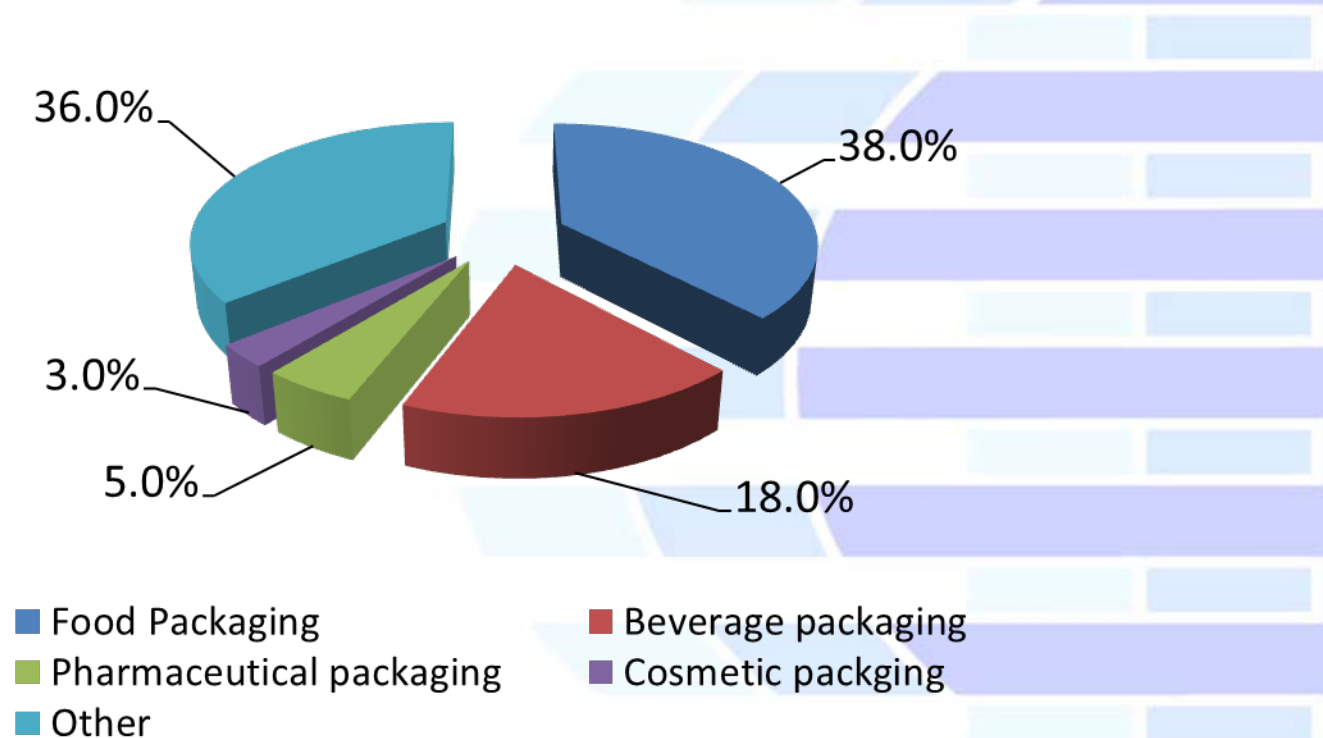
Plastic Packaging (2019-2020)

Item	2019	2020	Growth rate, %
Production, Tonnes	1,317,482	1,388,728.71	5.41
Consumption, Tonnes	953,021	988,677.77	3.74
Import, Million Baht	23,291.39	25,531.35	9.62
Export, Million Baht	39,811.12	40,041.48	0.58

Production and consumption increased about 5.41 and 3.74%, respectively which may due to Covid-19. Thus, consumers prefer single-use packaging to ensure safety. In addition, import & export increased due to increase demand for bio-based packaging and bio-degradable packaging.

Source: <https://packaging.oie.go.th/>

Application of Plastic by sectors



Source: Plastics Institute of Thailand

Glass Packaging (2019-2020)

Item	2019	2020	Growth rate, %
Production, Tonnes	1,526,175	1,566,619.80	2.65
Consumption, Tonnes	1,878,641	1,932,930.90	2.89
Import, Million Baht	1,462.44	1,604.29	9.70
Export, Million Baht	2,481.49	2,087.01	-15.90

Production and consumption increased about 2.65 and 2.89%, respectively. Demand of glass containers is a little higher, while import of glass containers also increased about 10%. This may be due to the fact that consumers required functional / health foods or beverages with tightly seal to ensure safety.

Source: <https://packaging.oie.go.th/>

Metal Packaging (2019-2020)

Item	2019	2020	Growth rate, %
Production, Tonnes	399,024	437,268.44	9.58
Consumption, Tonnes	321,250	402,781.93	25.38
Import, Million Baht	4,133.27	4,914.76	18.91
Export, Million Baht	9,147.48	8,851.49	-3.24

Production and consumption increased about 9.58 and 25.38%, respectively. Demand of metal containers is much higher, thus it's necessary to import metal containers which increased about 19%. This may due to the fact that consumers required shelf stable foods under thermal processing with tightly seal to ensure safety and longer shelf life. However, export decreased may be due to Covid-19 resulted in declined of export food products.

Source: <https://packaging.oie.go.th/>

Trends for Packaging Machinery

- Similar to packaging materials, packaging machinery will continue to grow
- Requirements of packaging machinery
 - Cost reduction
 - Waste reduction
 - Increase efficiency
- AI, Robotic and IOT will be implemented to improve production efficiency as comply with Thailand 4.0 policy

Packaging Trends

- Growing of E-commerce packaging
 - Demand for transport or tertiary packaging directly from manufacturers to consumers (B2C)
- Green Packaging
 - Reduce
 - Reuse
 - Recycle
- Wellness and Senior Friendly Packaging
 - Ready-to-eat/cook and smaller size pack
 - Convenience
 - Safety & Tightly seal

Thailand's E-commerce Market

	Revenue in 2016, US\$ million	Revenue in 2021, US\$ million
Electronic& Media	1,117	1,774
Toys, Hobbies & DIY	398	1,029
Furniture & Appliance	391	855
Fashion	390	1,310
Food & Personal Care	154	340
Total	2,450	5,308

Revenues include sales of physical goods via digital channel to a private end user (B2C) and purchases via both desktop computer and mobile devices, but exclude digital media, digitally distributed services, B2B markets, and resale of used goods and sales between private persons.

Source: Statistica

Packaging Trends Before vs After Covid

Before Covid

- 3Rs concept has been implemented
- Source reduction of petroleum based plastics and replacement by environmentally friendly renewable materials
- Government and private sectors had encouraged to use reusable packaging or containers e.g. any discount if bring your own packages
- Single use plastics are banned in some countries

After Covid

- Growing on E-commerce market and delivery services especially for food products
- Increase demand for single use packaging with tightly seal to ensure hygiene & safety
- Plastic waste increased during the lockdown up to 15%, or up from around 5,500 tons a day to 6,300 tons a day
- Increase both supply and demand for biodegradable packaging

Thailand Roadmap on Plastic Waste Management

Thailand's Roadmap on Plastic Waste Management 2018 – 2030

Target 1

Reduce and stop using single-use plastic targets by replacing with environmental friendly products

Target 2

100% of target plastic waste to Circular Economy

- Adopted "Bangkok 3R Declaration towards Prevention of Plastic Waste Pollution through 3R and Circular Economy"
- Adopted "Bangkok 3R Declaration on Combating Marine Debris in Asean Region"
- Develop plastic waste recycling system through circular economy

Stop using in 2019

- Cap seal
- Oxo
- Microbead

Phase 1



2019

0.5 million tons utilization

2 million tons or 12 % of the total waste generation

1.5 million tons disposed by landfill or incinerator

SDGs

- Summary of implementation in according to SDGs
- Continuously working to meet the target of Roadmap
- Law enforcement on plastic waste management

2027

Phase 3

100% of target plastic wastes will be recycled by applying Circular Economy Principle



- Reducing and stop using other single-use plastics

Phase 2

Stop using in 2022

- Plastic bag < 36 micron
- Foam food container
- Plastic cup < 100 micron
- Plastic straw
- Monitoring, evaluation and review Roadmap and Action Plan
- Develop recycling plastic waste system through circular economy

- Develop guidelines/ requirements/ standard for environmental friendly plastic products

- Establish Subcommittee/Working groups
- Develop Roadmap for Plastic Waste Management 2018 – 2030



Problems of Plastic Waste in Thailand



3 Plastics have been / 4 will be banned



cap seals



microbeads



plastic straws



plastic cups



oxodegradable plastics



styrofoam food



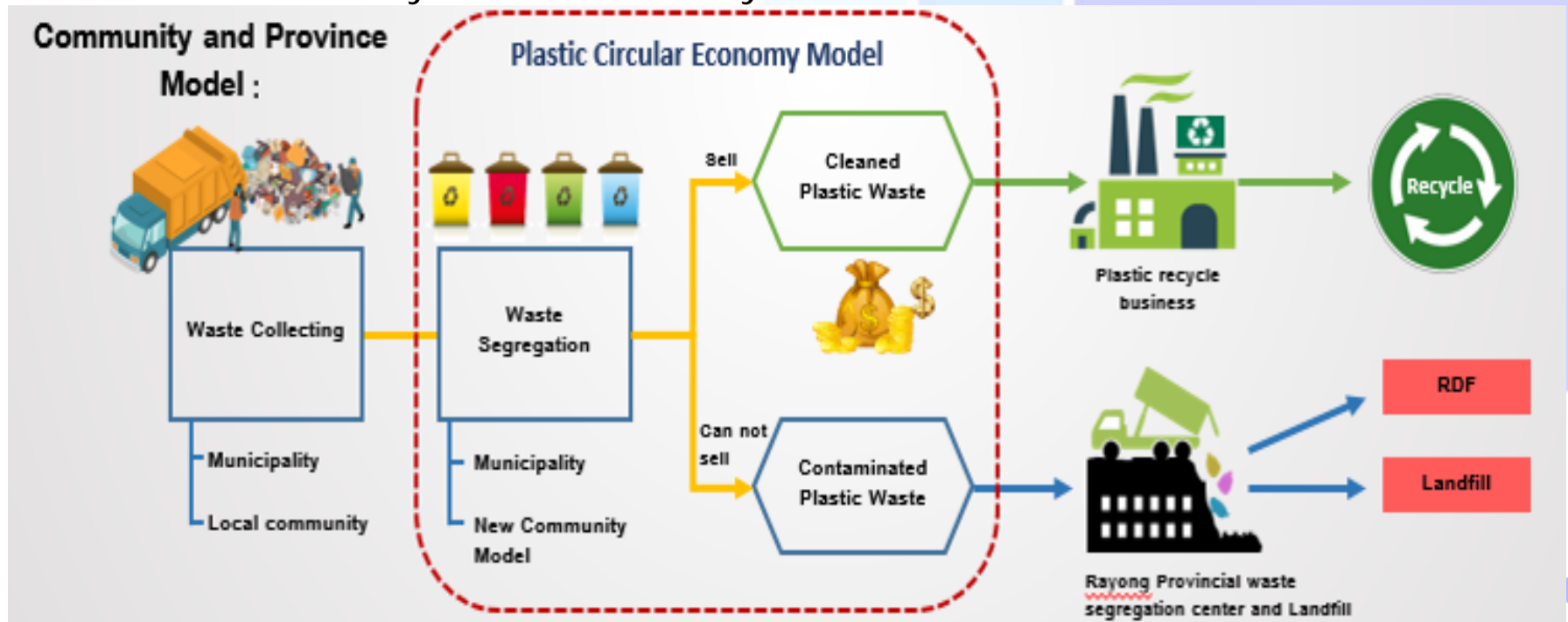
lightweight plastic bags

Rayong Model by PPP Plastic

Public Private Partnership for Sustainable Plastic and Waste Management (PPP Plastic)
>36 members from private organization e.g. PTT, Dow, SCG started in 2018

Goal: Within 5 years, at least 10% of plastic waste in Rayong will be recycled and generate at least THB 3 million income for local communities.

- By 2022, zero plastic waste will go into landfill in Rayong
- By 2027, reduce marine plastic debris by at least 50% and 100% of plastic waste to be recycled
- Municipalities will design the waste management system for their own area for maximum efficiency and sustainability



Packaging Challenges

- How to cut down production cost
 - raw material price increase, esp. paperboard packaging
 - Labor shortage – Increase production cost
- Customization
 - Small order with high frequency purchase
 - Digital technology play important role
- Higher competitive due to globalization
- Unpredictable economic situation due to Covid-19



Thank you for your attention!