

Seminar for Promotion of Cold Chain
Logistics Standards in Malaysia
February 7th, 2022 ONLINE



Cold Chain

Mori Takayuki
Professor, Emeritus,
University of Marketing and Distribution Sciences

Table of Contents

- Significance of Cold Chain.
- Background to the increased demand for the Cold Chain market.
- Where food loss and waste come from?
- Necessity of spread of Cold Chain standard.
- Problems & necessary action to solve.

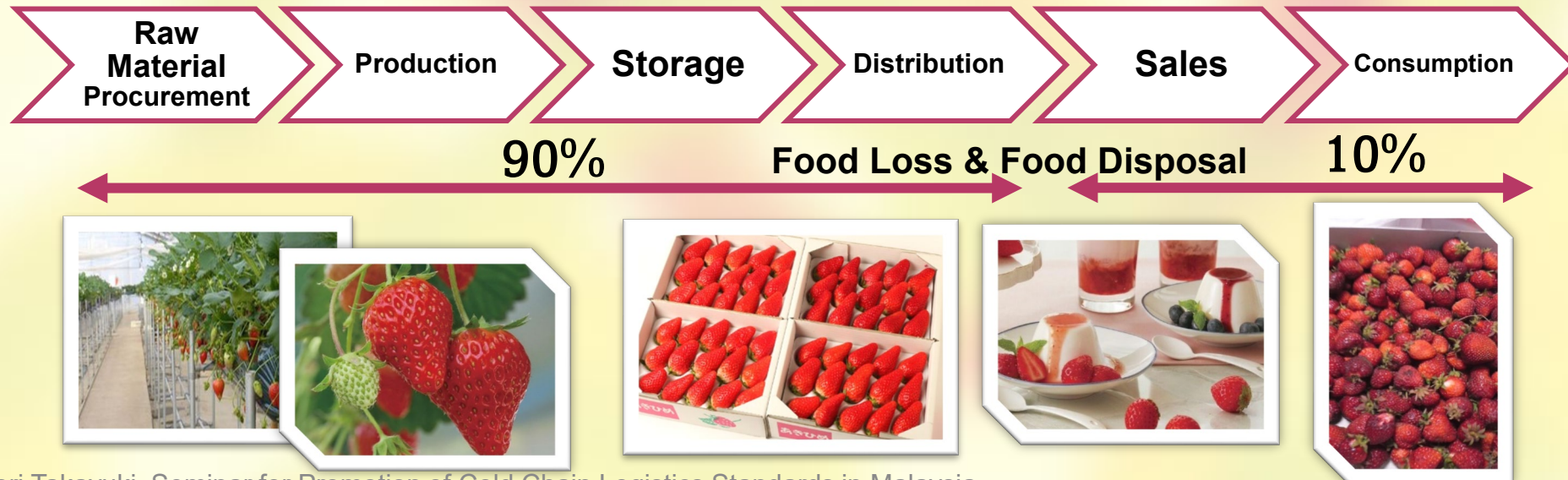


Significance of Cold Chain

Consumer requires safer and fresh foods

Cold Chain is necessary to protect corruption of fresh food and deliver to market in the safer and fresh condition.

90% of Food Loss/Waste occurs among Production, Storage and Distribution process.

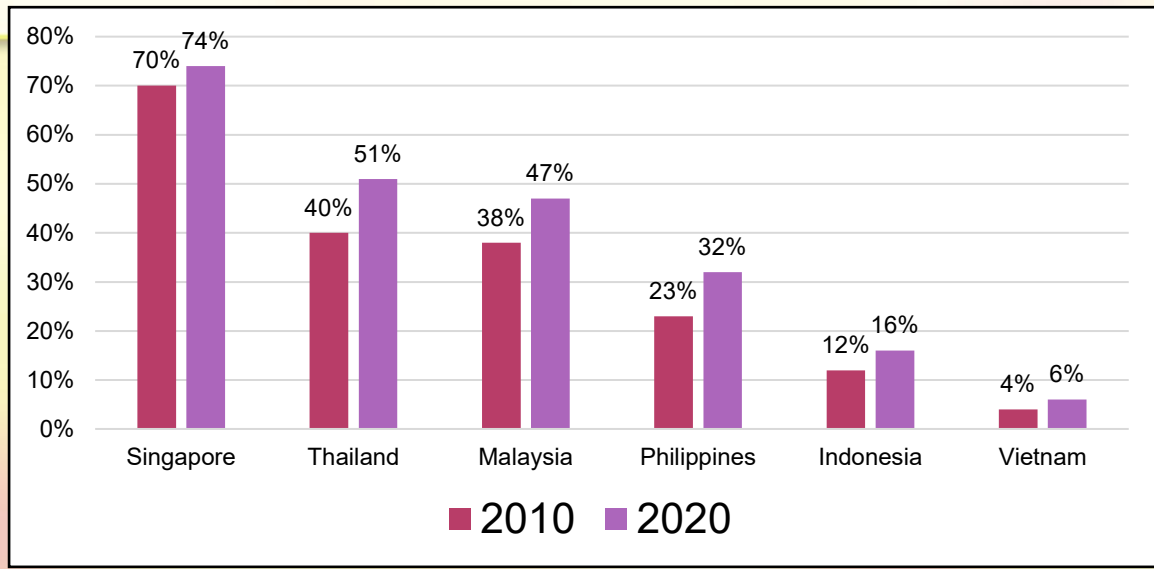




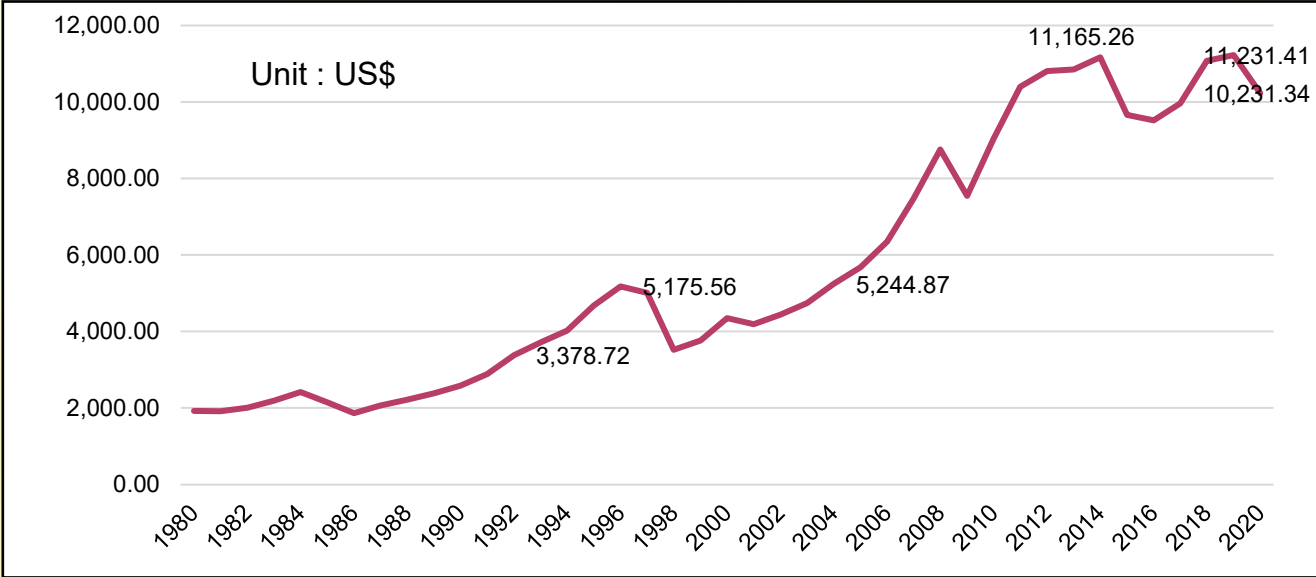
Background to the increased demand for the Cold Chain market. There are 2 factors.

⇒ Increase of Income / Increase of Modern trade ratio

The percentage of Modern Trade share in retail market.



GDP per Capita



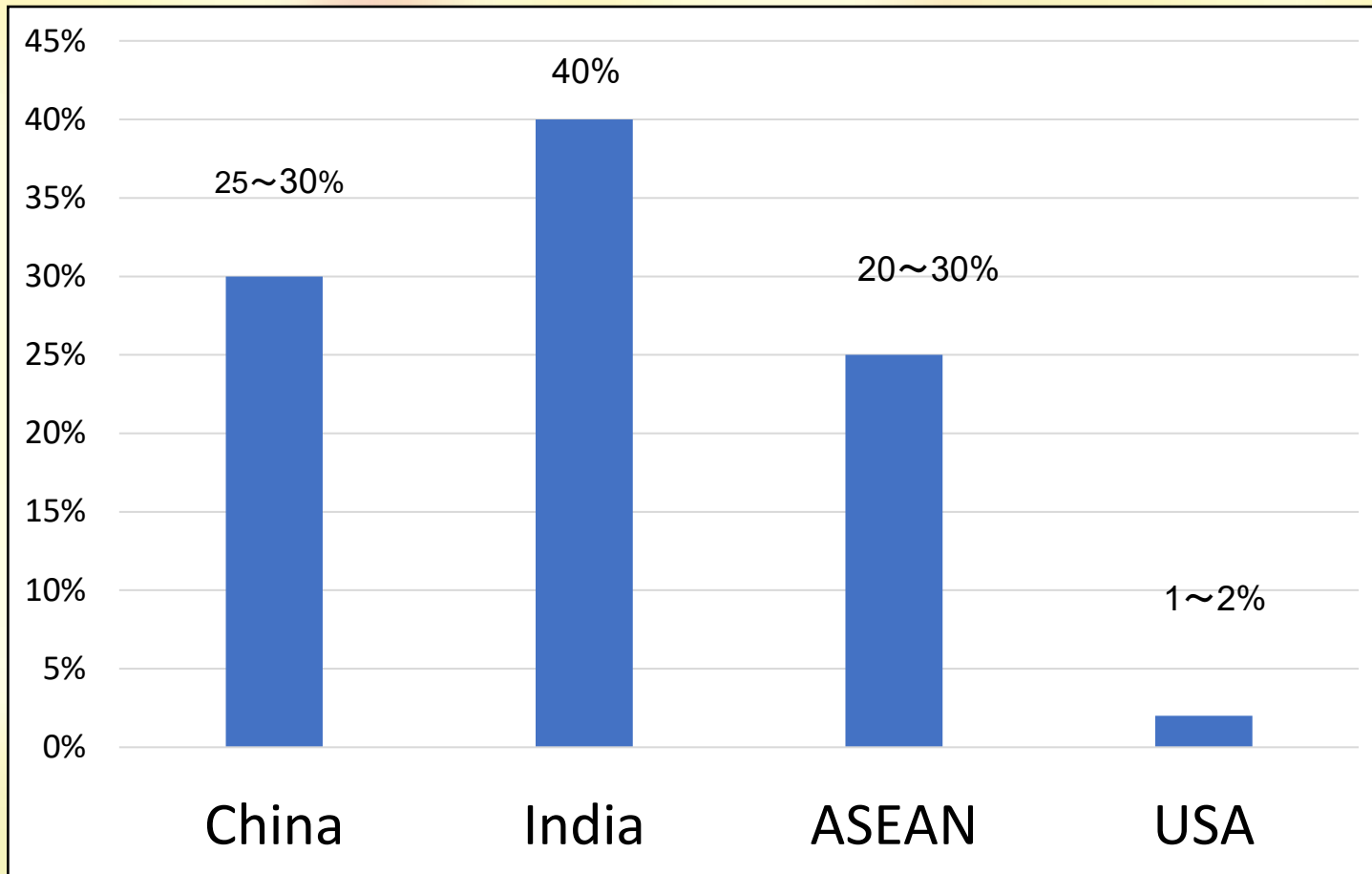
Source: Mizuho Research & Analysis Vol.54

US\$3,000 over;
⇒ Sale of general consumer goods expands

UD\$5,000 over;
⇒ Sale of Durable consumer goods expands.
⇒ Cold Chain needs increase.



Vegetable perish rate in distribution process



Source:
lettuceclub.net



Source: jacom.or.jp

※ Example: In China Meat perish rate 12%, Fish 15% in distribution process

Food loss is minus for all concerned, producer, wholesaler, retailer, logistics service provider, and consumer.

If 20-30% product lost between production and retailer (distribution process).
⇒ Producer or wholesaler or retailer Lost earning.
20-30% is big amount.
⇒ Consumer lost the chance to buy more fresh and cheaper product.





Where food loss and waste come from?



Lack of knowledge about handling frozen or chilled product



Lack of freezing and refrigeration truck and storage facility



Inferior traffic infrastructure, such as road



Unstable supply of electric power

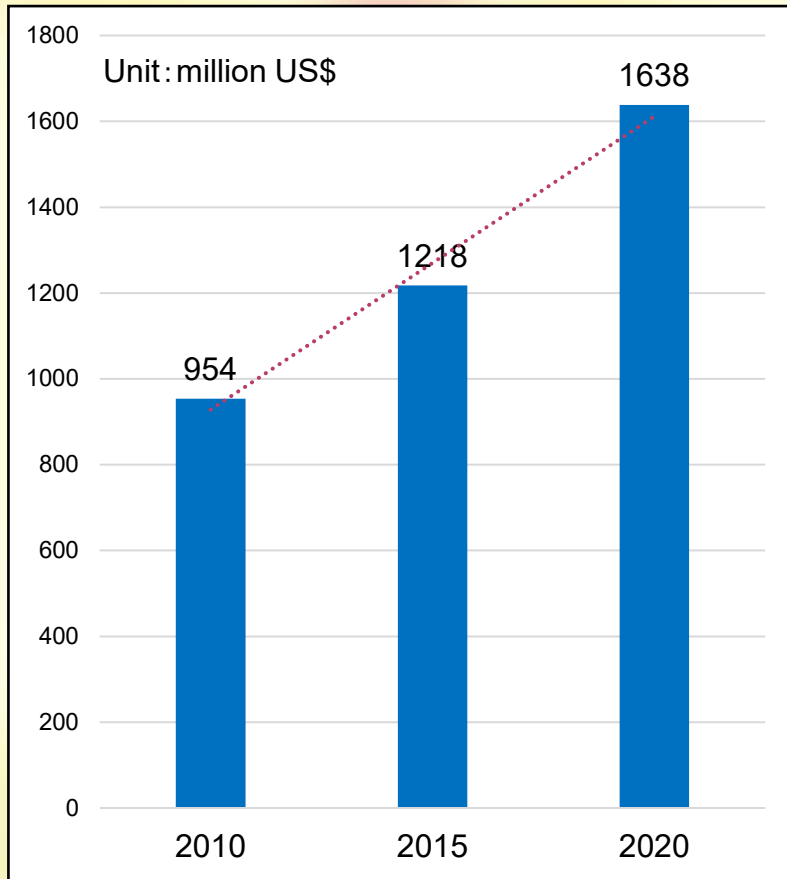


Food loss/ food waste



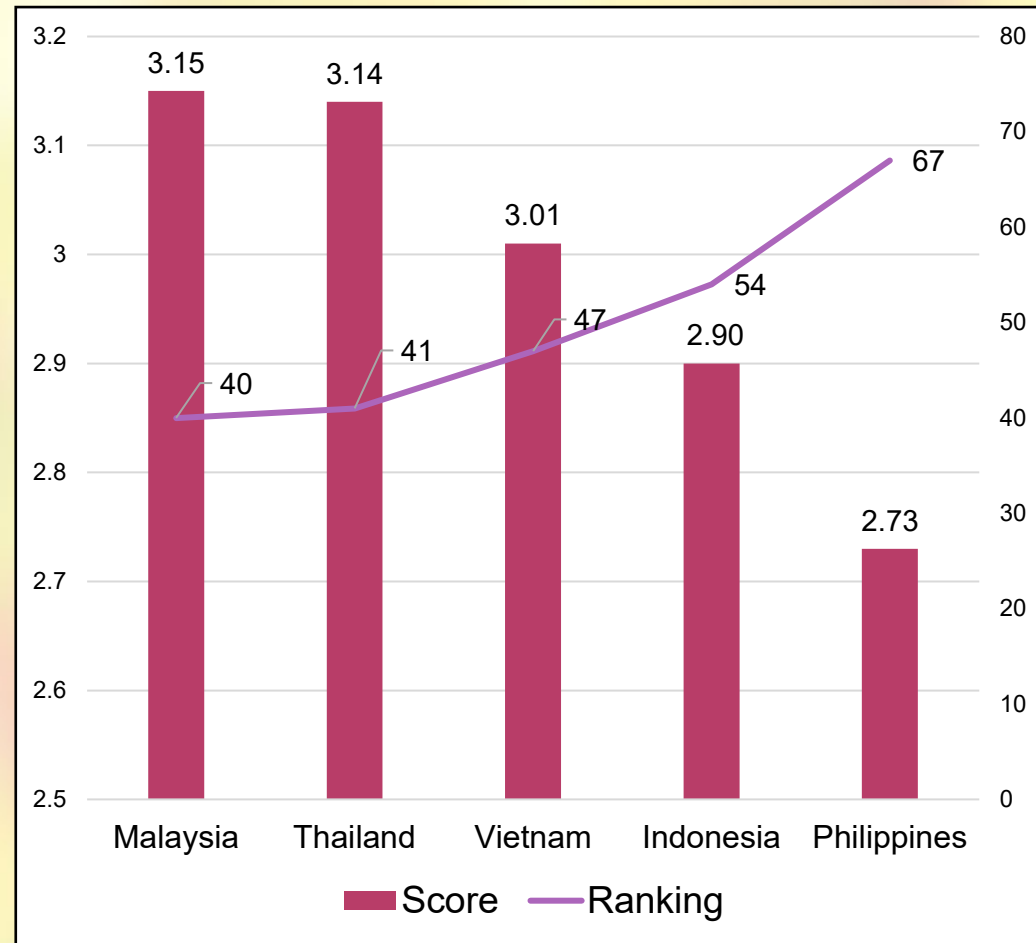
Malaysian Frozen Market increased rapidly, Logistics Infrastructure is still not enough.

Malaysian Frozen food market



Source: Mizuho Research & Analysis No.12

Logistics Performance Index Ranking (2018) "Infrastructure"



Source: Full LPI Dataset (World Bank)



Necessity of spread of Cold Chain standard

Cold Chain is necessary to deliver safer and fresh food to consumer for health by consumers' request.

Level-up of Cold Chain service is required to achieve the target of delivering safe and fresh food to consumers.

- By set up the “Cold Chain Standard” with certificate help logistics provider to level up their service quality of fresh food delivery.
- For SME logistics provider, “Cold Chain Standard” show how to establish Cold Chain in their service.
- For consignee can easily distinguish good service provider, who has certificate or not.



Problems & necessary action to solve

■ Problem;

- The awareness of the Cold Chain is low.
- The importance of the Cold Chain isn't learned about.
- Lack of knowledge and Know-how of Cold Chain by Logistics Provider (especially SME).

■ Necessary Action to Solve;

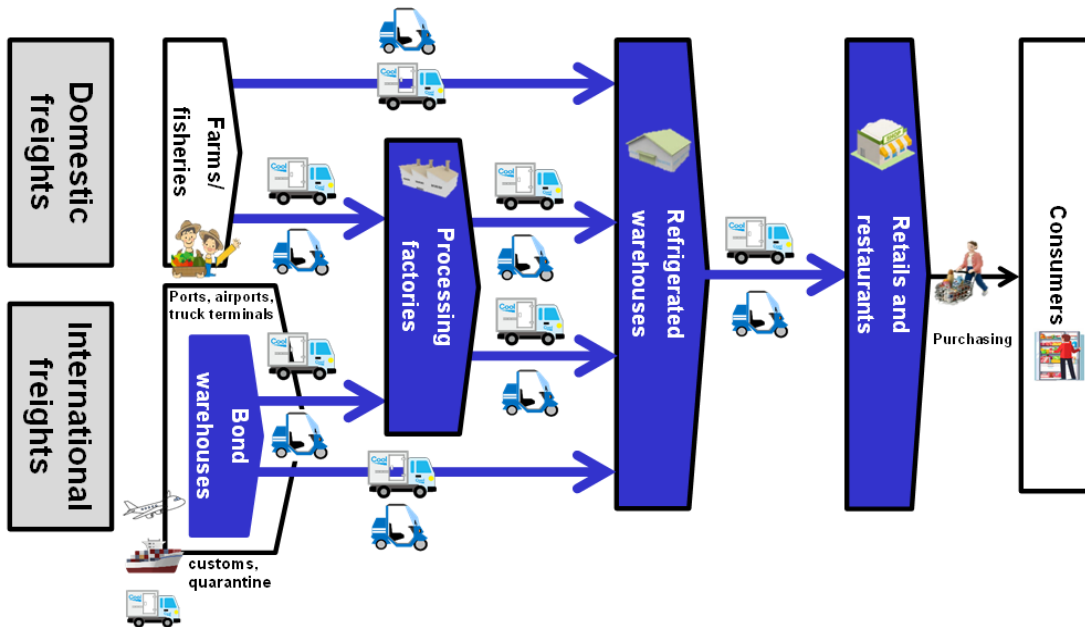
- Improvement of the awareness of the Cold Chain.
⇒ Seminar, Workshop, conference etc.,
- Training Program of Cold Chain for SME logistics provider.
- Incentive setting for the Cold Chain Standard promotion.
⇒ Ex. Tax reduction and/or exemption for the Cold Chain Standard certified company.

JSA-S1004

JSA-S1004 focus on the Food Supply Chain.

Standard cold chain logistics (B to B)

Blue shows temperature-controlled process : the coverage of this Standard



Subject temperature area is freezing, refrigeration and an equality fixed temperature (freezing - less than -40°C times, $+18^{\circ}\text{C}$).

Target is B to B (Business to Business) of warehouse and transportation service provider.

On the presupposition that hardware (refrigerated truck. Warehouse) are maintained.

By the spread of JSA-S1004, it will help to improve the service level of Cold Chain logistics.

It's also possible to apply this standard (JSA-S1004) about cold chain in processing plant, retail store and restaurant.

International Standardization of Cold Chain Logistics



TECHNICAL COMMITTEES

ISO/TC 315 Cold chain logistics

□ Background

2018 January	The former committee PC315* was established in ISO
2020 May	ISO23412 was published
2021 January	<u>ISO/TC315</u> was established taking over PC315

*Indirect, temperature-controlled refrigerated delivery service

- The COVID-19 pandemic has highlighted the importance of cold chain logistics for the steady food supply.

□ Scope

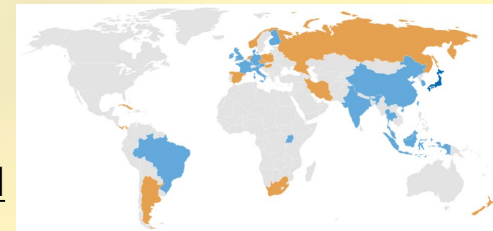
Standardization in the field of cold chain logistics.

□ Members

- Participating Members:
19 Countries, including **Malaysia(DSM), Indonesia(BSN), Singapore(SSC), and Thailand(TISI)**
- Observing Members:
13 Countries

□ Schedule

- The first online plenary meeting was held in June, 2021.
- **Japan has proposed the development of an International standard based on JSA-S1004.**
- The next plenary meeting will be held in February 2022.



■ PARTICIPATING MEMBERS
■ OBSERVING MEMBERS



**Thanks for your
attention !**

Takayuki Mori
Takayuki__Mori@red.umds.ac.jp