



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

APEC Workshop / Seminar on Capacity Building for Preventing Accidents in Maritime Dangerous Goods and Containers Transportation

Tokyo, Japan | 13-15 November 2018

APEC Transportation Working Group

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Produced by

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APEC Workshop / Seminar on Capacity Building for Preventing Accidents in Maritime Dangerous Goods & Containers Transportation

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Final Report

Executive Summary

On 13-15 November 2018 nine delegates from eight APEC economies gathered in Tokyo, Japan, in order to enhance capacity of APEC economies in the area aiming at preventing accidents in maritime dangerous goods and containers transportation.

On the first day and the second day, the delegates received lectures on nine themes: SOLAS and MARPOL conventions and IMDG Code, Classification, Packing and Tank Provision, Construction and Testing of Packagings, Consignment procedures (Mark, Label, Placard), Provisions concerning transport operations (Stowage and segregation), Limited Quantities, Verification of the Gross Mass of the Packed Container on SOLAS VI in Japan, and Container Packing Survey of Dangerous Goods in Japan from experts in Japan.

In the afternoon of the second day, technical tour was organized to provide practical knowledge about container packing survey in Japan. All the participants joined this tour.

On the third day, a workshop was held and each economy gave presentations regarding five issues such as, outline of marine transport of dangerous goods, including major dangerous cargo, related regulations and form of transport, problems such as past incidents, good practices, educational system to consigners and so on, and planned actions after the workshop of each economy. After the presentation, time for Q&A was provided and the participants positively raised questions for their further understandings.

After the workshop, a certificate was awarded for the participants who have attended the three day-workshop/seminar.

At the end of the workshop/seminar, feedback information was collected through a questionnaire to each participant. Seventy-eight per cent of the delegates responded the workshop matches “Very Much” or “Mostly” with their expectation and rest of 22 per cent of delegates replied as “Fair”. Some delegates mentioned the combination of the presentations and the technical tour was helpful, and others mentioned more time for workshop was desired.

Section One: Introduction

Seaborne international trade has grown steadily over the past decades and this trend will continue in the future. In the APEC region, a huge number of containers are transported by sea, with the majority of them used in intra-Asian trade. A key risk mitigation then becomes the prevention of accidents involving seaborne containers carrying many different varieties of hazardous products.

To prevent marine accidents, the International Maritime Organization (IMO) has issued safety regulations under the International Convention for the Safety of Life at Sea (SOLAS) and various codes. SOLAS, as amended, deals with various aspects of maritime safety and includes mandatory provisions governing the carriage of dangerous goods in packaged form. Specifically, SOLAS prohibits the carriage of dangerous goods in packaged form, except in accordance with the relevant provisions of SOLAS's Chapter VII, which are expanded upon by the International Maritime Dangerous Goods (IMDG) Code. For example, IMDG Code requires that all shippers of dangerous goods listed in the code shall use the proper shipping name of the goods and the correct description in accordance with the classification set out in the code. Transport information relating to the carriage of dangerous goods in packaged form and the container/vehicle packing certificate shall be in accordance with the relevant provisions of IMDG Code and shall be made available to persons or organizations designated by port state authorities. Furthermore, amendments to SOLAS Chapter VI, regulation 2, that came into force on 1 July, 2016, require shippers to verify the gross mass (VGM) of packed containers and ensure that proper weight information is delivered in order for containers to be appropriately loaded on a vessel.

While various IMO Conventions and Codes have many requirements to enhance safer seaborne transportation, decent number of accidents still occur. Since a large quantity and variety of cargoes are subject to these regulations, it is important to ensure that all people involved in ocean shipping follow them rigorously. Furthermore, although the amended SOLAS VGM regulations described above entered into force in July 2016, only 45 of 162 countries (around 28% member States) have developed and published their domestic laws/guidelines for facilitating the VGM regulations. Implementation of IMO regulations varies considerably among member states because understanding and enforcing those provisions requires professional knowledge and management know-how. For example, IMDG Code lists more than 6,500 codes covering over 3,000 substances, each with its proper method for packing. For the safe trade and in tandem with economic growth, it is important that APEC economies fully understand and comply with existing international rules and regulations. Japan believes this capacity-building project must contribute to this goal.

Section Two: Overview

The APEC Workshop/Seminar was held on 13-15 November 2018, in Tokyo, Japan, and nine (9) delegates from eight (8) economies attended.

The delegates were from eight (8) APEC economies namely, People's Republic of China, Republic of Korea, Malaysia, the Philippines, Chinese Taipei, Thailand, the United States, and Viet Nam.

The list of participants is attached as an Annex I in this final report.

Workshop Budget and Sponsorship

This workshop/seminar was sponsored by Japan .The Ministry of Land, Infrastructure, Transport and Tourism of Japan hosted the workshop and prepared strategy, physical space, site tour, keynote speakers, moderators, signage of all presentation, and staffing resources.

APEC provided funding for travel, accommodation, and per diem for the participants from APEC travel eligible economies, including People's Republic of China, Malaysia, the Philippines, Thailand, and Viet Nam.

APEC provided venue costs and also funded a consultant team, Japan Marine Science Inc. to organize the event.

Section Three: Results of the Workshop/Seminar

During this workshop/seminar the delegates had opportunities to obtain keynote speech from the experts from The United States.

Keynote speech: Preventing Accidents in Maritime Transportation of Dangerous Goods

Mr Steven Webb, International Transportation Specialist at Pipeline and Hazardous Materials Safety Administration (PHMSA) of U.S. Department of Transportation made a Keynote speech on advanced countermeasures for accident avoidance and educational systems to help consignors and carriers of dangerous goods in the maritime realm.

In his speech, Mr Webb highlighted importance of having a system of dangerous goods regulations that are easily comprehended by the intended users. PHMSA is actively engaged with their regulated community of shippers and carriers in many ways, including hosting workshops that provide an overview of dangerous goods transportation requirements. Through the initiatives, PHMSA aims to raise public awareness of the risks of shipping undeclared hazardous material.

Seminar1: SOLAS and MARPOL conventions and IMDG Code

Mr Takashi Hamada, a Manager of Research Team, Safety & Technology Division, NIPPON KAIJI KENTEI KYOKAI (NKKK) made a lecture on “SOLAS and MARPOL Conventions and IMDG Code”

In this lecture, Mr Hamada explained outlines of SOLAS Convention 1974, Chapter VII Part A “Carriage of dangerous goods in packaged form. He also gave an overview of MARPOL Convention, Annex III “Regulations for the prevention of pollution by harmful substances carried by sea in packed form”. In the end, he explained how IMDG Code is structured.

Seminar2: Classification

Mr Takashi Hamada, Manager of Research Team, Safety & Technology Division, NKKK made a lecture on “Classification”

In this lecture, Mr Hamada explained the classification rules for dangerous goods transport based on IMDG Code Part 2. The lecture included among others, classification, packing group, and UN number of dangerous goods.

Seminar3: Packing and Tank provision

Mr Takashi Hamada, a Manager of Research Team, Safety & Technology Division, NKKK made a lecture on “Packing and Tank provision”.

In this lecture, Mr Hamada explained the containment system of dangerous goods transport based on IMDG Code Part 4. He addressed such issue as different packaging means, bulk containers and tanks.

Seminar4: Construction and Testing of Packaging

Mr Toshikazu Kondo, Director of Technical Department, The Ship Equipment Inspection Society of Japan (NIPPON HAKUYOHIN KENTEI KYOKAI;HK) made a lecture on “Construction and Testing of Packaging”.

In this lecture, Mr Kondo explained how construction and tests for packaging for dangerous goods transport should be carried out based on IMDG Code Part 6. The contents of the lecture included different packaging means, bulk containers and tanks.

Seminar5: Consignment procedures (Mark, Label, Placard) Provisions concerning transport operations (Stowage and segregation)

Mr Takashi Hamada, Manager of Research Team, Safety & Technology Division, NKKK made a lecture on “Consignment procedures (Mark, Label, Placard) Provisions concerning transport operations (Stowage and segregation)”.

In this lecture, Mr Kondo explained how construction and tests for packaging for dangerous goods transport should be carried out based on IMDG Code Part 6. The contents of the lecture were about different packaging means, bulk containers and tanks.

Seminar6: Provisions concerning transport operations (Stowage and segregation)

Mr Takashi Hamada, a Manager of Research Team, Safety & Technology Division, NKKK made a lecture on the theme of “Provisions concerning transport operations (Stowage and segregation)”.

In this lecture, Mr Hamada explained stowage category and segregation rules of dangerous goods transport based on IMDG Code Part 7. He addressed stowage category, stowage & handling Code and segregation group and Code.

Seminar7: Limited Quantities

Mr Takashi Hamada, a Manager of Research Team, Safety & Technology Division, NKKK made a lecture on the theme of “Limited Quantities”.

In this lecture, Mr Hamada explained quantities limit of dangerous goods transport based on IMDG Code Part 3. His lecture included the quantities rules for specific dangerous goods, and marking on container.

Seminar8: Verification of the Gross Mass of the Packed Container on SOLAS VI in Japan

Mr Shun Masui, a Deputy Director of Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau, Ministry of Land, Infrastructure,

Transport and Tourism made a lecture on the theme of “Verification of the Gross Mass of the Packed Container on SOLAS VI in Japan”

In this lecture, Mr Masui explained why VGM was such important. Then he introduced the registration system for VGM submission in Japan and other countries. He concluded his lecture by emphasizing that harmonization and standardization of VGM information were important for smooth international marine logistics.

Seminar9: Container Packing Survey of Dangerous Goods in Japan

Mr Daizo Yokoyama, General Manager of Safety & Technology Division, NKKK made a lecture on the theme of “Container Packing Survey of Dangerous Goods in Japan”

In this lecture, Mr Yokoyama first explained overview of the container packing survey in Japan. Then explained which dangerous goods to be subject to the survey. Finally, he showed survey examples and explained check points during the survey.

Technical Tour

Technical tour was organized and all the participants joined this tour. The participants first visited the dangerous goods warehouse in Yokohama (Naigai Trans Chemical). There was actual container packing survey taking place and participants had chance to talk and ask some questions to the surveyor.

Then, the participants went to container terminal in Yokohama (Minami Honmoku Container Terminal). They had chance to see actual container operation in one of the busiest ports in Japan.

This technical tour gave the delegates a practical knowledge on container packing survey and container operation.

Workshop

The delegates from each economy made a fifteen (15) minutes presentation on the theme of “Marine Transport of Dangerous Goods”. The workshop was facilitated by Dr Susumu Ota, a Director of Center for International Cooperation National Maritime Research Institute, National Institute of Maritime, Port and Aviation Technology.

Each economy gave presentations regarding five (5) issues such as “ Outline of marine transport of dangerous goods, including major dangerous cargo, related regulations and form of transport” ,“Problems such as past incidents ”, “Good practices”, “Educational system to consigners and so on” and “Planned actions after the workshop” of each economy.

In the presentations, each economy first provided general information on dangerous goods managements such as dangerous goods declaration processes.

Then explained past incidents cases such as dangerous substance leakage from tank container. As good practices, some economy explained counter measures such as information sharing system of dangerous goods.

Most of the economies explained training courses in place and the efforts made for the effective management of those courses.

In the end of the presentation, most of them presented action plans including improving training for people involved in dangerous goods transportation.

Best practices were also shared among the participants during “Good Practice” section in the presentations. There were several remarkable initiatives, for example, the United States explained that YouTube videos, Webinars, and mobile apps were utilized in USA for information giving and educational purposes.

The presentations were followed by Q&A and the participants positively raised questions for their further understandings. Main discussion topics were shown as below

- Dangerous goods handling restriction (local port regulations) based on groupings of IMO classes.
- Difference of dangerous goods declaration process (e.g. deadline) in each economy
- Circumstances of IMDG Code training (e.g. who gives training? etc.) in each economy.

Section Four: Evaluation of the Workshop/Seminar

1) Period of the workshop

Seventy eight per cent of delegates responded that the period of the workshop was "Adequate". Twenty two per cent of them responded that the period of the workshop was "Short".

2) Topic of the workshop

Total of 78 per cent of the delegates responded that the topic of the workshop matched their request "Very Much" or "Mostly". And 22 per cent of the delegates responded that the topic was "Fair".

3) Time allocation

One hundred per cent of the delegates responded that the allocated time for the workshops was "Fair".

4) Training environment

Total of 89 per cent of the delegates responded that the training environment was "Very Good" or "Good". And 11 per cent of the delegates responded that environment was "Fair".

5) Material of the Training (handout etc.)

One hundred per cent of the delegates responded that the training material (handout, etc) was "Very Good" or "Good".

6) Total Management of Japan

One hundred per cent of the delegates responded that the management of Japan was "Very Good".

7) Accommodation

One hundred per cent of the delegates responded that the accommodation prepared was "Very Good" or "Good".

8) Free Comments

About topic of the workshops

- IMDG Code is an essential convention in the field of dangerous cargoes management. This workshop pays a lot of focus on it. That is very important.

- The topic of the workshop is similar to work we do in our company.
- Outline of dangerous goods regulation and introduce for Japan packing inspection with site tour.
- It will help enhance our authority's capability in dealing with dangerous cargoes handling storage and transport for safer, more secured and smooth operation.
- The presentations and trips were very much in line with the desired mission statement.
- The workshop includes theory and fact-finding trips.
- More workshop time.
- Related to the division but not directly to my scope of work.

About accommodation

- The communication from the hosts was outstanding. Expectations were clearly communicated, and logistically easy to attend.

General comments

- If possible, prolong the duration of the workshop.
- This is grateful chance to share each economy's technical information, but 10 minutes is too short for efficiency discussion and presentation. Please consider of it to extend. Thank you for your efforts.
- 1 day tour to related agencies would be much better. Include speakers from other developed countries.
- To invite at least two participants in every economies concerned for a more collaborative discussions in APEC conference(s) in the future. Aside from that, it will provide ease, confidence and avert loneliness when representing with partner(s) in the conference.
- Distribute the materials in electric version.
- Perhaps a Pre-meeting, Survey that asks attendees what issues are important to their member economies and then have other governments prepare responses specific to other members' interests.

Section Four: Workshop/Seminar Conclusion

On 13-15 November 2018, nine delegates from eight APEC economies gathered in Tokyo, Japan, in order to build capacity of APEC economies in the area of preventing accidents in maritime dangerous goods and containers transportation.

During the seminars, the delegates received lectures on nine theme, "SOLAS and MARPOL conventions and IMDG Code", "Classification", "Packing and Tank provision", "Construction and Testing of Packagings", "Consignment procedures (Mark, Label, Placard)", "Provisions concerning transport operations (Stowage and segregation)", "Limited Quantities", "Verification of the Gross Mass of the Packed Container on SOLAS VI in Japan", and "Container Packing Survey of Dangerous Goods in Japan" from experts in Japan.

Technical tour was organized and the participants visited the dangerous goods warehouse and the container terminal in Yokohama. The technical tour gave the delegates a practical knowledge on container packing survey and container operation in Japan.

In the workshop, the delegates from each economy made a 15-minute presentation on the theme "Marine Transport of Dangerous Goods". The workshop was facilitated by Mr Susumu Ota, Director of Center for International Cooperation National Maritime Research Institute, National Institute of Maritime, Port and Aviation Technology.

After the presentations, time for Q&A was provided and the participants positively raised questions for their further understandings. Main discussion topics were shown as below

- Difference between dangerous goods group (port regulations) and IMDG Code
- Difference of dangerous goods declaration process (e.g. deadline) in each economies
- Circumstances of IMDG Code training (e.g. who gives training? etc.) in each economies.

At the end of the workshop/seminar, feedback information was collected through a questionnaire to each participant. Eighty-seven per cent of the delegates responded the work shop matches "Very Much" or "Mostly" with their expectation and rest of 22 per cent of delegates replied as "Fair". Some delegates mentioned the combination of the presentations and the technical tour was helpful, and others mentioned more time for workshop was desired.

Annex I: List of Speakers/ Moderators and Participants

Speakers / Moderators

No	Economy	Title	First Name	Last Name	Position	Division	Organization
1	The United States	Mr.	Steven	Webb	International Transportation Specialist	Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety	U.S. Department of Transportation
2	Japan	Mr.	Takashi	Hamada	Manager	Research Team, Safety & Technology Division	NIPPON KAJI KENTEI KYOKAI(NKKK)
3	Japan	Mr.	Toshikazu	Kondo	Director	Technical Department	The Ship Equipment Inspection Society of Japan(NIPPON HAKUYOHIN KENTEI KYOKAI:HK)
4	Japan	Mr.	Daizo	Yokoyama	General Manager	Safety & Technology Division	NIPPON KAJI KENTEI KYOKAI(NKKK)
5	Japan	Mr.	Shun	Masui	Deputy Director	Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau	Ministry of Land, Infrastructure, Transport and Tourism
6	Japan	Mr.	Susumu	Ota	Director	Center for International Cooperation	National Maritime Research Institute, National Institute of Maritime, Port and Aviation Technology
	2 economies		6 Speakers / Moderators				

Participants

No	Economy	Title	First Name	Last Name	Position	Division	Organization
1	People's Republic of China	Mr.	Yuming	Bai	Director	Dangerous Goods and Pollution Prevention Division	Maritime Safety Administration Ministry of Transport People's Republic of China
2	Republic of Korea	Mr.	Jong-Shik	Woo	Management Director		Korea Maritime Dangerous Goods Inspection & Research Institute
3	Republic of Korea	Mr.	Seong-Ho	Yang	Inspector	Inspection Team	Korea Maritime Dangerous Goods Inspection & Research Institute
4	Malaysia	Ms.	Shazrina	Mohd Hanifah	Assistant Secretary	Port Services Unit	Ministry of Transport Malaysia
5	The Philippines	Mr.	ENRICO I	MENDOZA	ACTING CHIEF SAFETY OFFICER		PHILIPPINE PORTS AUTHORITY
6	Chinese Taipei	Ms.	Ya-hui	Ni	Vice President (Deputy General Manager)		Environment Resource & Information Co., Ltd.
7	Thailand	Mr.	Saravuth	Pinnuk	Chief	Dangerous Cargo Control Section	Port Authority of Thailand
8	The United States	Mr.	Steven	Webb	International Transportation Specialist	Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety	U.S. Department of Transportation
9	Viet Nam	Mr.	Van	Quang Khuong	Inspector	Maritime Inspectorate	Viet Nam Maritime Administration
	8 economies		9 Participants				

**Mr. Steven Webb from The United States participated seminars as a speaker and a participant.

Annex II: List of Secretariats

Title	First Name	Last Name	Position	Division	Organization
Mr.	Noriaki	Usui	Director	Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau	Ministry of Land, Infrastructure, Transport and Tourism
Mr.	Shinichi	Kigawa	Deputy Director	Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau	Ministry of Land, Infrastructure, Transport and Tourism
Mr.	Shun	Masui	Deputy Director	Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau	Ministry of Land, Infrastructure, Transport and Tourism
Mr.	Susumu	Endo	Attendant	Dangerous Goods Transport Office Inspection and Measurement Division Maritime Bureau	Ministry of Land, Infrastructure, Transport and Tourism

Mr.	Akihiro	Yonehara	Senior Consultant	Research and Consulting Group	Japan Marine Science Inc.
Ms.	Machiko	Kusumi	Consultant	Research and Consulting Group	Japan Marine Science Inc.

Annex III: Pictures of Workshop/Seminar

• First Day



Fig.1 Group Photo



Fig.2 Keynote speech: Preventing Accidents in Maritime Transportation of Dangerous Goods

•Second Day

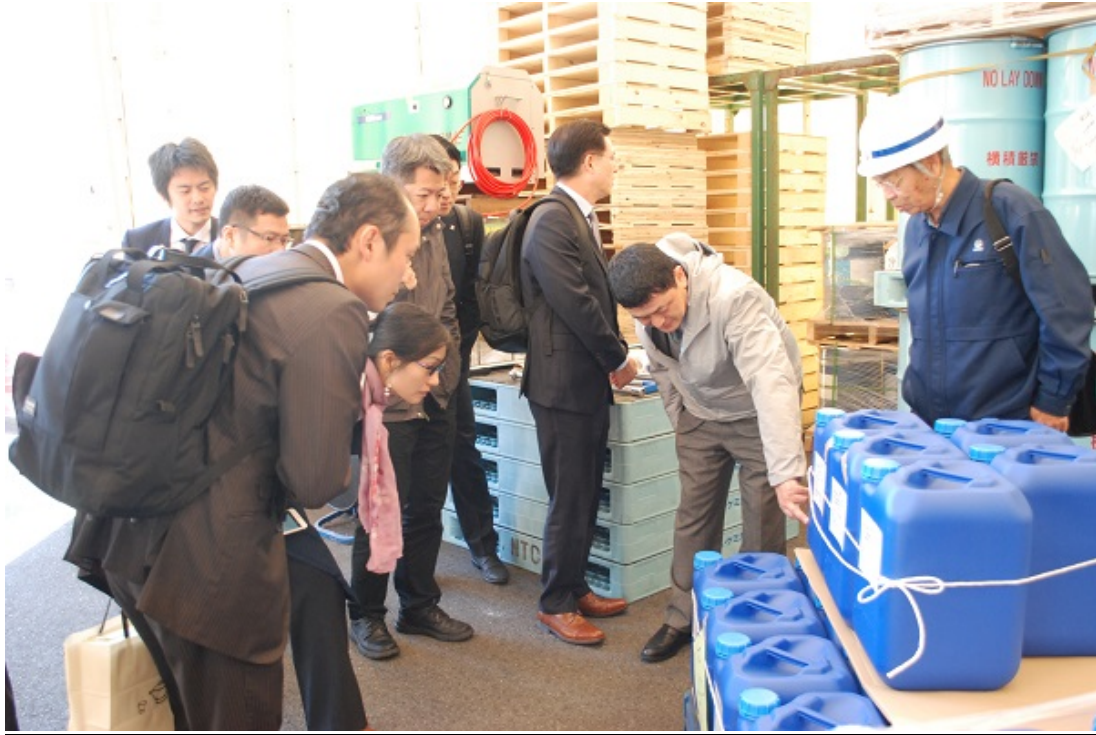


Fig.3 Technical Tour (1 of 2)



Fig.4 Technical Tour (2 of 2)

•Third Day



Fig.9 Workshop (1 of 2)



Fig.9 Workshop (2 of 2)