

Building a Resilient and Sustainable Cruise Industry Post COVID-19

APEC Transportation Working Group

April 2024



**Asia-Pacific
Economic Cooperation**



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1. Objective

The objective of this project is to identify the path of post COVID recovery and attributes to build a sustainable and resilient cruise industry by conducting policy research and a comprehensive dialogue among stakeholders from public and private sectors with expertise in policies, technologies and business through the Forum. This project makes effort to enhance regional replicability of best practices on how cruise industry can recover in a sustainable and resilient manner. This project's outputs support APEC Putrajaya Vision 2040 and priorities of APEC Thailand 2022 in their pursuit of sustainable and inclusive growth.

The policy survey and research of this project give a theoretical contribution toward resilience and sustainability literature especially within cruise industry by constructing a valid hierarchical framework based on the causal interrelationship among attributes. The framework is projected to be a significant reference for academicians due to its validity and comprehensiveness. The hierarchical framework based on the causal interrelationship among attributes which constructed by this project can determine the major attributes that cruise industry need to prioritize to ensure the resilience and sustainability development. Therefore, the key attributes will provide practitioners clear views and assist industry in achieving high resilience.

In addition to providing essential information and framework for cruise industry to improve their resilience and sustainability, the project provided opportunities for APEC economies to exchange experiences with international organizations through hosting APEC Resilient and Sustainable Cruise Industry.

This project also provided the policy recommendation of pandemic prevention regulations, protocols, and open policy for all APEC economies' cruise industry based on the survey and sharing experience from APEC economies and CLIA professionals. These policy recommendations will be the reference for the cruise industry stakeholders including policy makers, cruise liners, port authorities to develop post COVID recovery practices.

2. Key Findings of the Policy Research

The cruise industry is well-known as a significant sector in shipping and tourism, characterized by consistent yearly expansion and notable contributions to the global economy. The cruise industry is noted for its growth rate, which is almost twice as high as that of land-based tourism. This makes it the preeminent and most rapidly expanding sector within the travel industry. Since 1970, there has been a substantial growth of 2,600 percent in the cruise industry. According to the Cruise Line International Association (CLIA), the

cruise industry has witnessed a substantial surge in passenger numbers. This growth can be observed by the industry's transition from a relatively small enterprise, catering to less than five million passengers in 1970, to a formidable industry that accommodated over 30 million passengers in 2019. Furthermore, this expansion has resulted in the generation of over 160 million passenger movements across various global cruise ports. Moreover, the expeditious development of the industry additionally engenders job prospects for the society. According to the statistics, the cruise sector has a significant impact on employment, with over 1.17 million individuals being employed, and contributes substantially to the financial output, amounting to approximately USD150 billion. As a result of the exponential growth of the cruise industry, cruise firms continue to operate their existing ships while also acquiring new ships in order to effectively cater to the increasing demand for cruise shipping.

In accordance with the vision of expanding the industry, there is a growing emphasis on implementing strategies to enhance the industry's resilience, especially in light of the profound impact caused by the COVID-19 pandemic. Amidst the global pandemic, the cruise industry had a significant downturn, characterized by a substantial decline in passenger counts to slightly over 7 million individuals and a consequential reduction in traffic by 75 percent. Furthermore, the swift expansion of this industry is accompanied by increasing concerns about its adverse social and environmental impacts, which might place significant strain on destinations and shape community perceptions and concerns. In order to mitigate the risk of future catastrophic disruptions, it is essential for the cruise industry to undertake comprehensive structural and transformational changes aimed at achieving enhanced resilience. Resilience may be defined as the capacity of a system to effectively manage and respond to disturbances, adapt to changing conditions, and mitigate the negative impacts of such disturbances, all while maintaining its fundamental function, structure, and identity. This particular concept seems to have complemented the previously stated concept of sustainability. The argument posits that resilience encompasses several dimensions, including social, institutional, environmental, economic, spatial, and technological, resulting in a wide range of attributes being available. In order to facilitate the transformation of the cruise industry towards resilience, it is essential to identify and assess the attributes that contribute to enhanced resilience. Nevertheless, previous research has not comprehensively elucidated the valid attributes of resilience. Therefore, the objective of this research is to ascertain and provide a set of valid resilience attributes derived from qualitative information. Additionally, it aims to investigate and elucidate the intricate nuances of these essential attributes as well as define those attributes that are advantageous to the business in advancing the real implementation of resilience.

(1) Questionnaires Design

In order to achieve the stated objectives, this study constructed two distinct kinds of questionnaires. The first type pertains to an expert choice questionnaire that is derived from a thorough examination of relevant scholarly sources. This questionnaire results will then be used in the fuzzy Delphi method (FDM) analysis. Drawing upon the existing body of literature, this study presents a comprehensive expert choice questionnaire consisting of six aspects and 30 criteria. These aspects include social welfare (A1), institutional mitigation management (A2), spatial resilience management (A3), business management and economic activities (A4), environmental and energy management (A5), and safety and security technologies development (A6). To guarantee relevance with the cruise industry, this set of aspects and criteria were verified by professionals prior to data collection. Furthermore, within this questionnaire, the expert's linguistic judgment is converted into triangular fuzzy numbers (TFNs) utilizing linguistic scales of extreme, demonstrated, strong, moderate, and equally to express the importance degree of each aspect and criterion.

To acquire appropriate data for the qualitative survey analysis, which in this study will be used to support the findings of the FDM, this study additionally administered an open-ended questionnaire to experts. The purpose of this open-ended questionnaire is to gather data pertaining to comparable topics. Furthermore, the incorporation of open-ended questions served to augment and enrich the quantitative approach used in this study. This was achieved by a comparative analysis of the results and a thorough examination of detailed insights of the key measurements resulted by the FDM analysis, so enhancing the overall depth and comprehensiveness of the research findings. In this study, the obtained open-ended questionnaire data are utilized for the qualitative survey analysis, which the results are subsequently compared with the outcomes of the FDM analysis in order to provide a full and complex overview of the drivers influencing the resilience and sustainability of the cruise industry. Additionally, this open-ended questionnaire results are important for the establishment of a series of specific recommendations for the practitioners to further strengthen the key drivers proposed. The use of both quantitative and qualitative methodologies in this research has undoubtedly facilitated the emergence of a more intricate depiction. The open-ended questionnaire survey used the English language. The questionnaire consists of a total of five open-ended questions. The following set of five questions has been established and proposed by experts in order to address the issues prevalent in the cruise industry. The five questions are outlined as follows:

- What are the impacts caused by the COVID-19 toward the cruise industry, such as cruise terminals, cruise lines (seafarers, crew

members, cruise ship operation), source market, cruise supply, travel agent, port agent, and cruise port cities?

- What are the challenges encountered throughout the reoperation of cruise industry?
- What actions should be taken to ensure the cruise industry's reoperation in the post pandemic era?
- What actions should be taken to enhance the cruise industry's resilience and sustainability?
- The COVID-19 pandemic has caused significant disruption and massive decline for the cruise industry. Due to these circumstances, the island-hopping cruise was promoted to foster cruise industry recovery process. What are your thoughts toward this issue? And how is the development of island-hopping cruise progressing?

(2)Data Collections

The study incorporated two primary data collection, namely the expert choice questionnaire and the open-ended questionnaire. Both questionnaires are designed in the English language and delivered both in person and via an online questionnaire platform, specifically Google Form. Both questionnaires were sent over a two-month period, commencing in March and concluding in April 2023. Due to the need to collect the data from experts, this study utilized the purposive sampling technique. This technique was implemented by selecting the respondents based on specific characteristics required for the study. In this study, respondents were required to be cruise industry experts or professionals with extensive experience. A total of 17 experts with an average of 19 years of experience in the cruise industry in the Asia-Pacific Economic Cooperation (APEC) region were selected for evaluating both expert choice and open-ended questionnaire. The experts involved in this study are academician, cruise specialist, and government officials from 10 APEC economies such as Australia; Canada; China; Japan; Korea; Malaysia; the Philippines; Singapore; Chinese Taipei; and Thailand.

(3)Results

Fuzzy Delphi method results

The FDM analysis utilized the expert choice questionnaire to assess the subject matter. A total of 30 criteria, categorized into six distinct aspects, were put up for evaluation. The evaluation used the fuzzy scale to assess the resilience criterion, relying on the expert's judgement. Following that, the defuzzification procedure was conducted in order to convert the linguistic phrase into the corresponding TFNs. The FDM analysis is thereafter used to

assess the expert's perspective on every aspect and criteria. The results indicate that the most significant aspects are spatial resilience management (A3), social welfare (A1), and institutional mitigation strategy management (A2). These are followed by safety and security technology development (A6), environmental and energy management (A5), and business management and economic activities (A4) in descending order of importance. The spatial resilience management is essential due to its capacity to strengthen the territorial system's capacity to recover and bounce back after unforeseen disturbance. Spatial resilience management also plays an essential role to improve business environment, preserve the industry's reputation, and nurture enhanced social, environmental, and economic performance. Social welfare is necessary to improve societal well-being and establish a more effective social mechanism that allows communities to partake in disaster preparedness and response efforts. In addition, this aspect can facilitate the implementation of recovery initiatives that mitigate social disruption and lessen the impact of future disruptions. Further, institutional mitigation strategy management is required for identifying, evaluating, and reducing risks associated with the industry's operation. This includes the development and implementation of plans and procedures intended to mitigate the risks currently encountered by the organization, thereby minimizing the negative effects of an imminent threat and establishing a clear path to recovery.

Added to the findings of aspects analysis, the results of the criterion analysis show a threshold value of 0.501. This determination of the threshold value plays a crucial role in assessing the importance of the criteria, as it determines whether the criterion should be deemed important or less important, and thus accepted or rejected. Based on the threshold value, it is concluded that a total of 19 criteria were considered acceptable, while 11 criteria were deemed unacceptable and consequently removed. In this study, the top five criteria identified are as follows: enhanced relationship with the local community (C4), enhanced risk assessment management (C8), growing investment and financial assistance (C17), customer experience improvement (C11), and development of shore excursions and port attractiveness (C10). The enhanced relationship with the local community is of utmost importance in bolstering resilience, as it facilitates the spread of cruise culture throughout communities, hence augmenting public view of the cruise industry. This criterion is also crucial for promoting the local community's willingness to accept tourists in a hospitable way, which has the potential to enhance economic benefits for the region. The enhanced risk assessment management as the second most important criteria is essential for effectively identifying possible risks from both internal and external sources. This, in turn, allows for the formulation of suitable strategies to mitigate these threats. Enhancing risk assessment management may augment an industry's capacity to evaluate the potential ramifications of forthcoming disruptions, hence enabling the business to allocate its resources in a manner that successfully mitigates the repercussions of those disruptions. The growing investment and

financial assistance are necessary to facilitate the achievement of enhanced resilience performance. This is due to the fact that this criterion has the potential to provide the necessary funding for the creation and execution of innovative measures, including safety and security technologies and advancements in energy-related sectors. These measures play a crucial role in enhancing operational efficiency, resilience, and sustainability. The customer experience improvement is also necessary in order to enhance the facilities and customer experiences offered on board the cruise ship, as well as at the cruise ports and port cities. This criterion enhances the loyalty and satisfaction of cruise passengers, and reinstates their trust in the cruising business after the disruption. The capacity of the cruise industry to substantially improve the overall levels of satisfaction among cruise passengers is also augmenting the probability of repeat trips and subsequent visits, so bolstering the overall resilience of the industry. Finally, the development of shore excursions and port attractiveness also plays a crucial role in strengthening the resilience of the cruise industry by improving the overall experience of cruise passengers. This, in turn, leads to increased levels of passenger satisfaction, repeat purchases, and customer loyalty. The improvement of shore excursions and the appeal of ports also functions as a noteworthy economic stimulant, as it has the capacity to revitalize local business activity and provide employment opportunities, therefore enhancing the overall economic performance of the area.

Qualitative survey analysis results

For the qualitative survey analysis which utilized the open-ended questionnaire, the analysis is conducted through the utilization of NVivo 12. This software facilitated the generation of a word frequency table and a word cloud. The data presented in the word frequency table and word cloud generated indicate that the strategies most commonly mentioned for strengthening resilience are related to the promotion of health and safety measures, the growth of tourism and infrastructure, and the provision of support from governmental and local communities. Based on the results of the qualitative open-ended questionnaire analysis, it is detailed that promotion of health and safety measures is needed to prevent disease outbreaks and ensure compliance with regulations. Additionally, such measures can enhance passengers' trust in the cruise industry, thereby potentially improving its reputation and resilience. There is also a contention that the improvement of health and safety measures have the potential to enhance the achievement of improved risk assessment management through facilitating the enhancement of emergency plans, safety protocols, and crisis handling procedures in order to mitigate or alleviate the consequences of identified risks. Within the context of the COVID-19 pandemic, it is essential to augment health and safety protocols, encompassing procedures for cleaning and

disinfection, mandates for mask use and adherence to social distancing measures, as well as the implementation of pre-boarding health exams. These measures are indispensable in mitigating the transmission of the illness. Moreover, in order to enhance the resilience of the cruise industry, it is also essential to foster the development of tourism and infrastructure. This is because these practices have the potential to enhance the whole cruise experience for passengers, leading to increased levels of satisfaction, repeat purchases, and customer loyalty. This strategy furthermore functions as a noteworthy economic stimulus, as it has the capacity to rejuvenate indigenous trade and provide employment opportunities, hence enhancing the general economic performance of the area. In addition, it is imperative to receive assistance from governmental entities and local communities in order to mitigate the detrimental impacts of an impending disruption, establish comprehensive safety and welfare protocols for passengers, crew members, and the environment, and foster a more effective trajectory towards recovery and resilience. The implementation of enhanced rules leads to the creation of more efficient contingency plans, which subsequently improves adaptive capacity and facilitates the ability to address disruptions. This, in turn, guarantees the continuity and resilience of businesses. On another hand, it is necessary to establish deeper relationships with local communities in order to build resilience. This is because such connections have the potential to facilitate the spread of cruise culture throughout communities, therefore improving the public's opinion of the cruise industry. Establishing a more robust rapport with surrounding communities not only facilitates the restoration of public confidence but also plays a pivotal role in fostering a receptive attitude among local residents towards incoming visitors, so possibly enhancing the economic prospects of the region that enhancing industry resiliency.

It is revealed that these discovery from qualitative survey analysis aligns with the FDM analysis, which posits that the successful management of spatial resilience management, social welfare, and the management of institutional mitigation strategies are of the utmost crucial aspects. Moreover, in conjunction with the analysis of qualitative surveys, this research has also shown the resilience assessments that should be given priority depending on economies. The enhancement of pandemic prevention and safety measures, service standards, safety training and education, cooperation and collaboration with local communities, and cruise publicity and promotion are recognized by economies as the primary factors required to bolster the resilience of the cruise industry. In addition, the results of the qualitative open-ended questionnaire are also utilized to discuss the theoretical and managerial implication of this study.

3. APEC Resilient and Sustainable Cruise Industry Forum

(1) Background

- ◆ **Time:** 25 July 2023, with a site visit on 26 July
- ◆ **Venue:** Taipei City
- ◆ **Participants:** 106
- ◆ **Participating Economies:** 12 APEC economies, including Australia; Canada; Indonesia; Korea; Malaysia; Mexico; the Philippines; Singapore; Chinese Taipei; Thailand; the United States; Viet Nam.
- ◆ **Discussion Topics:**
 - ✧ Sustainability and Inclusive Growth of International Cruise Sector
 - ✧ Focusing on the Resilient Cruise Industry Policy in the APEC Region
 - ✧ Post Pandemic Recovery Practices of the Cruise Industry in the APEC Region

(2) Agenda

Time	Agenda
08:40-09:00	Registration
09:00-09:20	Welcome Remarks ◆ Hsieh-Lung Yeh, Director General of Maritime and Port Bureau, MOTC, Chinese Taipei Opening Remarks

Time	Agenda
	<ul style="list-style-type: none"> ◆ Jason Hill, TPTWG Lead Shepherd (pre-recorded) ◆ Mohamad Halim Bin Ahmed, MEG Chair, TPTWG
09:20-09:30	VIP Group Photo
Session 1: The Sustainability and Inclusive Growth of International Cruise Sector	
09:30-09:35	Moderator: Mohamad Halim Bin Ahmed, MEG Chair, TPTWG
09:35-10:05	1. Sailing to a Better Future: Pursuing Net-zero Carbon Cruising Dimity McCredie, Director, Advocacy & Government Affairs Australasia, Cruise Lines International Association (CLIA)
10:05-10:35	2. Sustainable Development and Inclusive Growth in the Cruise Industry: Canadian Perspectives Tanya Dare, Manager and Senior Policy Advisor, International Marine Policy, Transport Canada
10:35-10:45	Coffee Break
10:45-11:15	3. Cruise Industry Growth and Prospect in Asia Ted Blamey, Principal, CHART Management Consultants
11:15-11:45	4. Enhancing the Inclusiveness in the Cruise Industry through the APEC Women in Transportation Initiative Ronâle Taylor, Chair, Women in Transportation (WiT)
11:45-12:00	Discussion
12:00-13:30	Luncheon
Session 2: Focusing on the Resilient Cruise Industry Policy in the APEC Region	
13:30-13:35	Moderator: Ted Blamey, Principal, CHART Management Consultants
13:35-13:55	1. The Role of Chinese Taipei in the Integration of the Asia-Pacific Cruise and Island-Hopping Region: Strategies and Practices to Enhance the Resilience of the Cruise Industry

Time	Agenda
	Wayne Liu, Professor, Graduate Institute of Tourism Management, NKUHT
13:55-14:15	2. Green Cruise Development in Viet Nam Trần Thị Tuyết Mai Anh, Director, International Cooperation and IMO Department, VINAMARINE /MEG Deputy Chair, TPTWG
14:15-14:35	3. Enhancing Regional Connectivity: Prospects and Opportunities for Cruise Tourism in the Philippines Luisito U Delos Santos, Director, Planning and Policy Service, Maritime Industry Authority
14:35-14:50	Discussion
14:50-15:10	Coffee Break
Session 3: Post Pandemic Recovery Practices of the Cruise Industry in the APEC Region	
15:10-15:15	Moderator: Dimity McCredie, Director, Advocacy & Government Affairs Australasia, Cruise Lines International Association (CLIA)
15:15-15:35	1. Sea of Opportunity: The Future of Cruise Tourism in Asia Irene Chua, Vice President / Group Publisher, Northstar Travel Group
15:35-15:55	2. Asia Pacific Chain Green Cruising - High Way to the Sustainable Cruise Industry Bok Soon Leem, President, Korea International Cruise Institute
15:55-16:15	3. Cruise Trend Analysis and Promotion Strategy Shu-Hui Cheng, Vice President of Business, TIPC
16:15-16:30	Discussion
Final Discussion	
16:30-17:30	Moderator: Hsieh-Lung Yeh, Director General of Maritime and Port Bureau, MOTC, Chinese Taipei

Time	Agenda
	<p>Expert Briefing: Feng-Ming Tsai, Professor and Chairperson, Department of Shipping & Transportation Management, NTOU, Chinese Taipei</p> <p>Panelists:</p> <ul style="list-style-type: none"> ◆ Tanya Dare, Manager and Senior Policy Advisor, International Marine Policy, Transport Canada ◆ Bok Soon Leem, President, Korea International Cruise Institute ◆ Luisito U Delos Santos, Director, Planning and Policy Service, Maritime Industry Authority ◆ Trần Thị Tuyết Mai Anh, Director, International Cooperation and IMO Department, VINAMARINE /MEG Deputy Chair, TPTWG

(3) Forum Record

Opening remarks

Yeh, Hsieh-Lung, Director General of Maritime and Port Bureau

In his opening remarks, Mr. Hsieh-Lung Yeh, Director General of Maritime and Port Bureau, Chinese Taipei, pointed out that the pandemic has caused significant obstacles to cross-border personnel flow and related tourism development. As a result, the cruise industry has been greatly impacted. However, during the peak of the pandemic, Chinese Taipei launched the Dream Explorer's Island-Hopping Cruise through its comprehensive epidemic prevention measures and effective spatial resilience management. This achieved the first resumption of operations in Asia and the second in the world. The project had a total of 95 voyages, carrying around 97 thousand passengers, and is estimated to have contributed nearly USD160 million to the domestic industrial supply chain during its operation. Therefore, he stated that strengthening the resilience of the cruise industry is an important issue worthy of exploration and attention, and only by ensuring resilience can we maintain the sustainable development of the industry.

Jason Hill, TPTWG Lead Shepherd

Mr. Jason Hill, TPTWG Lead Shepherd, expressed his gratitude to Chinese Taipei for hosting this Forum as one of the best examples of how the APEC region can strengthen cooperation under the impact of the pandemic. Mr. Hill believed that a set of policy guidelines must be established to address future challenges and potential impacts on the transportation industry since the pandemic has become the biggest challenge for the cruise industry. Understanding that this Forum focuses on the sustainability and resilience of the cruise industry, Mr. Hill underscored the importance of ensuring its economic expansion while simultaneously creating workforce and employment opportunities. He expressed optimism that this Forum would serve as a platform for stakeholders to engage in meaningful dialogue, and collaborate on how to utilize crucial tools and guidelines to ensure a stable leisure economy and foster growth within the APEC cruise industry.

Mohamad Halim Bin Ahmed, MEG Chair

Chairman Ahmed stated that while the pandemic and environmental issues pose challenges to the cruise industry, they also present opportunities for rebuilding and strengthening the industry. Regarding the path towards resilience and sustainable development, Chairman Ahmed proposed two

recommendations. First, the establishment of comprehensive standards and guidelines to ensure the safety of crew and passengers and promote cross-border travel experiences. Second, considering environmental responsibility in driving industry development. Lastly, Chairman Ahmed expressed his gratitude to Chinese Taipei for hosting this meaningful Forum.

Session 1: The Sustainability and Inclusive Growth of International Cruise Sector

1-1: Sailing to a Better Future: Pursuing Net-zero Carbon Cruising

Dimity McCredie, Director, Advocacy & Government Affairs Australasia, Cruise Lines International Association (CLIA) firstly introduced Cruise Lines International Association. CLIA's vision is for the cruise industry to be recognized as a leader in responsible travel and the best way to see the world. CLIA involves in the global and regional cruise lines, travel agencies & advisors, also ports, destinations, ship builders & suppliers, etc. CLIA Cruise Line members are part of an influential community, which will increase USD150 billion to the global economy, create 1.17 million jobs, and bring USD50 billion in wages. There will be 64 new ships on order through 2028 and more than 40 million passengers enjoying cruise service. The intent to cruise is back to where it was before the world shifted in March 2020. Cruisers are telling us that their commitment to making travel decisions based on environmental considerations is higher than ever. To meet such demand, the cruise industry proposes the key to the future success, including developing partnership and collaboration, reducing emissions and advancing environmental commitments, and promoting the new levels of innovation and investment. To reach net zero carbon cruising by 2050, 3 pillars of actions have to be taken, which are reducing the carbon footprint of ships while at berth and at sea, investing in advanced environmental technologies onboard, partnering with cities and ports on sustainable destination management. Until now, innovative solutions are already having a positive impact. The CLIA ocean-going member fleet includes: 11 LNG-powered CLIA ocean-going cruise ships sailing today and 23 more ships currently on order; 78% of CLIA global capacity equipped with advanced wastewater treatment which increases 9% compared to 2021; 14.1 average age of the ships in the CLIA ocean-going fleet which is 4 years younger than the average age at all cruise ships sailing; 79.1% of CLIA global capacity utilizing exhaust gas cleaning system which increases 7% compared to 2021; 40% of CLIA global capacity connecting to shoreside electricity which increases 20% compared to 2021. CLIA applies its net zero carbon cruising pillars to set up 14 measures and develops a new, online, multilingual resource containing reports, statistics, infographics, videos, case studies and more for CLIA members.

1-2: Sustainable Development and Inclusive Growth in the Cruise Industry: Canadian Perspectives

Tanya Dare, Manager and Senior Policy Advisor, International Marine Policy, Transport Canada, introduced global environmental and economic sustainability, which needs rapid change to meet the Paris Agreement's 1.5-degree goal, as well as the Green Shipping Corridor Initiative committed to at COP26, which aims at connecting zero-emission maritime routes between two or more ports. Ms. Dare also elaborated on Canadian efforts to establish Green Shipping Corridors. Ms. Dare emphasized that it is important to build an inclusive and sustainable labour force. According to the IMO-WISTA International "Women in Maritime" Survey, only 2% of the world's seafarers are women, and most of them work in the cruise sector. Customer-facing maritime industries present the biggest opportunities for women seafarers, and addressing the lack of women captains. Women seafarers are experiencing increased bullying and violence since the pandemic started. A significant portion (43%) of Canada's available seafarer labour pool will retire in the next 8-10 years. In 2021, Transport Canada studied current and future gaps in seafarer capacity and identified key issues that affect the availability of seafarers in Canada, which are low awareness of the maritime sector, high cost of training, difficulty filling critical positions, and the wage gap between men and women. Canada's efforts to address its marine labour shortage include recognizing STCW maritime certificates for seafarers who have immigrated to or will immigrate to Canada, granting dispensations for the temporary promotion of certified seafarers, a seafarer recruitment placement service, reciprocal agreements with other economies, granting equivalencies to Department of National Defence seafarers to gain commercial marine certification, strengthening Canada's pay equity regime, and continuous efforts to vaccinate international seafarers. Ms. Dare finally recommended that APEC policy makers work together to reduce emissions from marine shipping, for instance by establishing green shipping corridors focused on cruise routes; to address cruise industry labour gaps creatively, cooperatively, inclusively, and fairly by addressing hiring practices, working conditions, and pay equity issues; to protect public health, employees, travelers, and the marine environment when restarting higher-risk segments of the marine economy, in line with international standards; to seek to standardize reporting measures from the cruise ship industry to relevant authorities in each destination or to governing bodies; and to encourage collaboration between relevant government departments, agencies, and organizations, including scenario exercises to train and practice for future disasters and to develop resiliency planning.

1-3: Cruise Industry Growth and Prospects in Asia

Ted Blamey, Principal, Chart Management Consultants analyzed that current cruise line sustainable development initiatives mainly include huge

efforts towards low-carbon fuels, minimizing energy demand and optimizing all aboard systems and net cruising needs. Resilience in the cruise industry emphasizes on post pandemic recovery. The return to worldwide cruising has been gradual but strong. Globally, future passengers are projected to quickly exceed pre-pandemic levels. Demand (source markets) in cruise industry is driven by supply (deployment and capacity). How cruising benefits local and regional economies? Firstly, the cruise industry is a dynamic source of economic activity which provides economic benefits to a vast number of industries and economies at a local level throughout the globe. Furthermore, CHART developed “3×3” to illustrate the direct economic impacts of cruise, which includes 3 categories of collected fees/ charges, received revenues, paid wages, 3 groups of cruise lines & ships, passengers, crews & shoreside employees, 3 strata in community of government authorities, private businesses, employed citizens. A narrow view is often taken by authorities and governments who look only at the returns on port infrastructure (small) and not the flow-on benefits through the wider community (large). It is often wrongly thought that cruising is no better than outbound tourism, i.e., that all benefits go offshore. Mr. Blamey mentioned that Asia’s source market has its unique challenges, such as very short vacation durations, little itinerary diversity, strong preference to embark locally/ avoid flight, low brand recognition, little visibility, lack of knowledge of cruise’s benefits & value, preference for own language, cuisine, entertainment, fellow passengers. In Mr. Blamey’s observation, pandemic severely affects cruising deployment capacity, especially Eastern Asia. The reasons are COVID-19 regulations & protocols made deployment uncertain and risky. Most international cruise lines withdraw, and Asia’s own cruise operators weakened. At last, Mr. Blamey proposed several key measures to help Asian destinations’ future growth, which are to implement cruise-friendly policies, to stimulate cruise line interest, and to simulate the national appetite for cruising.

1-4: Enhancing the Inclusiveness in the APEC Women in Transportation Initiative

Ronâle Taylor, Chair, APEC Women in Transportation, TPTWG, introduced that challenges that women face in the cruise industry currently are gender gap, lack of training/ education, unjust pay wages, unsafe working environment, and low retainment. The challenges could be improved by building resilience for sustainability in measures of policy reforming, trust-building, investment, and access. Detailed strategy and policy development for the contributions by women includes increased visibility by training/ education and leadership roles, developed safety measures and accessibility. Next, Ronâle introduced “APEC Women in Transportation Initiative”, which launched during the 7th APEC Transportation Ministerial in 2011. It invigorated TPTWG on the important topic of gender inclusivity and equality and encouraged TPTWG Expert Groups to ensure gender-related issues were integrated in

Main Policy Themes. WiT continues to promote the advancement of women and support the goals of the La Serena Roadmap. The next steps in WiT will address gender equality issues in support of the La Serena Roadmap through each of the TPTWG Expert Groups' Main Policy Theme (MPT) by building on successes, creating more opportunities, improving access, gender inclusiveness and economic growth, collaborating with member economies and private sector.

Discussion of Session 1

The participant from Indonesia asked for cruise industry to consider the opportunity of western Indonesia as one of the cruise home ports in Asia. Mr. Blamey responded that the current infrastructures and transportation facilities in the western Indonesia is not enough to support this area to become a cruise home port. However, it might be possible to consider Bali model as expedition cruise lines to provide cruise passengers as an alternative cruise tour option for adventure and unusual thrills seekers and provide unique and exotic destinations. Participants also asked about gender equality related to convention level. Ms. Dare elaborated the current approaches and measures within Canadian maritime/cruising industry. Participants and panelists discussed the chance which the Philippines would be selected to the big cruise companies' destinations. Mr. Blamey echoed that the Philippines is full of attractions for international cruise lines while the disadvantage is too far from main east Asian cruise home ports, such as Keelung, Shenzhen. To solve this issue, bigger cruise vessels are needed but the current port infrastructures in the Philippines are not available yet.

Session 2: Focusing on the Resilient Cruise Industry Policy in the APEC Region

2-1: The Role of Chinese Taipei in the Integration of the Asia-Pacific Cruise and Island-Hopping Region: Strategies and Practices to Enhance the Resilience of the Cruise Industry

Wayne Liu, Professor, Graduate Institute of Tourism Management, National Kaohsiung University of Hospitality and Tourism (NKUHT) highlighted the importance of policy support and collaboration between the public and private sectors for the sustainable development of the cruise industry. Despite challenges during the pandemic, Chinese Taipei has worked diligently to attract cruise ships through efficient government-cruise industry communication. In 2023, the projections indicate that there will be 190 homeport calls and 116 port-of-call visits. Additionally, it is expected that there will be approximately 503,000 passengers. The industry's core focus post pandemic turn to " long-term itinerary, in-depth experience " to expand the customer base, and also require ongoing development of the Asia-Pacific

cruise economic cooperation circle and the promotion of regional integration and island-hopping cruises.

The development of Chinese Taipei's favorable home port tourist source market is not achieved overnight, but through the long-term efforts of excellent cruise partners and travel agencies. Despite the disruptions caused by the pandemic, the foundation of the long-established customer base remains intact. This makes the recovery of the cruise industry post-pandemic a critical priority for the transportation sector. The cruise industry is an important strategic industry in Chinese Taipei. Chinese Taipei developed plans encompassing the four key aspects: navigation, port operations, cruise management, and tourism promotion. The strategies include increasing the amount of "supply of various materials required on board", optimizing offshore island cruise facilities, collaborating with exploration-oriented cruise operators to attract high-end cruise passengers, and developing new types of cruise tourism activities within the economic framework to attract more tourists to experience the beauty of Island.

2-2: Green Cruise Development in Viet Nam

Trần Thị Tuyết Mai Anh, Director, International Cooperation and IMO Department, VINAMARINE / MEG Deputy Chair, TPTWG emphasized Viet Nam's natural advantages for developing the shipping industry, including its extensive coastline, natural beauty, cultural heritage, and strategic location. Cruise ships visit to Viet Nam increased from 159 in 2014 to 286 in 2019, with diversification in markets, including Europe and the US. Popular destinations include Ha Long Bay, Da Nang, Nha Trang, and Ho Chi Minh City. There are five key policies related to the Vietnamese cruise industry, including visa exemption policy, port infrastructure development, marketing and promotion, environmental protection, and safety and security. While the cruise industry in Viet Nam has seen significant growth in recent years, it still faces several challenges that must be addressed in order to sustain its growth and development over the long term, such as seasonal variations, infrastructure limitations, environmental concerns, market competition, and carbon emissions reduction commitments. At COP 26, Viet Nam committed to develop and implement strong greenhouse gas emission reduction measures. Therefore, Viet Nam issued the "Green Port Development Project", which aims to enhance international carbon reduction efforts through technical standards and assessments. The long-term goal of this project is to implement the voluntary application of the "green port" criterion in Viet Nam. The primary criteria are commitment & willingness, action & implementation, and efficiency & effectiveness.

2-3: Enhancing Regional Connectivity: Prospects and Opportunities for Cruise Tourism in the Philippines

Luisito U Delos Santos, Director, Planning and Policy Service, Maritime Industry Authority discussed the Philippines as an archipelago with a vast coastline, a major contributor to the global maritime workforce, and an attractive cruise destination. The Philippines has multiple cruise ports and various vessel types. In 2023, international cruise companies made 136 ship calls, generating around PHP208.96 billion in tourism revenue in 2022. During the pandemic, the Philippines implemented measures like green lanes for crew changes, automated certificate issuance for seafarers, certificate validity extensions, remote inspections, limited in-person training, and a vaccination program for seafarers. With a focus on regional connectivity, efforts are ongoing to optimize positioning, train maritime personnel, and develop unique island tourism products. Also, the government plans to integrate cruise services into the 2019-2028 Maritime Industry Development Plan (MIDP2028), allocating more resources for cruise industry development and addressing global challenges proactively.

Discussion of Session 2

Participants and panelists talked about how to maintain the resilience of the cruise industry under the impact of the pandemic and the Russia-Ukraine conflict on the cruise industry, as well as the implications of related policies in the Asia-Pacific region and elsewhere. Professor Liu emphasized that cooperation is more important than competition, and utilizing existing resource advantages to complement each other is the core of regional cooperation. Adjusting the pace of implementing relevant measures in response to external factors, such as the impact of the pandemic, is essential to develop a resilient and sustainable cruise industry market. Ms. Mai Anh added that cruise itineraries often involve multiple Asian economies, and what economies need is mutual support and better itinerary coordination. Mr. Santos also emphasized the need for diverse tourism products to facilitate cultural exchanges between people.

Session 3: Post Pandemic Recovery Practices of the Cruise Industry in the APEC Region

3-1: Sea of Opportunity: The Future of Cruise Tourism in Asia

Irene Chua, Vice President and Group Publisher, Northstar Travel Group provided positive analysis regarding the future business opportunity and outlook of cruise tourism. She pointed out that, in comparison to other major cruise markets, Asia has incredible opportunity and potential due to its advantages in growing speed, the source market and low cruise penetration. At the same time, the passenger number in Asia is expected to grow to 5.35 million by 2027, exceeding the record of 3.74 million passengers in 2019, with a projected market volume of USD4.73 billion. Furthermore, Vice President

Chua explained that Asia, as a cruise destination, has more destinations in 2019, with an increase from 288 in 2018 to 306 different destinations. The top five destinations by number of calls in 2019 were Japan (2,681); China (809); Thailand (550); Malaysia (561); and Singapore (400), and the top cruise ports by calls in 2019 were Singapore (400), Baoshan/Shanghai (276), Keelung/Taipei (284), Hong Kong (255), and Fukuoka/Hakata (245). Vice President Chua also mentioned that the cruise sector, which was hit hard by the pandemic, is making a strong comeback and booming in 2023 due to the benefits of revenge travel. She believed that Singapore and Chinese Taipei are among first destinations to restart cruising in Asia. Finally, Vice President Chua introduced the cruise tourism status in Singapore, which restarted its cruise sector in November 2022. According to Singapore Tourism Board, more than 400 cruise ships across 30 brands called in Singapore in 2019, and the Cruise passenger volume was 1.2 million people in 2022, which is about two-thirds of pre-pandemic levels (1.8 million) in 2019.

3-2: Asia Pacific Chain Green Cruising - High Way to the Sustainable Cruise Industry

Bok Soon Leem, President, Korean International Cruise Institute analyzed the considering requirements for green cruise development, with a special focus on the practice and implementation of the resilience development and sustainability improvement of cruise industry after pandemic, including port equipment and ships. She also explained how external factors such as political, sociocultural and environment, are related to the cruise industry development, and the negative effects caused by ship activities such as environmental and noise pollution, and the over-crowded public spaces. Dr. Leem continued to introduce Korea's cruise policy, including the "Korea Master Plan for Development of Cruise Industry" and the "Action Plan for Development of Cruise Industry". She pointed out that nowadays Korea still has no specific standards and regulations applying to cruise ships and ports, even though Korea passed the Framework Act on Low Carbon, Green Growth in 2010, the Designation of SOX Emission Control Area in 2020, and the Framework Act on Carbon Neutrality and Green Growth for the Climate Change (the "Carbon Neutrality Act") in 2022. Finally, Dr. Leem used the case analysis of the "Cruise Ships' Environmental Impact Estimation (EIE) on Busan Port", done by the Busan Port Authority (BPA), explaining that a comprehensive plan for carbon neutrality of the port by 2050 is already launched by BPA, for the estimation of solid waste, sewage and air pollution to the environment caused by cruise ships visiting Busan Port. BPA considers that the Busan case can be a reference to the future sustainable development of Asia-Pacific cruise industry due to the high similarities in sharing market, similar cultures, relatively short cruises among economies.

3-3: Cruise Trend Analysis and Promotion Strategy

Shu-Hui Cheng, Vice President of Business, Taiwan International Ports Corporation (TIPC) introduced the company and pointed out that Chinese Taipei is the second largest (after China) source market in Asia. Second, Vice President Cheng explained TIPC's strategy and promotion action after COVID-19 after Chinese Taipei's border reopening in October 2022, for attracting international cruise back to the Asian market, including the announcement of incentives for International Cruises in December 2022, the promotion tour to Europe; Japan; Malaysia; and Singapore, and the early announcement in April 2023 for the international Cruises incentives in 2024, such as free charge of dockage fee and broadening it to more ports. Third, Vice President Cheng shared her observation of the cruise market trend in 2024 and pointed out that as the hub of cruise lines in Asia, Chinese Taipei highly values the cooperation with other international ports. Chinese Taipei is currently participating in two regional organizations including the Asia Archipelago Cruise Alliance (AACCA) and the Asia Cruise Cooperation (ACC), promoting the cruise tourism connection among with island chains and the regional cruise market cooperation. Finally, Vice President Cheng mentioned about Chinese Taipei's upgrade progress of ports facility during the pandemic, including ports of Keelung, Kaohsiung and Penghu, she also expressed that TIPC is ready to work on the development and promotion of cruise tourism after pandemic.

Discussion of Session 3

Participants and panelists discussed issues about the difficulties in terms of the cruise sector cooperation after the pandemic in the South-East Asia, the success elements behind the Asia Archipelago Cruise Alliance (AACCA), and the impacts of climate change to the cruise tourism. Vice President Chua believed that the cruise industry is unique for its strong reliance on the investment and infrastructure (such as port facilities) of each economy, which has already formed various task groups and cruise alliances to work together on the cruise tourism revival. The Maritime and Port Bureau Director General Yu from Chinese Taipei explained that the rationale for AACCA being able to work out effectively is, through the cooperation among regions and economies, and through the effective resource integration of various sectors such as governments, cruise operators and ports, to provide abundant and diverse itineraries for cruise passengers. Finally, President Leem explained the less weather impact that it has on cruise than flight. She took earlier cruises departing from China for instance and explained that 20%.

Final Discussion

Feng-Ming Tsai, Professor and Chairperson from National Taiwan Ocean University firstly presented the research summary of the policy survey. Professor Tsai concluded the outcomes of the research with following

suggestions: (1) The cruise industry must undertake structural and transformational adjustments to increase resilience to avoid such a catastrophic upheaval. (2) The necessary transformative changes include upgrading health and safety protocols, making investments in innovative technology, maintaining and improving the facilities and attractiveness of port cities, and enhancing the cooperation between industry stakeholders and the local community. (3) To consider the strategies of diversifying revenue streams, enhancing flexibility, and reducing reliance on particular markets.

After the presentation of Professor Tsai, Director General Yeh led the discussion, along with representatives from four economies including Australia; Canada; Korea; the Philippines; and Viet Nam. They engaged in a professional and concrete dialogue regarding how governments can strengthen their relationship with local communities, develop onshore tourist attractions to attract cruise passengers, and enhance the resilience of the cruise industry.

Finally, Director General Yeh summarized the Policy Recommendations based on the discussions during the conference as the conclusion of this forum. At the end of the forum, Director Ye expressed his hope that all distinguished guests attending the forum would gain new inspirations through the opportunity of this exchange. He also looks forward to the regional partners joining hands in facing challenges and difficulties in the future, and together creating a bright future for the cruise industry.

4. Policy Recommendation

(1) The cruise industry should continue to build a comprehensive and resilient crisis management system to enhance industry resilience.

After the impact of the COVID-19 pandemic, we recognize that risks are unpredictable, but we can strengthen the resilience of the cruise industry through crisis management. For example, many economies such as the International Cruise Line Association (CLIA), Malaysia; the Philippines; Singapore; and Chinese Taipei agree that the cruise industry should invest in innovative safety technologies such as non-contact pre-boarding, data sharing systems, and air purification systems. The implementation of pre-boarding health assessments and provision of basic medical services can enhance the industry's tolerance.

Facing an unpredictable future, the cruise industry should continuously review its vulnerabilities and prepare for risk control.

(2) It is recommended that cruise companies prioritize investments in innovation and low-carbon technologies to improve operational efficiency and achieve sustainable net-zero cruising as soon as possible.

Net zero carbon emissions by 2050 is a consensus in the international community. In early July this year, IMO adopted the 2023 IMO strategy to reduce greenhouse gas emissions from ships at the 80th MEPC meeting. The new emission reduction target will advance the year of net zero carbon emissions for international shipping vessels to 2050. In addition, both the EU's Fit for 55 Act and APEC's 11th Transportation Ministerial Meeting (TMM 11) held in May this year emphasize the important role of the transport sector in responding to climate change and show global attention to the trend of net zero carbon emissions.

The cruise industry chain involves diverse economic activities and energy use from cruise construction and maintenance, cruise operation, and related peripheral industries in the cruise terminal area. They should collectively contribute to reducing carbon emissions and achieving environmental commitments. For example: The International Cruise Line Association (CLIA) reminds cruise companies that they must prioritize investment in innovative energy-saving, low-carbon fuels, use of shore power, development and application of recycling waste reduction technologies to respond to climate change and practice environmentally friendly tourism. This is very important. The cruise industry must deploy

ahead of time. Only in this way can the cruise industry coexist with the environment and develop sustainably.

(3) Strengthening regional cooperation partnerships in the cruise industry will help maintain tourism attractiveness and, at the same time, facilitate the promotion of the cruise industry.

The diversity of cruise journeys greatly influences the competitiveness of the cruise industry. Many experts have mentioned strengthening regional connectivity and concepts like the Eastern Caribbean. Economies in the Asia-Pacific region share similar cultures and relatively shorter voyages, making cooperation between cruise ports even more important. In the future, it is hoped that through island-hopping cruises, Southeast Asia and Northeast Asia will have more connections, jointly enhancing the attractiveness of Asian cruise itineraries.

(4) Ensuring fair recruitment, training, and remuneration will help reduce labor gaps in the cruise industry, and APEC members should be committed to advocating for inclusive growth in the region.

After the COVID-19 pandemic, employees in the cruise industry have been severely affected due to job loss and financial deterioration. The cruise industry must have an abundant labor supply to ensure stable and sound development, so it should consider increasing inclusive employment to protect all stakeholders. The cruise industry should improve the unfair treatment of female employees and pay attention to improving gender inclusiveness, increasing training and education opportunities, and the importance of leadership training. In the APEC field. It is emphasized that transportation policies and investments should bring economic benefits to everyone, including micro, small and medium enterprises, women, and other groups with economic potential to be developed, such as people with mobility difficulties and residents in remote areas.