4TH ASEAN REGIONAL FORUM (ARF) WORKSHOP ON FERRY SAFETY

7-8 July 2022, Video Conference

Cochair by China & Thailand

I. HIGHLIGHTS OF THE WORKSHOP

1. DELEGATION/PARTICIPANTS

The Workshop was attended by a total of 155 delegation from government agencies, private sector and international organizations coming from:

Governments of Australia, Bangladesh, Brunei, Cambodia, China, India, Indonesia, Malaysia, Myanmar, Nepal, Pakistan, the Republic of Korea, Republic of the Philippines, Singapore, Thailand and Vietnam.

International/Non-Governmental Organizations such as the International Maritime Organization (IMO), United Nation Economic and Social Commission for Asia and the Pacific (UN ESCAP) and World Ferry Safety Administration (WFSA).

II. OPENING CEREMONY

Welcome Remarks were given by the following:

1. Mr. Yang Xinzhai, Deputy Director General of China Maritime Safety Administration, Co-chair from China of 4th ARF Workshop on Ferry Safety
2. Mr. Somchai Sumanuskajonkul, Deputy Director General of Marine Department of Thailand, ASEAN Co-chair of the 4th ARF Workshop on Ferry Safety
3. Mr. REN Weimin, Director of Transport Division of UN ESCAP

Annex 1: Workshop Agenda

III. SUMMARY OF PRESENTATION

Section 1: Developments after the 3rd ARF Workshop on Ferry Safety

Australia

• Mr. Benjamin Corden-McKinley, Senior Naval Architect, Vessel Safety Unit Operations, Australian Maritime Safety Authority, delivered a presentation on AMSA's Regulatory Approach to Domestic Commercial Ferry Safety, starting with a brief introduction to AMSA.

• The presentation focused on domestic vessels standardized by the National System Regulatory, which are the law act 2012 and 2013, which primarily concerns vessels and the responsibility of their crews. The Act includes Administration of the national system, Unique Vessel Identifier (UVI), Certificates of Survey, Certificates of Operation, Certificates of Competency, and Load Line Certificate. There are Accredited Marine Surveyors for operating under such regulations, and Marine

Surveyors Accreditation Guidance Manual 2014 Part 1 and 2.

• The presentation also provided information about operation details and the survey certificate procedure of Class 1 Passenger Vessels and AMSA Regional Engagement on Ferry Safety with Indonesia.

Bangladesh

• MD. Quamruzzaman, Deputy General Manager (Marine) rtd. introduced the meeting to the maritime geography of Bangladesh and the Bangladesh Inland Water Transport Cooperation (BIWTC).

• BIWTC is a Govt. owned organization that played an important role in operating passenger and ferry vessels both inland and coastal areas with functions to provide services for safe transportation of passenger and cargo, including emergency services at time of national needs and emergencies. The organization applied satellite-based communications for marine applications for safety and management purposes.

• He added that technical support, training and assistance of ARF, IMO and other international marine safety agencies were required in order to improve ferry safety standards which would consequently reduce domestic maritime casualty accidents.

• The organization also expected further close cooperation on the ground of COVID-19 pandemic situation.

The People's Republic of China

Part 1: Accurate Weather Service for passenger ship

• Mr. CHEN Jie'an, Jiangmen MSA, delivered a video presentation on Accurate Weather Service for passenger ships.

• The video presentation focused on the small ferry crossing and terminating at the river under severe weather conditions by applying Accurate Weather Service to ensure the passengers' safety and to meet their goals in a safe, reliable, economical, suitable, and highly efficient ferry service. A history background information of weather forecasts was given as there are customized accurate weather forecasts in some specific areas to avoid general information used in the urban areas. The video described how the bureau of Metrology works and how weather forecasts are presented to the public.

• The video also gave an example of how a company operates and implements the Accurate Weather Service and how accurate weather service helps transportation in many areas. Ship approval is a concern for ferry safety management as well. The video ended by emphasizing the domestic ferry safety regulation model cooperating with the government agencies and local enterprises to gain effective outcomes fast.

Part 2: Practice and Experience of Ferry Safety Management in the Yangtze River

• Mr. JIANG fan, Jiangsu MSA, delivered a presentation on the topic of Practice and Experience of Ferry Safety Management in the Yangtze River. The presentation consisted of 3 parts, including the basic situation of the Yangtze River ferry, policies, and technologies.

• The first part showed the annual throughput and maximum shipload, the most complex hydrological environment, the highest navigation density, the corresponding number to ferry, and the number of accidents that decreased in the past four years.

• The second part revealed that management responsibilities of all stakeholders are clarified, a safety management system is implemented, navigation order in ferry waters and Practices of ferry crew are standardized, and Application of ship types with advanced technology is promoted.

• The final part presented that Domestic ferry safety performance is improved, and the visual recognition sight distance of ferries in the daytime and night is enhanced by implementing the Recommended Code for Coloring of Ferry and lighting project, the life-saving appliance for ferries is optimized, application of ship types with advanced technology is promoted which is Shore-based monitoring institutions.

Myanmar

• Capt. Myo Min Thant, Deputy Director, Maritime Safety, Security and Environmental Division, from the Republic of the Union of Myanmar delivered a presentation on Ferry Safety in Myanmar.

• The presentation explained the types of ferry in Myanmar, including, riverine ferry and coastal ferry, numbers of passengers and passengers transported, coastal and river routes.

• The presentation also provided examples of notable ferry accidents and their decrease in Myanmar and emphasized the developments after 3rd ARF Workshop on ferry safety, including implementation of new legal instrument, inspection of ferries and the initiation of Domestic Safety Management (DSM) System and Planned Maintenance Schedule (PMS) by the Department of Marine Administration (DMA).

• The DMA also conducted training, demonstration for usage of live saving appliances and control of passengers to prevent overloading. The presentation also addressed further on challenges in water transportation in Myanmar.

Live Streaming from Liuzhou: The "Four Good Ferry + N" project to improve domestic ferry safety

"Four Good Ferry" is a long-term ferry safety management mechanism launched by Guangxi Maritime Administration. It aims to improve the safety standards of ferry piers, ferries, ferry crews and management, improve the level of ferry safety management in rural areas, and reduce the occurrence of ferry accidents. In this video, Liuzhou Maritime Administration introduced the transportation changes in

inland river in China's rural areas in the past decade, and the basic situation of ferries in mountainous waters.Also introduced the development model of the "Four Good Ferries" combined with rural passenger transportation hubs, rural tourism and rural logistics, and put forward the "Four Good Ferries" plus Numbers of different possibilities for promoting the development of township transportation and revitalizing the rural economy.

The Republic of Singapore

• Leong Kah Weng Andrew, Senior Marine Officer, Marine Environment and Safety, Maritime and Port Authority of Singapore, presented Singapore's enhanced ferry safety programme and initiatives and progress update since 3rd ARF Ferry Workshop.

• Key Innovations, including updates on lifejacket installation, video analytics to prevent overcrowding and Geo-Fencing for safety of navigation, were also highlighted in the presentation.

• Capt. Andrew concluded that MPA will frequently work with stakeholders, raise public safety awareness, conduct emergency preparedness, embrace technology and ensure national safety. He extended an invitation to participate in the International Safety@Sea Week 2022 to be held in August 2022.

The Kingdom of Thailand

• Mr. Thanatip Jantarapakde, Chief of Vessel Traffic Control Section in MD Thailand, presented a brief maritime profile, the domestic ferry safety profile and the way forward of Thailand.

• Mr. Thanatip Jantarapakde introduced the waters geography, shipping route, main ports and the marine department of Thailand.

• The presentation also covered the domestic passenger statistics and 10 domestic shipping routes. A new ferry named POPAX Service constructed last year has been fully introduced.

• Lastly, he explained the safety measure principle including port safety, ship safety and the people.

Islamic Republic of Pakistan

• Dr. Kanwar Muhammad Javed Iqbal, Senior Research Fellow, National Institute of Maritime Affairs (NIMA), Bahria University, Islamabad, and Mirza Zeeshan Baig, Ph.D. Candidate, WMU, Malmö Sweden together presented the overview of domestic ferry in Pakistan.

• The presentation also included ferry services and safety related challenges for domestic ferry in Pakistan.

• Dr. Kanwar emphasized that the development of domestic ferry safety specific rules, regulation and procedure, marine casualty investigation, minimum training standards, technological advancement, survey/inspection regime, online ticketing /

booking system and capacity building and awareness raising programme, strong collaboration among all domestic stakeholders as well as regional and international collaboration are ways forward for domestic ferry safety in Pakistan.

The Republic of Indonesia

• Mr. Junaidi, Director of Inland Waterways and Ferry Transport, discussed a brief background in Indonesia including the roles of inland water way ferry transport sectors, the 3 main routes and infrastructure ferry port. He also introduced an APP named "ferizy" to us for ferry, islands,

• As regards the ferry transport fleet, the data showing the surge of ferry fleet since 2020 were presented. And the government had adopted some measures, such as AIS installation, technology and operational improvement on local port service and implementation of new TSS, to improve the navigational service.

• The application, Verified Gross Vehicle (**VGV**), had been introduced to simulate the vehicle stowage plan in RO-RO ferry, which can improve ship safety, guarantee customer satisfaction, avoid human error and improve load time.

• The presentation likewise included the national policy on COVID-19 prevention and the seafarer vaccination timeline.

• Some green policies in Indonesia transport sector were presented, such as national low carbon policy in energy.

• In regard to the Guangzhou Statement, Indonesia had taken some action. As for the government, Indonesia-Australia cooperation in capacity building of ferry transport operation has been carried out. For the industry, there are the fleet condition monitoring scheme. For the government and stakeholders cooperation, private sector has explored new route with subsidies program.

Section 2: Mechanism to Effectively Implement and Enforce Ferry Safety Rules and Regulations & Industry Initiatives & Best Practices on the enhancement of Safe Operation of Passenger Ferries

The Registration and Survey of 2nd Hand Ferries

• Mr. Surachet Dejkajornrittha, Ship surveyor, Ship Standard Bureau, Marine Department of Thailand, shared the ship registration in Thailand, including the qualifications for ownership of Thai vessels, ship registration procedure, deletion of vessels from Thai registry and survey for a second-hand passenger ship.

• Mr. Surachet proposed that If the deletion certificate is used for registration with several flag at the same time, both AMS Registrar who issued such deletion certificate and AMS Registrar who issued new certificate of registration should cooperate in verifying such circumstances to prevent double registration.

Live Streaming from Guilin: Pollution prevention of tourist ships engaged in Guilin Lijiang river.

• Lijiang River recognized by CNN as one of fifteen "most beautiful rivers" in the world, attracting millions of Chinese and foreign tourists to visit by ship every year. A large number of tourists and ship's generate more than 5000 tons of ship pollutants every year. It is an important and arduous task to protect the Lijiang River from ship's pollution. Guilin MSA has investigated and mastered the basic information of pollution prevention, established and updated the database of potential pollution risks, and strictly required ships to be equipped with pollution prevention facilities and implement relevant pollution prevention measures from the aspects of ship technical specifications and safety management system, so that the pollutants from ships on the Lijiang River can be scientifically treated and the pollution risks can be effectively prevented and controlled.

Introduction of safety management on high speed craft

• Mr. WEI Junjie from the Beihai Maritime Safety Administration of the P.R.C presented the introduction of safety management on High Speed Craft, which includes the characteristics of the Beihai-Weizhou island route, and the types of high speed craft.

• The Presentation also included the management philosophy and practices of China with responsibilities of VTS and maritime department to the safety of navigation of high speed craft.

• Highlighted was China's efforts and the rectification of potential safety hazards of waterway blockage in Beihai passenger ports presented by live streaming.

Live Streaming from Beihai: Navigation safety management of high-speed passenger ships engaged in Beibu Gulf

• The theme of the video is how maritime department ensures the arrival and departure of high-speed passenger ships in the Beibu Gulf. First of all, the commentator in the video introduces the basic situation of Beihai-Weizhou island route, the characteristics of high-speed passenger ship. Large high-speed passenger ship in the voyage, when entering and leaving the port has higher requirements, and put forward the maritime department to ensure the navigation safety of high-speed passenger ships. Then the commentator followed the camera to show the overall picture of Beihai passenger port, and interviewed the company manager about the factors affecting the navigation safety of ships, including meteorological conditions, fishing boat navigation, etc. The company expanded the channel under the guidance of the maritime department. From the perspective of the drone, the whole port was observed, as well as the pictures of high-speed passenger ships leaving the port, and the maritime authorities' measures to ensure the safety of high-speed passenger ships were explained, including joint law enforcement, channel expansion and the adoption of new technology.

• Finally, the commentator mentioned that we need to establish a sense of safety, always be vigilant, to control the risk within an acceptable range.

Introduction of safety management on Tourist Ferry by the Marine Department of Thailand

• Mr.Adoon Raluekmoon, Ship Surveyor, Professional Level, 5th Marine Office, Phuket Branch of the Marine Department of Thailand, delivered a presentation of Introduction of safety management on Tourist Ferry highlighting the safety management of ferries and other vessels in Phuket province in Thailand.

• The presentation includes, the introduction of the Smart Pier platform, training of seafarers, crew employment, regulations of the 5th Marine Officer, Phuket Branch, relating to ships and navigation in Phuket province, significant navigation routes of ferries in Phuket province, ship inspection check points in Phuket province and inspection procedure, measures and technologies applies to Enhance of water transport patrol and monitoring of water traffic, particularly the Vessel Traffic Service of Marine Department (Marine Department VTS), integration and coordination among the relevant authorities.

Thailand's Video on 'The introduction of Safety Management on Tourist Ferry in Thailand'

• Thailand presented the video on the topic 'The introduction of Safety Management on Tourist Ferry in Thailand', emphasizing the role of ferries in driving the marine tourism in Thailand. The video presented notable ferry piers and ferry operators in Thailand's provinces with marine tourist attractions namely, Phuket, Phang Nga, Chumphon and Surat Thani, introducing piers with Smart Pier platform, inspection of ferries' documents and live saving appliances.

The application of VR technology in electric ferry inspection

• The presentation of Mr. Yang Pei, Guangzhou MSA, consists of two parts, the first part is the application of VR technology in training the PSCO for electric ferry inspection, taking an example of the electric ferry Pearl River Prince, using VR technology to explore parts of the ship, examine ship's equipment to demonstrate the application of such technology in electric ferry inspection.

• This VR technology is applied to the training of PSCO and FSCO, to enhance training capacity and improve the electric ferry inspection. The second part is the topic of New Energy, which explores the advantages and risks of electric vessels, the fire response for electric vessels particularly occurring from the batteries and the standardization of electric vessels of IMO, IACS and China.

The integrated and comprehensive ferry safety management mechanism

• Mr. Yang Kechun, Guilin MSA delivered a presentation on the topic of the integrated and comprehensive ferry safety management mechanism.

• This presentation consists of four parts, namely, the characteristics of the Lijiang River and tourist passenger ships, the special rules and applicable to passenger ships, experience in preventing pollution from the ships and measures for the safety management of passenger ships.

• As Lijiang River, Guilin is a remarkable tourist attraction, therefore, safety management of ferries and preservation of environment in the vicinity are priorities.

• Notable measures for the safety management of passenger ships include the establishment of a water traffic safety management mechanism at the municipal level, daily supervision and inspection to ensure the seaworthiness of the ship and the competence of the crew, maintaining the order of navigation and ensure the safety of navigation and strengthening the application of informatization in maritime management.

Measures to Improve Domestic Ferry Safety in the Republic of Korea

• Mr. Taehoon Kim, Korea Maritime Transportation Safety Authority (KOMSA), delivered a presentation on the topic of 'Measures to Improve Domestic Ferry Safety in the Republic of Korea'.

• The presentation includes 6 parts namely, Domestic Ferry Operation Control Center, Intelligent CCTV & Communication Environment, Development of Personnel on Safety Blind Spots, Remote Safety Management with Drone, Education for Safety Managers in Shipping Companies and 4-Layer Safety Management System.

• The presentation also provided that the Republic of Korea has made notable developments since the 3rd ARF Workshop on Ferry Safety, including reinforcing vessel safety management by the operation control center, intelligent CCTV and improved communication environment, expanding scope of safety management, overcoming the blind spots, drone based safety management and distance learning and 4-layer system which emphasizes the collaboration among the company, KOMSA, MOF and Civilian Safety Supervisor.

Ferry Safety: Influence of Ferry Designs and Construction

• Capt. Nurur A. Rahman, Hannur Maritime Consultants Pty Ltd delivered a presentation on Ferry Safety: Influence of Ferry Designs and Construction. The presentation explained on the relations between ferry design and construction and ferry casualties and fatalities, reemphasized ferry casualties, types of ferries, steps taken for prevention at the IMO level, reiterated the proportional factors, focusing on human error.

• The presentation explained further that not only ferry casualties occur because of human error during operation, but vessels can also be built as unseaworthy vessels, hence human error also plays role in ship designing and building. Therefore, the presentation emphasized the implications of IMO initiatives and documents to explain the relations between ferry design and construction and ferry casualties and fatalities.

• The presentation also provided the private sector initiatives for ferry designs and construction to enhance ferry safety, including ferry design competition.

Improvement of Ferry Safety Management Based on Collaboration Among Local Government, Maritime Safety Administration and Shipping Enterprises

• Ms. LU Li, Shanwei MSA delivered a presentation on Improvement of Ferry Safety Management Based on Collaboration Among Local Government, Maritime Safety Administration and Shipping Enterprises.

• The presentation explained the characteristics of the Pinqing Lake in Shanwei City, Guangdong Province, its ferry route and the role of Zhongshan Ferry Point in providing transport across the lake.

• The presentation explored the challenges including complex Hydro meteorology in the water area and the operator has insufficient fund to maintain efficiency and safety of service, which results in occasional stranding and overloading, while the service capacity can not accommodate the increasing passengers.

• To address the mentioned challenges, a solution was implemented, particularly the Model Innovation, an inclusive improvement with collaboration among Local Government, Maritime Safety Administration and Shipping Enterprises, implementing policy support and measures to enhance safety management resulting in overcoming of the challenges and the ferry operator becomes safety and economy efficient.

Live Streaming from Zhuhai MSA: Introduction to the Safety Management of High Speed Ferry

• Zhuhai MSA has accumulated a lot of experience in the safety supervision of high speed ferries over the decades. We plan to raise the crew's safety awareness and emergency response ability by means of information technology, source management of the shipping company and on-site inspection.

• This video is divided into three parts.

• The first part introduces how MSA provides services for the safe navigation of high speed ferries through the surveillance system, and how to prevent bad weather and monitor the navigation dynamics of high speed ferries. Pollutant transfer activities reported by high speed ferries as required will be checked through the application of Maritime Eye. .

• The second part introduces the intelligent ocean broadband system, an internal monitoring system of a reputable shipping company. Sitting in the monitoring center, the safety management personnel of this company can carry out real-time monitoring on the bridge, cabin, main deck and engine room through the system to find violations and potential safety hazards in time.

• The last part introduces the on-site supervision carried out by MSA. This kind of inspection is similar to the initial inspection in PSC inspection. If clear grounds are found, the inspectors will start FSC inspection, which is similar to the detailed inspection in PSC. In addition, this part also focuses on the pre-sailing self-inspection of high speed ferries.

Section 3: Technical Cooperation & Networking & Comprehensive approach to enhance domestic ferry safety in the Region

Develop Online Training Courses to Improve Domestic Ferry Safety

• Captain He Qinghua, Dalian Maritime University, made a presentation on developing online training courses to improve domestic ferry safety.

• The significance of developing online training courses and advantages of such courses were highlighted.

• Steps to develop online training courses and the establishment of domestic safety data platform were presented in detail.

• Challenges in developing online training courses on domestic ferry safety were also discussed.

New Explosive Construction Technology Influencing Ferry Safety

• Capt. Nurur A. Rahman, Hannur Maritime Consultants Pty Ltd, recapped the ARF 03 presentation, including innovations in ship safety, developments in navigation system, weather related development and human factors. Then, he introduced a new topic in this presentation: explosive technology in ferry construction.

• He presented the revolutionary innovations to design, particularly the foam-based deployable bulkheads.

• 3-D technology applied in ship construction was discussed.

• The presentation highlighted the world's largest 3D print vessels through the video, covering the install process, construction material, structural parts, cost and production time (only 5000lb, 72hrs).

Live Streaming from Foshan MSA: Haishou Ferry Terminal (Alongside with a demonstration of the comprehensive ferry management mechanism)

• Haishou Ferry undertakes the water transportation function from Jiujiang Town to Haishou Island, which is an island located in the middle of the Xijiang River. The Ferry is the only passage for villagers and students on the island to travel to and from Jiujiang. In addition, the entire voyage is about 1.8 kilometers, and it takes about 8 minutes. The video mainly introduces how technology helps ferry safety by showing the whole journey of taking ferry.

• Firstly, because real name system is not required for ticket purchase in Haishou Ferry, the first part mainly talks about the use of technology and management mechanism to prevent the overload.

• Secondly, the Pearl River system, including the Xijiang River, always affects by floods due to the rainfall and topography. The second part mainly introduces what measures should be taken to ensure the safety of the ferry during the flood period.

• Lastly, the route of Haishou Ferry is across the main channel of Xijiang River, which has the risk of collision. The third part mainly introduces the remote supervision through smart platform in order to improve the navigation safety.

Cooperation on Maritime Safety Information

• Mr. Thanatip Jantarapakde, Chief of Vessel Traffic Control Section of MD Thailand presented MSI and SAR information platform in Thailand

• He also introduced the broadcast methodology in Thailand

• He pointed out the way forward is to develop a good system to guarantee traffic safety，ship safety and people safety

Regional and global Ferry Safety technical cooperation program

• Mr. Bekir Stiki Ustaoglu，Head of Asia and Pacific Section，Technical Cooperation Division of the International Maritime Organization (IMO) summarized IMO's efforts to improve domestic ferry safety.

• IMO started from some traditional capacity building activities，such as GLOBALReg and workshops/seminars delivered in different region.

• In Asia and Pacific Region，IMO initiated discussion forum between regulators and all stakeholders. HAZID/scoping exercise and FSA project is proceeding.

• He emphasized the critical decision that the MSC committee has included new item on measures to improve domestic ferry safety on its agenda

• He appreciated China's support in IMO initiatives relating to improve the safety of passenger ships and specific workshop on domestic safety. And he praised all previous speakers.

Live Streaming from Zhanjiang: The safety management of Ro-Ro passenger ships engaged in Qiongzhou Strait

• Live streaming mainly focus on the measures we have taken and our experience on the management of ro-ro ships carrying dangerous goods. The intent is to prevent illegal carriage of dangerous goods，eliminate potential safety hazards and avoid any accident.

• Ro-ro ships carrying dangerous goods must be surveyed and approved by CCS and issued with the Certificate of Fitness for the Carriage of Dangerous Goods At Sea. When shipping dangerous goods，the company is required to submit a declaration to Zhanjiang MSA in advance. On-site inspections of ships carrying dangerous goods will be carried out before they leave the port.

• It is also presented in the live streaming the shipping companies' great efforts to promote the safety of ship by conducting vehicle security check to determine whether there is illegal carriage of dangerous goods inside and carrying out inspection on the loading of vehicles and patrol on the deck.

• The operation of VTS center is also highlighted. Making full use of scientific and technological means is conducive to the safety management of ro-ro ships.

Annex 2: Details of discussions

IV. WORKSHOP OUTPUT

Mr. XIN Jian，Secretary General of the ASEAN Sub-Committee on Maritime Cooperation and Research，proposed the following steps for the establishment of the Expert Group on Ferry Safety:

• Collecting feedback and opinions from all parties on the TOR

• Adjusting the TOR and submitting it to the ARF Assembly

• Discussing the period of time for collecting the opinion

The participants agreed to submit relevant opinions and suggestions within two months and showed great enthusiasm for setting up this regional Expert Group.

V. CLOSING CEREMONY

Closing Remarks delivered by:

1. Dr. Bekir Sitki Ustaoglu, Head of Asia and Pacific Section, Technical Cooperation Division, IMO

2. Mr. Somchai Sumanuskajonkul, Deputy Director General of Marine Department of Thailand, ASEAN Co-chair of the 4th ARF Workshop on Ferry Safety

3. Mr. Yang Xinzhai, Deputy Director General of China Maritime Safety Administration, Co-chair from China of 4th ARF Workshop on Ferry Safe