WMU
Sasakawa Felloship Students
The Japan Field Study Trip
2023

May 7-14, 2023

Supported by THE NIPPON FOUNDATION

OPRI OCEAN POLICY RESEARCH INSTITUTE
SASAKAWA PEACE FOUNDATION

Preface

The WMU Sasakawa Fellowship Program started its operation in 1987 when The Nippon Foundation made a grant of $1 million to WMU through the Sasakawa Peace Foundation, just after WMU's founding in 1983.

In 1992, an extra $4 million was added to ensure that scholarships would be provided to seven to ten students every year. Since 1993, we have planned and executed the Japan Field Study Trip to respond to the Sasakawa Fellowship Students' growing interest in Japan as a donor and as a country which has one of the world's largest merchant fleets and continues to maintain the world's largest share of shipbuilding.
The Secretariat nearly gave up on conducting the Japan Field Study Trip during the 2011 Great East Japan Earthquake, but with the encouragement of The Nippon Foundation Chairman Sasakawa and the cooperation of organizations and institutions we were visiting, we were able to manage the Japan Field Study Trip. However, the COVID-19 pandemic was beyond our control, and we regretfully cancelled the program for a three-year period from 2020 to 2022. It was a great feeling to be able to hold the trip this year for the first time in four years.

The main objective of the Japan Field Study Trip is to show the students how the maritime industry's effective development contributed to the flourishing of Japan's economy, and how each maritime entity is tackling the challenges they currently face. Our hope is that this experience will be a source of inspiration for future nation-building of their countries by Sasakawa Fellowship students.
Finally, my belief is that spending a week together will be one of the most rewarding experiences for the unique network of Sasakawa Fellowship Students.

Eisuke Kudo
Senior Advisor, Sasakawa Peace Foundation

The Japan Field Study Trip 2023

Date	Visiting Places
May 7 (Sun)	**Arrive in Tokyo**
May 8 (Mon)	**Tokyo University of Marine Science and Technology (TUMSAT)** **Maritime Bureau, MLIT** **The Nippon Foundation**
May 9 (Tue)	**Tokyo Metropolitan Government Waste Landfill Site** **Ariake Water Reclamation Center**
Mau 10 (Wed)	**Kyokuyo Shipyard** **Nippon Survival Training Center (NSTC)**
May 11 (Thu)	**Port of HAKATA** **KANMON KAIKUO Vessel Traffic Service Center**
May 12 (Fri)	**FURUNO – Miki Factory** **HSN-KIKAI KOGYO Co., Ltd.**
May 13 (Sat)	**Kyoto Sightseeing Tour**
May 14 (Sun)	**Depart Osaka**

Site Visit Report

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Maritime Bureau, MLIT

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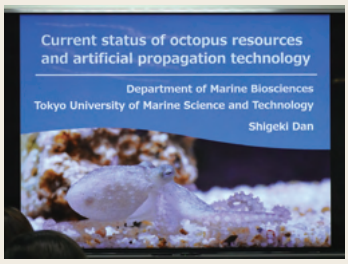
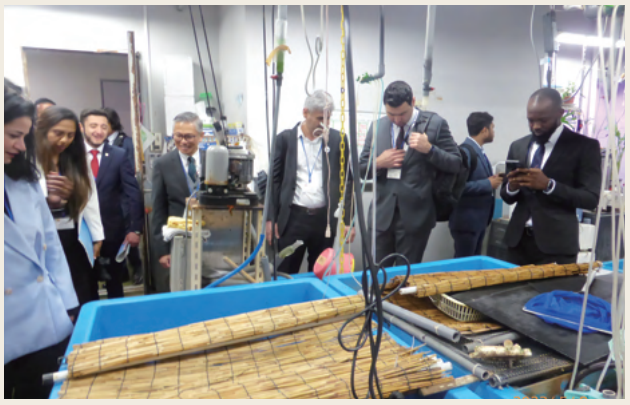




●Maritime Bureau, MLIT

●The Nippon Foundation

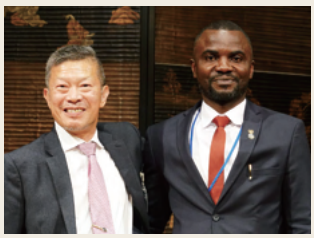




●Reception








Tokyo University of Marine Science and Technology

Daniela Jimena Andrade Tamayo (Ecuador)

On May 8th, during the Japan Field Study Trip, we enjoyed visiting the Tokyo University of Marine Science and Technology (TUMSAT); during this visit, we learned about this Institution's commitment to Japan's sustainable development through marine education and research activities.

The TUMSAT was established in 2003, by merging the *Tokyo University of Mercantile Marine* and the *Tokyo University of Fisheries.* The University has two campuses. The main one, the Shinagawa campus located in Minato, is home to the Schools of Marine Life Science and Marine Resources and Environment; this last one was established in 2017. The Etchujima campus is the second one, and it is in Koto; this campus houses the School of Marine Technology.

Our visit was to the main campus; this started with welcome remarks and a brief explanation of the University and its programs by Mr. Yoshinori Miyamoto, Dean of the *Faculty of Marine Resources and Environment.* He emphasized that education and research contribute to developing human resources, which will impact the building of a maritime nation while sustainably using the sea and its resources.

The TUMSAT offers various undergraduate and graduate programs, yet, what caught my attention is that the University promotes the international exchange of education because the oceans are for global exploitation and conservation. Among the student body, there are international students from 32 countries, creating a truly global learning environment; the TUMSAT has built partnerships with 99 institutions distributed in all the world regions, making evident the effort and emphasis on reaching international cooperation and cross-cultural understanding.

As part of the research activities conducted at TUMSAT, there are five training and research vessels. They conduct hydrographic and oceanographic surveys and provide hands-on training on fisheries and marine engineering or education about the marine environment. The biggest of these ships is the *Umitaka-maru,* which travels around the world, providing students qualifications required of marine technicians and advanced education to conduct investigation and research.

After the general information about TUMSAT, we learned about the *Current Status of Octopus Resources and Artificial Propagation Technology,* which is part of the research of Mr. Shigeki Dan from the Department of Marine Biosciences. Octopus is one of the marine resources that are consumed back in Ecuador; however, according to the information given, Japan is one of the biggest producers and

consumers of this living resource. The Japanese octopus fishery started at least 2000 years ago, and nowadays, Japan consumes about 70 thousand tons annually. Half of this tonnage is imported, whilst the other half is produced locally.

The agenda presentation included information about the common octopus's life cycle and a brief explanation of the current research on artificial propagation technology. This research aims to improve the knowledge of octopus ecology and resources and develop octopus aquaculture and conservation technology; now, they are focusing on the paralarvae phase, and the future work is to conduct studies of the juvenile stage of octopuses.

Following the in-class presentation, we had the opportunity to visit different areas of the TUMSAT. First, we visited the *Multipurpose experimental facility of fluid dynamics*; this facility simulates a circulating waters channel, and it was explained how it is used to test the design of fishing gear and how it would behave depending on the different sea conditions. This demonstrates that the university goes beyond in-class into more practical and experimental learning.

Last, we visited the *Artificial Reproduction Center*, where several species undergo tests to reproduce themselves in tanks that assimilate their environmental living conditions. Through research and science, the TUMSAT seeks to conserve Japan´s waters' biodiversity and ensure sustainable resource exploitation.

Walking back to our bus, we could see students walking to their classes or breaks; they all were kind and attentive, and some stopped to answer our questions about the studies program. Overall, the experience at the Tokyo University of Marine Science and Technology was an opportunity to understand more about the importance of education, science, and technology for a maritime nation. The quality of education, dedication of the faculty and staff, and welcoming community of students all made a lasting impression.

Knowing about the TUMSAT's work made me realize that several aquaculture projects are in place; I would highly recommend this university to my colleagues to enhance cooperation between our countries and drive Ecuador toward a sustainable future.

Beauty Ebiere Maghoromi (Nigeria)

On Monday, 8th May 2023, we visited the prestigious national academic institution, Tokyo University of Marine Science and Technology (Shinagawa Campus), TUMSAT, in Japan. TUMSAT is renowned for its cutting-edge research and advancements in maritime and fisheries industries. Established 1st October 2003.

During the presentation, we were informed that the University comprises two campuses and boasts 243 academic staff, 223 administrative and technical staff, and approximately 2600 students.

At the University, three undergraduate schools focus on Marine Life Science, Marine Resources and Environment, and Marine Technology. These schools have admission capacities of 170, 105, and 160, respectively. The Graduate School provides Master's and Doctoral programs and two Advanced Courses authorized by the Japanese Government. These courses offer specialized knowledge and skills in marine navigation, specifically for the shipping and fishing industries.

It was further mentioned that TUMSAT owns five vessels dedicated to oceanographic surveys. Among these, the Umitaka-maru stands out with its 93.0m length and 1886-ton weight. The Shinyo-maru is comparatively smaller, measuring 64.55m and weighing 986 tons. Furthermore, the Shioji-maru is primarily used for training and weighs 425 tons, while the Yayoi, weighing 19 tons, is meant for sailing training and experiments. Finally, the Hiyodori, which is 16.55m long and weighs 19 tons, is mainly used for research conducted in Tokyo Bay.

The subsequent presentation segment was the Field Science Center, which encompasses a coastal field using seawater and freshwater. The Coastal Field Station has three stations, namely Tomiura, Tatetama, and Shimizu, with Tomiura and Tatetama being the larger ones. Additionally, there are Oizumi and Yoshida stations that cater to freshwater needs. TUMSAT has a strong global presence, collaborating with 99 institutions and 32 countries. It has also welcomed 222 international students hailing from 26 different countries.

Shigeki Dan from the Department of Marine Bioscience provided an overview of the current state of octopuses. He asserted that octopus is a characteristic animal with more than 500 species and an important material for Japanese dishes. He also stated that the annual consumption of octopuses by the Japanese population is 70,000 tons and gave an overview of the life cycle of the common octopus, which consists of Spawning, Hatching, Settlement, and Benthic stages. Mr. Dan mentioned that tidal currents are particularly challenging to cultivate the Hatching-Settlement, known as the Planktonic stage.

During his presentation, he explained that the purpose and background of paralarvae culture are to advance our understanding of octopus ecology and resources and to advance the technology for octopus aquaculture and conservation. As a result, the advancement of paralarvae culture technology is crucial for numerous studies that involve the use of artificially produced juvenile octopuses.

Shigeki Dan generously shared some innovative tank designs to aid Paralarvae's survival. One of the designs includes an upwelling culture system that proves beneficial for the growth of Octopus larvae. To further enhance survival and growth rate, swimming crab zoeae can be used as a food source. With proper care, Octopuses can grow to weigh over 1kg. As he wrapped up his presentation, he mentioned that his team is researching the ecology of young octopuses and collaborating with students to develop aquaculture methods for monitoring their growth and behavior.

We had a Q&A session followed by the university tour. We visited the Genome Science Lab, Seafood Breeding Room, and infectious experiment room. Then we explored the Multipurpose Experiment Facility for Fluid Dynamics, used for model testing and analyzing hydrodynamics of fishing boats and equipment.

In conclusion, we had an amazing experience at the Tokyo University of Marine Science and Technology. On the contrary, having interactive sessions with university students would have been a great opportunity. Conversely, the university's cutting-edge facilities and technology are impressive, and its commitment to academic excellence and innovation is remarkable. In view of the foregoing, I found their contributions to the field impressive and appreciated their commitment to building strong ties with students and researchers from around the world.

Francesco Leonardo Castiglione Escontrela (Venezuela)

We arrived at TUMSAT at, approximately 09:35. Shortly thereafter, we were invited to a two-part presentation.

On the first part of the presentation, we were introduced to the University, its history (starting as the Private Mitsubishi Nautical School in 1875) and its role as the only maritime university in Japan. Within this context, we were introduced to the university's work in furthering Sustainable Development Goals (SDG's) and how SDGs are incorporated into the university's teaching and research activities.

Furthermore, we were introduced to the graduate, master's and PhD programs offered by TUMSAT, including: Course of Marine Sciences, Course of Marine Resources and Environment, Course of Marine System Engineering and Doctoral courses in Applied Marine Biosciences and Applied Marine Environmental Studies.

On the second part of the presentation, we were introduced to a particularly interesting research project developed by the TUMSAT. The presentation by Mr. Shigeki Dan, revolved around the artificial propagation of the East Asian Common octopus.

We were first introduced to the predominant role that East Asian Common octopus plays in Japanese gastronomy, consuming more than 70,000 tones a year; being a predominant ingredient in a plethora of dishes that are popular all over Japan.

This introduction was fundamental to understand the following section, which was Japanese fishing of the octopus and the more than 2,000-year history of octopus catch that exists in Japan. Mr. Shigeki Dan allowed us to observe and manipulate ancient octopus traps that were used regularly to catch East Asian Common Octopus hundreds of years ago.

Within the context of octopus catch we discussed the risks and implications that overfishing could have for commercially valuable species of octopus and how, without proper regulation and research, Japan would have exhausted their existing stocks. To address the risk of overfishing, a project was developed and executed to artificially grow East Asian Common octopus in controlled environments within TUMSAT.

Initially, researchers were able to reproduce octopus in an artificial environment, but they quickly ran into challenges that stopped octopus from going from a hatchling to the benthic stage. As Mr. Shigeki

Dan explained, the problem was not the nourishment of the hatchlings, the problem was water flow inside the tanks where the octopus were bred.

Existing methodology to pump oxygen into the tanks, created a downward pressure on the hatchlings which would push them to the bottom of the tank, away from their food source (Zoea), which would cause them to stop feeding and perish. This was solved, by developing a server tank where aerated water would be pumped (served) into the tank containing the larvae, turning a downward pressure into an upward pressure.

With this description, the presentation finished and we were separated into two groups (X and Y) which toured different facilities on TUMSAT.

Group Y made its way to TUMSAT's labs, where they focus on reproductive biotechnology. There, we toured several tanks and labs with different species, including shrimp and rainbow trout. We were further introduced to the role that the lab plays in gene editing (shrimp in this case) and germ- line stem cell culture and cryopreservation research. Additionally, our guide for the tour explained that a substantial part of the research focuses on gene editing to address different illnesses and weaknesses that commercially and non-commercially valuable species have which could risk their health, shorten their lifespan or decrease their commercial value.

After visiting the tanks with living species, we visited a different lab that focuses on tank design and artificial environment development. This concluded our visit to this lab.

We then made our way to a larger lab, located in a warehouse close to the center of campus. The purpose of this large lab is to optimize net design to reduce short-, mid- and long-term effects of water currents on offshore tuna farming facilities and how they affect the tuna inside the net, in order to maximize the use of space and minimize the negative effects that the current has on a fish that is confined to a limited space. This second visit concluded our overall site visit, we then returned to the initial conference room for a farewell address.

Maritime Bureau, MLIT

Rahul Lodhi (India)

1. On 08 May 2023, Sasakawa Fellows made a courtesy visit to Maritime Bureau, MLIT as per the scheduled programme. During the course of the visit, many activities were undertaken. The group called on Mr. Yoshifumi Miyatake, Deputy Director-General of the Maritime Bureau, MLIT. Mr. Yoshifumi Miyatake also delivered a small speech in which he welcomed the delegation from World Maritime University and briefly explained the role and position of Maritime Bureau in the Ministry of Land, Infrastructure, Transport and Tourism. He also suggested that, the delegation must also try the local hospitality of the Japanese Culture. Professor Max Mejia representing the delegation also delivered a short speech expressing the appreciation and gratitude towards all the assistance provided by the Ministry towards smooth processing of documentation for the trip. Also, Prof. Mejia mentioned the pioneering role which the WMU graduates have been playing in the maritime sector and representation at various international forum like IMO. Rahul Lodhi also gave a short message on behalf of the Sasakawa Fellows and expressed the heartfelt gratitude of Sasakawa Fellows to the Ministry and Mr. Yoshifumi Miyatake for all the assistance provided by them and the arrangement for the reception of the group. The event then continued with two presentations, one by Mr. Shohei Goto, International Negotiation Office, Ocean Development and Environment Policy Division, Maritime Bureau, MLIT. The presentation was about the maritime policy on decarbonisation of international shipping. The second and a shorter presentation by given by the representative of Japan Coast Guard at the Ministry about the role and function of Japan Coast Guard. Content of both the presentation will be discussed subsequently. The meeting then culminated with a group photograph with the Deputy Director-General of Maritime Bureau.

2. The visit introduced the group to the functioning and role of MLIT and especially Maritime Bureau and Japan Coast Guard in the maritime sector of Japan. The event also provided the fellows with an excellent opportunity for networking and learning from the leaders in the field of policy and decision making. The content of both the presentations are enumerated in the succeeding paragraphs: -

3. **Maritime Policy on Decarbonisation of International Shipping, Mr. Shohei Goto, International Negotiation Office, Maritime Bureau, MLIT**. The presentation highlighted the commitment which IMO has made towards achieving the goals set out by the Paris Agreement. It was also presented that Mr. Saito the Minister of Land, Infrastructure, Transport and Tourism has announced the aim of Japan to become net-zero GHG emitter in international shipping by 2050 at COP26. A detailed plan which included the roles and responsibilities of various agencies was then presented to the group. As per the

presentation Japan is of the opinion that, targets set should be ambitious and feasible and the target on intensity and usage of alternative fuels should be consistent with targets on total amount of emission. As one of the Market Based Measures' Japan proposed the concept of Feebate System, which in a nutshell is 'Levy on fossil fuels' and 'Reward for zero emission fuels' this would promote the initiative for the first movers towards zero-emission. The presentation was concluded with discussions on the alternate fuel ships and the efforts which Japanese Shipping companies have been making towards achieving net zero-emission from international shipping.

4. **Japan Coast Guard 2023, JCG Representative at Ministry**. The second and a shorter presentation was about the Japan Coast Guard in which the history, characteristics, missions and assets of the agency were covered in detail. Then international cooperation efforts of the Japan Coast Guard were highlighted with various other Coast Guards of then world. Also, Multi-lateral Cooperation like Head of Asian Coast Guard Annual Meeting (HACGAM) and Coast Guard Global Summit (CGGS) were also touched upon. The presentation culminated with the introduction of JCG Mobile Cooperation Team (MCT) and its role and functions.

5. **Conclusion**. The visit was a big success and helped enrich the fellows with the understanding of the role and functioning of not only the Ministry of Land, Infrastructure, Transport and Tourism and Maritime Bureau but also of the Japan Coast Guard. The pathway lead by the Maritime Bureau towards decarbonising the international shipping is an ideal approach towards the task at hand in a manner which will ensure the sustainability of maritime sector while decarbonising the sector.

Dani Daniel Chunga (Tanzania)

INTRODUCTION

The World Maritime University Sasakawa fellow field study from May 7th to May 12th, 2023 in Japan for S.2023, was part of the curriculum and was meant to familiarize students with actual and practical domains of work.

The courtesy visit to the Maritime Bureau, where Mr. Yoshifumi Miyatake, Deputy Director-General of the Maritime Bureau, and Mr. Akihiro Tamura, Director of the Ocean Development and Environmental Policy Division, provided an overview of the institutions' functions, an overview of how Japan works with IMO, Japan initiatives to meet IMO goals, international frameworks, technology development, and coastal shipping, as discussed below.

We saw Japan's initiatives at COP 26 to reduce GHG emissions net zero in international shipping by 2050 through the formulation of strong emission prevention policies, and the key lesson from a developing country is that we can also adopt such policies and strengthen the IMO's decarbonization goals.

Another lesson from the MLIT is how the Japanese government has been flowing the IMO standards and adapting such standards to meet international sustainable shipping standards. For example, the government has been attending the IMO Maritime Safety Committee (MSC), Marine Environmental Protection Committee (MPEC), Technical Cooperation Committee (TC), and Facilitation Committee.

Japan also submitted a proposal to the IMO to reduce GHG emissions by 50% by 2040 rather than the IMO's proposed target of 2050, and while other countries believe the original targets should be maintained, Japan focuses on ambitious and targets that are aligned between the target example target on intensity and usage of alternative fuels should be considered with the target on the total amount of emission.

Another lesson I learned is that our countries may be leaders in promoting IMO GHG reduction policies, for example. Japan has proposed a 5% decrease in GHG emissions from international shipping compared to 2008, and 30% of newly built ships will be zero emission by 2037, with Japan contributing to a 50% reduction in GHG emissions by 2040.

I learned that technology development should be prioritized for the achievement of alternative fuels. For example, during my field visit, I saw how the Japanese government supports zero-emission ships through the green innovation fund for ammonia-fueled ships in 2026 and hydrogen-fueled ships in 2027 as good development of bunkering guidelines.

Partnership in GHG reduction projects is required between the government and private companies. The Japanese government invested 74.3 million USD in private companies NYK LIN, IHI Power Systems, Japan Engine, and Nihon Shipyard in an ammonia-fueled project from 2021 to 2027, and 186 million USD in a hydrogen fuel ship project from 2021 to 2030 to Kawasaki Heavy Industries, Yanmar, Japan Engine, and Methane Slip from LNG fuel ship 5.3 million USD to Hitachi Zosen, Yanmar, Mitsui O.S. K line from 2021 to 2026 project.

Decarbonization of coastal shipping in order to meet carbon dioxide emission targets by 2030 Japan has adopted these actions in pursuit of additional energy savings on ships and support for advanced attempts to use alternative fuels for coastal shipping.

Japan Coast Guard is formed for the sake of maritime safety and security by combating terrorism, controlling violations of maritime law and regulations, countermeasure illegal operations of foreign vessels, responding to suspicious vessels, and piracy countermeasures while not involved in any military activities dealing with any maritime crime and any disruption that occurs in the sea and was formed in 1948 under the slogan "humanity and justices" as this can be a reference to the United Nations.

Finally, during a courtesy visit to the Maritime Bureau, MLIT, I learned how Japan is committed to allocating a large budget for decarbonization through collaboration with private Japanese companies and the government, and such observed efforts should be taken by all IMO members to ensure greater achievement on GHG reduction by 2050.

Quan Hieu Nguyen (Viet Nam)

During an internship in Japan sponsored by the Sasakawa Peace Foundation, we had the opportunity to visit The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan. The orientation session started with a presentation by Mr. Shohei Goto from the International Negotiation Office, Ocean Development and Environment Policy Division and cordial greetings from the Director General of Maritime Bureau. After that, the presentation on Japan Coast Guard by Mr. Shimizu.

During the presentation on MLIT, it was learned that The Ministry Land, Infrastructure, Transport and Tourism (MLIT) of Japan plays a crucial role in shaping the nation's development and instructing the efficient functioning of its infrastructure and transportation systems. Established in 2001 through the merger of several government entities, MLIT has emerged as a powerful force in Japan's governance, overseeing the management and planning of land, roads, railways, aviation, maritime affairs, and tourism. MLIT is a large-scale agency with a clear and efficient decentralization of authority to subordinate agencies, with 16 departments and nine divisions under the Maritime Bureau. With a rich history and a comprehensive mandate, the ministry's diverse responsibilities encompass urban planning, disaster management, transportation policy formulation, and the promotion of tourism, all aimed at fostering sustainable growth and enhancing the quality of life for the Japanese people.

This presentation also emphasizes the development goals and directions of the Japanese maritime industry that will focus on reducing GHG emissions from domestic and international shipping and clearly states that MLIT is aiming for GHG emissions net- zero in international shipping by 2050. Currently, Japan is close to meeting the target when only 0.93% of CO2 emissions are left from domestic transportation activities. In addition, the importance of IMO is also mentioned and cooperation with IMO and member countries is essential to achieve this common goal. Japan plays an important role in the IMO Strategy on the reduction of GHG emission when submitted the proposal about the amendment of the Strategy in IMO. This proposal sets a target to reduce CO2 emissions according to each time milestone such as 2030, 2040, 2050; with criteria ambitious, feasible and aligned between targets. The presentation highlighted the importance of technology transition from using fossil fuels to using clean energy like ammonia and hydrogen. Japan supports the development of the core technologies of zero-emission ships through the Green Innovation Fund and the timing of zero-emission ships are (1) Ammonia fueled ships in 2026; (2) Hydrogen fueled ships in 2027.

Next, we heard an introduction to the Maritime Bureau. Maritime Bureau takes charge of the following affairs: International Shipping Policy, liner conference policy; licenses, fares, etc. on domestic maritime passenger transport business; license, permission and approval on maritime freight transportation enterprises; permission and approval on coastal freighter shipping service; matters Japan regarding

Railway Construction, Transport and Technology Agency (maritime affairs); matters the maritime procedure agent; matters covering development, improvement and coordination of freighter shipping service; ship inspections; development of international and domestic technical standards of vessels and equipment on safety and environment protection; development, improvement and coordination of shipbuilding and ship machinery industries; promotion, improvement and coordination of manufacturing, repair, salvage and scrapping of vessels and of manufacturing, repair, distribution and consumption of marine engines and rigging; improvement of technology for ship building-repair and for manufacturing and repair of marine engines and rigging; registration of ships; motorboat racing; adjustment of seafarers labor relations; education and training of seafarers; improvement of working conditions of seafarers and compensations for accidents and other protection for them; certificate of competency for ships' officers, the qualifications and manning standards concerning ships' officers and pilotage.

Finally, Mr. Shimizu introduced the Japan Coast Guard. An interesting thing can be noticed that the position of Japan Coast Guard is very special when JCG is Maritime Law Enforcement Agency, not a Military Agency. JCG was established under the MLIT, and JMSDF was established under the MOD. The duties and powers of JCG are relatively similar to those of my governing body – Vietnam Maritime Administration including Maritime Surveillance, Maintaining Maritime Order, Maritime Safety & Rescue, International Collaboration and Cooperation. However, there are also differences at Maritime Disaster Prevention and Guarding Territorial Waters. It is known that JCG's fleet is one of the largest fleets under the government with a total of 474 ships; Moreover, JCG owns 92 aircraft with the most modern technology and starts applying the unmanned aircraft system into practice from 2022.

Furthermore, Mr. Shimizu stressed the importance of Japan's regional and international cooperation. JCG is currently cooperating bilaterally with countries in the region such as India, Philippines, USA, Australia, and Vietnam. Along with that is the important contribution of JCG in international forums such as North Pacific Coast Guard Forum, Heads of Asian Coast Guard Agencies Meeting, Coast Guard Global Summit. The publication of Maritime Safety and Security Policy Program (MSP) by The JCG and the National Graduate Institute for Policy Studies (GRIPS) have laid an important foundation for a framework for search and rescue cooperation in the Indo-Pacific region with 10 participating countries.

The presentation and meeting at MLIT left us a lot of impressions as well as gaining more knowledge about the maritime situation and how the Japanese maritime administration works. As WMU students, we are honored to be a visiting guest at MLIT and the knowledge we gain from here and from WMU will be most effectively applied to our work and dedication to our country.

The Nippon Foundation

Abbas Falih Madhi Aldwyah (Iraq)

The Nippon Foundation, also known as the Nippon Foundation Peace Initiative, is a renowned organisation dedicated to promoting peace and international understanding. Established in 1978 as a non-profit organisation, its primary mission is to contribute to world peace and foster cooperative relationships among countries.

With a focus on various areas related to peace, including conflict resolution, disarmament, human rights, and global development, the foundation endeavours to create a more peaceful and harmonious world. It supports research, education, and cultural exchange programs that facilitate dialogue and cooperation among different nations, promoting peaceful coexistence. One of the notable initiatives of the Nippon Foundation is the Nippon Global Network for Peace. This program brings together individuals and organizations from different countries, encouraging them to collaborate on peace-related activities. By connecting various peace initiatives, the Nippon Foundations aim to foster a global network of peacebuilders united in their commitment to creating a more peaceful world.

The Nippon Foundation plays a significant role in advancing peacebuilding efforts, promoting dialogue, and fostering understanding among nations. Through its initiatives, grants, and scholarships, it supports projects and individuals engaged in peacebuilding activities. The foundation collaborates with universities, research institutions, and non-governmental organizations to develop programs that address key peace and security challenges faced by the international community. The foundation's commitment to peace is demonstrated through its financial support for research and academic programs. It provides grants to institutions and individuals conducting research on peace-related topics, such as conflict resolution, sustainable development, and human rights. By investing in research, the foundation aims to generate knowledge and understanding that can contribute to the development of effective peacebuilding strategies.

In addition to research, the Nippon Foundation supports educational initiatives that promote peace and intercultural understanding. It offers scholarships to students pursuing degrees in fields relevant to peacebuilding, allowing them to acquire the necessary knowledge and skills to become future peacebuilders. These scholarships not only provide financial assistance but also help build a network of like-minded individuals committed to working towards peace. The foundation's commitment to peace extends beyond academic and research activities. It actively engages in cultural exchange programs, fostering understanding and appreciation of different cultures. By promoting cultural exchange, the

foundation aims to break down barriers, challenge stereotypes, and build bridges of understanding among people from diverse backgrounds.

I had the privilege of meeting Mr. Yohei Sasakawa, the founder of the Nippon Foundation, in person. It was a truly humbling experience. Mr. Sasakawa welcomed us warmly and generously, showing great hospitality. We had the opportunity to introduce ourselves and our countries one by one, allowing for meaningful cross-cultural dialogue. As a token of our appreciation, we presented Mr. Sasakawa with a poster that featured his picture alongside the students of the WMU-2023 Sasakawa fellowship. The moment I took a personal photo with him will forever be etched in my memory. I am grateful for the opportunity to have met such an inspiring individual and to have witnessed his unwavering dedication to peace.

I would like to convey my deepest gratitude to Mr. Sasakawa and the Nippon Foundation for making our dreams a reality and providing us with this golden opportunity. Their support and generosity have given us the platform to contribute to the cause of peace. I am truly honoured to have been a part of the WMU-2023 Sasakawa fellowship, and I will forever cherish the experiences and memories that came with it. May Mr. Sasakawa be blessed with continued health and success in all his endeavours.

In conclusion, the Sasakawa and Nippon Foundation, through its various initiatives, grants, and scholarships, has made significant contributions to peacebuilding efforts and the promotion of international understanding. Its commitment to fostering dialogue, cooperation, and peaceful coexistence among nations is commendable. By investing in research, education, and cultural exchange programs, the foundation plays a vital role in creating a more peaceful and harmonious world. We extend our heartfelt thanks to Mr. Sasakawa and the Nippon Foundation for their invaluable support, which has provided us with a life-changing opportunity to contribute to the cause of peace.

Kevin Providence (St. Vincent and the Grenadines)

One of the main highlights of the Japan field study trip was the visit to the Nippon Foundation headquarters. This visit occurred on the first day following visits to the Tokyo University of Marine Science and Technology, followed by a Courtesy Visit on Maritime Bureau, MLIT. While at the Nippon headquarters, Nippon fellows got the opportunity to meet Dr. Yohei Sasakawa.

30 Nippon fellowship students representing many nations across the globe along with Professor Mejia and Ms. Lyndell had the privilege to briefly be graced by the presence of Dr. Sasakawa at the Nippon headquarters. All the students were very excited and eager to meet Dr. Sasakawa, as he entered, the room erupted with great applause, warm smiles and fast pounding hearts from excitement. He was formally greeted by Professor Mejia and Ms. Lyndell on behalf of the World Maritime University and the president of the World Maritime University Dr. Cleopatra Doumbia-Henry, they also thanked him for his unwavering contribution to WMU.

Each student then had the opportunity to share briefly some sentiments of their WMU journey and how the knowledge will be used in their home nation. With only one hour of Dr. Sasakawa time, we were granted the opportunity to each take a photo with him followed by a group photo after which he gracefully left the room.

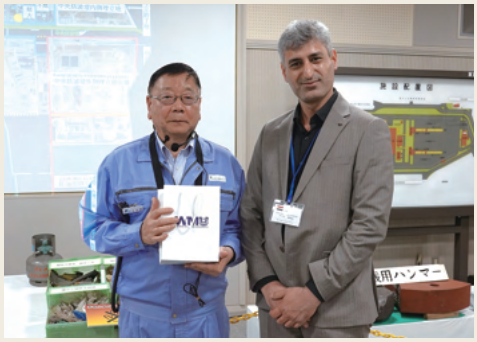
It would be very remiss of me to not express my heartfelt thanks On behalf of the 2023 Sasakawa Fellowship students for not only making it possible for us to attend the prestigious World Maritime University but also for blessing us with the opportunity to travel to Japan and experience such rich culture and humble people, and most of all for gracing us with his presence though it was short, we will remember and cherish it for all our days. May his days be long and fulfilling.

Tuesday, May 9, 2023

Visiting

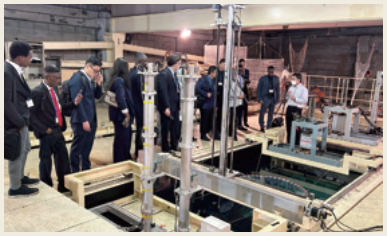
Tokyo Metropolitan Government Waste Landfill Site
Ariake Water Reclamation Center

●Tokyo Metropolitan Government Waste Landfill Site

●Ariake Water Reclamation Center






Tokyo Metropolitan Government Waste Landfill Site

Xavier Stephen Roger Perry (Antigua and Barbuda)

On Tuesday 9th May 2023, the WMU S23 Sasakawa fellows had the pleasure of visiting the Tokyo Metropolitan Government Waste Landfill Site where we would be able to see firsthand how a country with such large and busy cities deals with all its waste. With a population of 126 million people, it was incredible to see how the garbage was gathered, processed and disposed of or repurposed, while simultaneously reclaiming waste energy generated in the process.

We learned that Japan has twenty-three (23) different districts which generate 300 tons of garbage per year, and the final destination for all of the waste in these areas is the Central Breakwater Outer Landfill Site and New Surface Disposal Site which is located on reclaimed land in the Ocean of Tokyo Bay specifically to handle such large amounts of garbage.

There are separate areas for different types of garbage at this facility. When the garbage is collected it is separated into three categories: 1) Combustible/Vulnerable – this category of waste is incinerated and turned to ash before burying. 2) Incombustible/Invulnerable – this category of waste cannot be burned so is shredded before it is buried. 3) Large size garbage – also shredded or incinerated before shredding if possible.

One of the most interesting things about this visit was seeing the innovative ways they repurposed the waste. Heat produced from incinerators is efficiently recovered to produce heat energy for in-house use as generated power, air conditioning, heated swimming pools and even sell the surplus. Ash from incinerators is used to make cement for construction and civil engineering materials while metals recovered are collected and recycled.

While it is quite smart and innovative to use garbage to reclaim land, an important fact we learned was that by burying garbage in the soil methane gas is produced which could be hazardous to the environment. This issue is dealt with in two ways. 1) a methane gas recovery system for use in power generation and, 2) by creating a wastewater buffer, to prevent hazardous run-offs from the rain mixed with the waste, between the reclaimed landfill site and the ocean.
What I like about, not only on the site visit but by observation while moving around Japan, is that there is a strong sense of pride and cleanliness within the country. The notation of the 3R's (reduce, reuse, recycle) plays a very important role in such a large country. If less waste is generated by each individual, it would be better for the country as a whole.

Our visit was split into two parts. We started with an interesting and insightful presentation which shared a lot of knowledge and technical aspects of Japan and its waste management system. After we got a good understanding of how everything works we got a bus tour of the sites to see all of it firsthand. There was even a chance to come out, explore a bit and take a few pictures. Even after hearing about the waste management process and the innovative technologies used, I was still taken back by amazement after seeing it up close.

This visit was definitely one of the highlights for me. Coming from an island myself, but even way smaller, some of these processes and innovations would be great to introduce and apply in my country as we do not have generous amounts of space like some big countries and tourism, which is our main industry, generates a lot of waste. Overall it was an eye opening, interesting and highly valued visit.

Salahudeen Abdallah Mustapha (Ghana)

On the second day of our field trip in Japan for the Sasakawa fellows, we visited the Tokyo metropolitan government waste landfill site. The site collects waste from 23 wards of Tokyo city. Its annual volume of waste has been significantly increasing since 1985 due to changes in the lifestyles and the social systems of mass consumptions, productions and increase in population. According to records, in 1989 the volume was at 4,900,000 tonnes but in previous years decreased to a totalling 2,560,000 tonnes in 2020. Each of the 23 wards or city set aside days for collecting of waste and the location also depends on the types of waste. The waste processing is free of charge for household waste but not exceeding 10kg per day but large waste and business generated waste are charged.

The sites were reclaimed from the ocean 50years back with garbage and waste but currently they are not using garbage because of some technological advancement and garbage use to always fill up and take spaces.

Some of the reason why they reclaim the ocean was due to where to dispose the waste from all 23 wards in Tokyo. The waste is separated into three different types which are;
Combustible
Incombustible
Large size garbage
Combustible items are sent to incineration plants to reduce to ashes before disposal, the incombustible waste is shredded before transporting to the site and large size waste shredded just like the incombustible and separated the Combustible and Incombustible from it to reduce the sizes and to ashes.

In 1965 due to the way of filling the land, that they spread the waste direct, there was a problem of flies in the areas disturbing the people so they turn to disinfect the land spraying disinfectant and with the aid of rain water to reduce the flies in the area. There was some soil and ashes were also spread to also prevents the flies too.

At the site, wire mesh is use to surrounds the site to prevent waste from entering the sea so as water walls created to prevent polluted water from polluting the sea.

Polluted water is treated to be used on the landfill sites and Methane gas obtain from the sites are used to produce power of about 275 kw.

After the lectures and overview of the sites, we were taken on a tour to the sites from where the crash the large waste to soil and how they treat the water and prevent the waste from entering the sea.

The future of Japan on waste is now on the use of the 3R, which is Reduce, Reuse and Recycle. That is reducing what becomes waste, reusing things before disposing them and recycle things as resources. This is the way forward and what is being educating the people of Japan in other to reduce waste and also, we were told it takes about 50 years approximately to fill the land when starts.

It was a great experience and more lessons learnt with advance technology in waste management. This is something that will help the developing countries especially the system of the 3Rs (Reduce, Reuse, Recycle) in the plastic use.

Ariake Water Reclamation Center

Mark Mikely (Liberia)

Introduction

Ariake Water Reclamation Center was constructed in the Clean Center of Tokyo's coastal sub-city. Its treatment area is a portion of the Sunamachi Treatment District in the central breakwater of Tokyo and its environs, as well as a portion of the landfill.

The Ariake water reclamation center located in Tokyo, Japan, is one of the largest wastewater treatment plants in the country. The plant, which covers over 72,000 square meters, is owned and operated by the Tokyo metropolitan government.

Body

The Ariake Water Reclamation Center is an innovative and vital facility located in the heart of Ariake, Japan. Spanning over an expansive area, this state-of-the-art center plays a crucial role in sustainable water management, wastewater treatment, and resource recovery. With a myriad of cutting-edge technologies and a dedicated team of experts, it serves as a beacon of environmental stewardship and a shining example of effective water reclamation practices.

At the core of the Ariake Water Reclamation Center's operations is its advanced wastewater treatment system. Through a meticulous and multi-stage process, the center efficiently removes pollutants and impurities from the incoming wastewater, ensuring the preservation of water quality and safeguarding public health. From industrial effluents to domestic sewage, every drop of water is treated with utmost care and precision.

One of the center's remarkable features is its utilization of innovative biological treatment methods. The facility boasts an array of bioreactors that harness the power of naturally occurring microorganisms to break down organic matter and eliminate harmful contaminants. This environmentally friendly approach not only reduces the reliance on chemicals but also minimizes energy consumption, making the center a model of sustainable water reclamation practices.

The main function of the plant is to treat wastewater produced by the residents and industries in the surrounding areas. The plant uses a combination of biological, physical, and chemical treatment methods to purify the wastewater to meet the strict quality standards set by the government. The process starts with the removal of large objects and debris through a screening process. The wastewater is then pumped

into a primary sedimentation tank, where gravity is used to settle out the suspended solids. The settled solids, known as sludge, are extracted and transferred to a sludge treatment facility.

The treatment is then pumped into a biological treatment tank, where microorganisms are introduced to break down the organic matter. The tank is aerated to increase oxygen levels, which promotes the growth of the microorganisms. The wastewater is then moved to a secondary sedimentation tank, where the solid particles that remain are removed.
The final stage of the treatment process involves disinfection, where chlorine is added to eliminate any remaining bacteria, viruses, or other pathogens. The treated water is then discharged into the ocean.

The Ariake water reclamation center is also committed to minimizing its environmental impact. The plant generates electricity through the use of methane gas produced from the sludge treatment process. The plant also recycles the sludge into fertilizer and uses it for agricultural purposes. The Ariake Water Reclamation Center is not only an engineering marvel but also an educational hub. The facility actively engages with the community, hosting workshops, seminars, and tours to raise awareness about the importance of water conservation, wastewater treatment, and the overall value of environmental sustainability. By fostering knowledge-sharing and encouraging public participation, the center plays an integral role in building a society that prioritizes responsible water management practices.

Conclusion

In conclusion, the Ariake Water Reclamation Center stands as a testament to Japan's commitment to environmental stewardship and sustainable development. Through its advanced wastewater treatment technologies, resource recovery initiatives, and community engagement efforts, it exemplifies a model for effective water reclamation practices. By preserving water quality, conserving resources, and inspiring others, the center is a beacon of hope for a future where water is cherished, protected, and utilized responsibly.

The Ariake water reclamation plays a vital role in ensuring the safe and sustainable management of wastewater in the Tokyo area. Tokyo’s sewerage system is essential to maintaining a secure and enjoyable living environment as well as a sound water circulation system. The technology quickly removes rainwater from the land surface of cities in addition to cleansing water that has become contaminated by use in the daily lives and activities of people of Tokyo.

Hai Vuong (Viet Nam)

Ariake Water Reclamation Center is a facility located in Tokyo for sewage water treatment. The Center utilizes advanced wastewater treatment method and biological filtration process to treat water before discharging the treated water into the Tokyo Bay via the Ariake-nishi Canal. In detail, sewage water from factories and houses through sewers goes to the pumping station, then to the wastewater treatment plants. Most of the treatment facilities are built underground. Here, wastewater goes through primary sedimentation tank, reaction tank, secondary sedimentation tank, advanced treatment facilities, and finally goes through chlorination tank, before discharging into the sea.

Sludge is collected from the later stage of treatment process and then incinerated. The Tokyo sewerage system plays a vital role in improvement of living environment, flood prevention, control of water quality in rivers and the sea. Besides, a part of treated water is used inside the facilities in particular and in the Tokyo maritime sub-city center area in general for flushing toilets, cleaning of facilities and transport vehicles, and cooling machines.

Regarding our visit to the Ariake Water Reclamation Center, it began with a presentation regarding the sewerage system. The system was explained in detail, from the sources of factories and houses to the last stage of discharge into the open water.

After that, a site tour was conducted with a close observation of reaction tank and sedimentation tank, where we can see the cleanliness of water after treatment process.

It is our privilege to experience the work of “the water guardians” through the tour into the tunnel underneath the wastewater treatment plant, where the operation of the sewerage system is presented utilizing both technology and creativity.

Wednesday, May 10, 2023

Visiting

Kyokukyo Shipyard

Nippon Survival Training Center (NSTC)

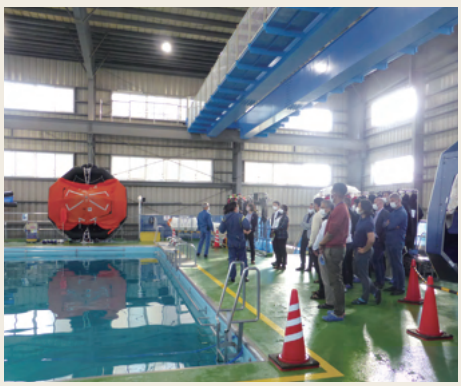
●Kyokukyo Shipyard





●Nippon Survival Training Center (NSTC)





Kyokuyo Shipyard Corporation

Mahmud Suleymanli (Azerbaijan)

Japan field study was full of interesting and productive site visits. One of the highlights of the visits definitely was Kyokuyo Shipyard Corporation in Kitakyushu, Japan.

The president, Mr. Katsuhiko Ochi, and the lecturers welcomed the delegation from WMU. After the brief presentation, we learned about the history of the shipyard. Established in 1942, as Hikoshima Shipbuilding Company by the combination of five neighboring shipbuilding companies starts shipbuilding and ship repairing. In 1985, the company name changed to Kyokuyo Shipyard Corporation. Being certified ISO 9001 in 2000.

After the presentation, we divided into groups and started the tour of the shipyard. We started with the ideal size for Kyokuyo Shipyard's products found at the manufacturing. There are no limitations on the facility's layout because of the geography or the site's shape. Together with our ground-breaking labour-saving and modernization initiatives, we are able to increase construction quality and speed up the process. Its proximity to the Kanmon Straits, a significant shipping route, enables time-efficient chartering of your ships into and out of the port.

We started from the Block assembly plant. The weather has the greatest impact on work efficiency. That is why we have an all-weather block assembly plant. We are able to manufacture high-quality blocks regardless of weather conditions. This plant boasts high ceilings at 28 meters below the crane level, allowing us to move blocks in mid-air and to freely invert 60-ton blocks. It also demonstrates its capabilities in advance outfitting. An all-weather blasting plant is located next door, ensuring high precision control of product and coating quality and processes regardless of the season or climate.

Also, the instructor showed us the dry dock facilities. In the shipyard, they have 2 dry docks, one for newbuild ships size 155m x 23.4m in order to meet a wide range of needs as a shipbuilder of medium and small size vessels. The extra length is advantageous for building container carriers and other high-speed ships. Another one for repairing a 125m x 21.4m dock is available for docking surveys and other inspections, marine casualties and conversion work. We had a tour of all the other plants, we were given information about the building procedures of the facilities.
They have worked on and completed numerous difficult projects, including the first spherically bowed ship in the world, PCCs with all-electric cargo equipment on board, the largest container ships in the history of coastal shipping in Japan, open-hatch MPCs with the widest opening in its class, and full-

reefer container carriers. Their organizational policy, which places a strong emphasis on originality of thought and consistent efforts in research and testing, is the foundation of the shipyard’s triumphs.

Only with their capacity to design and their ability to sculpt the designs into reality is our strategy of product mix and targeting of specific markets conceivable. Kyokuyo will keep using its technological prowess to offer distinctive and cutting-edge goods to transportation firms all around the world.

We were also given information about the future goals of the Kyokuyo Shipyard. The "three-segment ship" idea was developed by Kyokuyo as a suggestion for a low-carbon civilization. The idea uses our proprietary spherical bow technology and may be used with a variety of ship types and fuels. The Nippon Foundation accepted this idea for its "Development and Demonstration Grant Program for Advanced Vessels," and the first gas-fueled LPG carrier served as the basis for its development. The construction of tiny, zero-emission commerce ships is thought to be difficult from an economic point of view, but Kyokuyo has made a significant stride in that direction. To demonstrate our dedication to sustainability, Kyokuyo will keep working with marine equipment producers to propose practical product ideas that satisfy our customers and society's needs.

At the end of our tour, the memorable moment was, one of the newly built cargo ships was being delivered to its owner when we were in the yard.

With Best regards, wish them great success in farther developments.

Takanori Uzumaki (Japan)

It was a great honor to be able to visit the shipbuilding yard as a member of my classmate, who are also friends. The trip and experiences that we were fortunate to enjoy there were something that we would never be privileged to cherish the moment without any one of your efforts and dedication from the foundation, site visit contributors and other related associations. Very fortunately, we were given the opportunity to visit the Kyokuyo Shipyard Corporation and even a newly built ship. This report is for expressing the application and some essences that we could learn from each other.

It was the first time to visit the shipyard for me, of course, I knew the name of this yard as a builder that release the SEMI-SPHERICAL-SHAPED-BOW and also as a unique new idea provider. I felt very privileged to be able to observe the place where many unique designs are being explored and realized. We were given a chance to tour the factory. The factory tour provided an opportunity to observe the basic design, detailed design, and production design, as well as each process in the factory, from the bending of steel plates, the welding of steel into blocks, to the outfitting of the blocks to form the shape of a ship.

Brief explanations during the tour at each procedure explained to us about those sections and how those parts of ships are being constructed in there. All the processes are well managed in detail and the gap that very specific details are being managed even for constructing such huge structures was very surprised my colleagues apparently. I was very lucky to have a chance to talk about the situations of shipbuilding industries back in my colleagues' countries. For some of my friends the scene, sounds, and smells are something that reminds them about their professions in each their country. Contrariwise, those sensations are totally new for other my friends who do not have much experience in the shipping industry. Here is a very good story to illustrate our diversity; a friend on my left side was saying this is one of biggest merchant ships by seeing the newly built ship while a friend on my right side was seeing the vessel as not too huge for the standard of international voyage container carrier.

The friend explained to me about ships in his country, in general, tells me industrial shipbuilding especially on such a large scale is not common and ships are something wooden made or plastic base material and normally used for coastal fishing. Indeed, the shipbuilding business in front of us and that of which he spoke were quite different. It is not easy for me to imagine how he felt looking at the shipyard and the ships, but I could feel how shocked he was.

The experience of being able to walk from the engine room to the bridge in the new ship just before delivery shall also be mentioned. It was really a privilege and I could enjoy nice conversations about how ships and shipbuilding are different between each with my colleagues in there also. Indeed, thanks

to the arrangements of also the owner.

Afterward, we could see the design department also and be allowed to ask some questions. In that part, they explained to us how they manage the entire process and the design. The questions were also very diverse and interesting; from what are they doing with the computers to which specific software they are using. I found a very interesting opinion from my colleague that he felt a bit strange to see the situation of the Japanese office which stores so much volume of paper-based documents while all the processes in the departments are digitally handled. It remembered me of my office which is in the same situation and I could not answer why to him.

Thus, it was a good comprehensive experience to see the stream of shipbuilding backward from finish to factory and then design. One thing personally surprised me during the design department visit was the staff composition. I was surprised to find very diverse national background staff in a department.
I believe that all of the experiences gained through this time are invaluable and could not have been possible without any one person from the Foundation, cooperating companies, or sponsoring organizations. Finally, I would like to reiterate my utmost gratitude to everyone who made the trip happened.

Elgene Jalon Francisco Gregorio (Philippines)

On or about 11:00am, 10 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation paid a courtesy visit at Kyokuyo Shipyard. We were warmly welcome by the officers and staff of the shipyard upon arrival. They have prepared a brief presentation as to what the shipyard is all about.

Kyokuyo Shipyard is a compact shipyard based in Shimonoseki. It was established in 1942 as Hikoshima Shipbuilding Company by the combination of five neighboring shipbuilding companies, it was engaged in shipbuilding and ship repair. In 1961, the name of the company was change to Kyokuyo Shipbuilding and iron works ltd. From thereon, the company was engaged in the building capacity expansion to increase its building and repairing capacity and to be able to handle larger vessels. In 1984, the name of the company was changed to Kyokuyo Shipyard Corporation, from thereon, the company has become one of the leading shipbuilders and ship repair company in Japan.

Just like any other shipyard in Japan, Kyokuyo shipyard is also a member of the Shipbuilders Association of Japan. The SAJ comprise of 17 member companies which is an organization of shipbuilding and Ship-repairing companies in Japan.

Kyokuyo Shipyard was engaged in building a pure car carrier, roll-on/roll-off ship, multi-purpose cargo vessel, LPG carrier, reefer ship, cement carrier and advance coastal ship. The company was known in building the world first SSS-bowed eco-ship “City of St. Petersburg” and was proclaim as the Japan Ship of the year 2011, the most valuable award in the Japan’s shipbuilding industry. Likewise, on 2016, the SSS-B Container Ship Natori win as logistics environment award and was named ship of the years category winner. Moreover, the Senior Managing Director and the boss of designing team of Kyokuyo Mr. Tetsuo Mitsui was awarded the Prime Minister Prize for CY 2020 at the 8th Monodzukuri Nippon Grand Award Ceremony.

The company focus on improving engineering capabilities with the view to the future of the global environment rather than simply seeking economies scale. The company strives to create a workplace with the sense of unity and vitality where everyone with different backgrounds, ages, positions, and organizations works as one.

After the presentation, we were then divided into 3 groups and we were toured inside their facilities as to how the vessel was constructed, they also allowed us to board on a brand new constructed container vessel which is about to depart to its home of port. In general, the class did enjoy in the tour inside the

shipyard, all employees was observed upholding the highest form of professionalism and hospitality which is worth emulating.

Nippon Survival Training Center (NSTC)

Teona Khabeishvili (Georgia)

Japan field study was full of interesting and productive site visits. One of the highlights of the visits definitely was Nippon Survival Training Center (NSTC) in Kitakyushu, Fukuoka.

Group of WMU delegation was greeted by the chief operational officer Mr. Seichi Hashimoto and course instructors. After brief presentation we learned, that NSTC was established in 2011, Since NSTC's establishment the number of delegates has exceeded 10,000 in 2021, which is highly appreciated by clients in various industries. Being certified ISO 9001 and ISO45001, NSTC ensures the safety of the clients and maintains and improves the quality of the various training they offer.

As the auditor, I was pleased to know that the Center has the quality assurance department, annual audits by external auditors are conducted for those international approval training such as OPITO, STCW and GWO. Quality Assurance Specialists regularly critique Quality Management, Facility Management, Health & Safety Management systems and the competencies of staff. Training center is recognized as one of the top-class training centers, worldwide.

As we learned from Mr. Hashimoto, NSTC is a Survival Training Center meets international standards. It has 2 facilities, gorgeous, old building where we had the presentation and firefighting facilities, which is different from main building. The Firefighting Training Facilities have a Fire Training Ground, Escape Training Facility, Engine Room / Accommodation Simulator and Working at Height Training Facility. We were not able to see it, but I am sure it is equipped with standards they are obliged with.

Offshore training facilities are comprised of an indoor 14m×14m and 5m deep heated pool and two quayside lifeboats. Both facilities are equipped with comfortable lecture rooms, lounge, and changing rooms with showers. We were fortunate enough to visit the pool and see equipment provided there on site, guided with actual instructors.

As Mr. Hashimoto mentioned, they lack of trainers with good English, but it is still fascinated how the center manages to run so many courses they are conducting during the year. As mentioned above, Nippon Survival Training Center offers different organization approved trainings:

1. *OPITO Approved Training Courses - OPITO* （Offshore Petroleum Training Organization was established for the UK Oil & Gas Industry, committed to managing standards in work safety and survival skills for the offshore industry. The rationality of the standard has been evaluated,

and those engaged in marine resource development projects are required to attend OPITO training. This international standard has been introduced to some research vessels in Japan, as well. NSTC received approval as the first OPITO training provider in Japan in 2011.

2. *BOSIET for offshore* workers consists of "Safety Induction", "Helicopter Safety and Escape", "Sea Survival & Evacuation" and "Firefighting & Self Rescue". This is a three-day basic training course focused on safety and emergency response.
    - BOSIET- Basic Offshore Safety Induction and Emergency Training
    - FOET - Further Offshore Emergency Training
    - HUET - Helicopter Underwater Escape Training

3. *NSTC provides STCW Training Courses*, in accordance with STCW. In 2014, NSTC was awarded approval as Japan's first private sector STCW training provider by ClassNK and started to deliver Basic Safety Training, and then approval for the Basic Safety Training Refresher in 2017. In 2017, MLIT confirmed our center as training institution and many delegates have certified.

4. *GWO Approved Training Courses* - GWO （Global Wind Organization） is an association of Wind Turbine owners and manufacturers with the aim of supporting an injury-free work environment in the wind industry. The training has become mandatory for personnel working for many wind turbine companies in Europe and growing around the world. In 2014, NSTC received approval as the first GWO BST training provider in Japan.

5. *NSTC Training Courses - Diving Techniques Training* （DTT） is designed for not only commercial diving services but also public agency lifesavers. It consists of theory sessions and practical diving techniques in our training pool and at sea.

6. *Aircrew Ditching Courses* - This course is specially designed for pilots and aircrew, including lectures on the safety and hazards of ditching, preparatory actions for ditching/ surface and underwater evacuation, and sea survival training, to increase the rate of survival when adrift. This course developed due to an increase in the number of medical personnel on board medical transport helicopters and crew on broadcasting helicopters taking aerial photographs offshore in recent years

7. *MLIT Approved Training Courses* - Ministry of Land, Infrastructure, Transport and Tourism, Japan, Liferaft Operations Course, Bridging Course

8. *SPC - Specialized Course - SPC* - is a customized training program designed to meet your needs. We offer a variety of training programs, such as Diving Techniques Training designed for aquaculture businesses, diving training for special operations personnel, hazard prediction training, Free Fall Lifeboat training, and other offshore survival training upon request.

I was surprised how diverse the courses are in the center, I learned that facility can have many different directions but still remain quality in every each of them.
With Best regards, wish them great success in farther developments.

Daiki Maeno (Japan)

Field studies of the World Maritime University (WMU) are an important part of WMU's Master of Science (MSc) in Maritime Affairs Programme as they provide the course's practical example leading to more comprehensive understanding of the maritime substance among the students. The Nippon Survival Training Center (NSTC), which we visited during our field study trip to Japan, made us aware of the importance of education and the facilities that can provide it.

The NSTC provides many trainings such as fire drills for people operating at sea around the world, escape training for helicopter aviators in the event of an emergency landing at sea, and lifeboat takeoffs to help them learn to make calm decisions and protect their own life safety in the event of an accident. Training is provided in accordance with global standard regulations such as Offshore Petroleum Industry Training Organization (OPITO) and STCW.

The NSTC is the first full-fledged comprehensive survival training center in Japan, and is a key component of the NSTC's efforts to improve safety in the maritime industry. As the first full-scale comprehensive survival training center in Japan, NSTC is making a significant contribution to improving the safety of the maritime industry. Participants come not only from Japan but also from all over the world. The opportunity to visit this facility during this field study reminded us of the potential dangers that exist in the ocean and human resource development and helped us to instill the importance of the institution that provides this service.

During our visit, we were able to inspect one of the training buildings at the NSTC. In the training building, we visited the lifeboat facility as well as the training pool.

In the training pool, in addition to training in diving techniques, there is also a model of a helicopter cockpit where helicopter underwater egress training can be conducted. Although designed for pilots and crews, in recent years there have been many requests for training, as doctor helicopters, firefighters, and police also have helicopters in their fleets. Some of the instructors are former members of the Japan Self-Defense Forces Air Force, and the well-equipped facilities confirm that advanced technical training is being provided. The provision of this series of training has contributed to increased survival rates at sea.

In the outdoor sea-facing area of the training building, actual lifeboat descent equipment is installed. The lifeboat descent facilities are of the davit type and free-fall type, and training is conducted on how to secure a safe posture when leaving the lifeboat. Injuries caused by lifeboat departures and falls are not uncommon, and it is highly beneficial and effective to receive training in order to be able to act calmly in the event of an accident.

In conclusion, the education of seafarers is an important role in the maritime industry. In particular, training based on STCW, which is largely concerned with the safety of human life, is a high priority. However, providing quality training requires well-equipped and highly skilled instructors, and NSTC has confirmed that it provides this to a high standard. We hope that more similar facilities will be established around the world to raise awareness of safety issues.

Aziza Mohammed Swazuri (Kenya)

Introduction

The field study was an eye-opening opportunity with lots of important information shared throughout the study. The reception received was warm and friendly, delicious food and professionalism in all the organizations visited.

Nippon Survival Training Comments Overview

The center is located in Kitakyushu area offering several courses in survival training for anybody who works in oceans and water bodies.

The school offers training courses such as STCW (Standards of Training, Certification and watchkeeping for seafarers), aircrew ditching courses, diving techniques training for special operations personnel, free fall life boat training, Global wind organization approved training courses (GWO) and other water-survival related courses upon request.

The center is located in a serene and quiet environment which is an important factor for any facility that offer any form of teaching. It is well-equipped with modern training equipment which makes the courses practical because they teach learners also how to use them. The center is also spacious thus creating enough room and comfort for everyone to make learning to be in a more favorable and conducive environment.

It is very interesting to know that learners can learn the theory part as well as conduct the practical sessions, something most colleges especially in the third world countries may not be able to offer except for simulation. This is a case in my own country. The practicality aspect prepares the learner on the real work situation, that is, what to expect once they are in the water, the dangers to be avoided, the risks to be taken, prevention mechanisms and many others, because water is their daily working environment or whenever they come into contact with a water body anywhere in their line of duty or otherwise.

In essence, it is putting what has been learnt in class with the practical. This is a good commendable standard that the center provides.

The center also offers first aid training as survival techniques and life skill lessons. Accidents are normal in any working environment and thus, it is important to extend the water survival techniques to first aid for faster relief in case of an accident or occupational hazards in the working environment.

I think that extension of training people what to do when the accidents do happen is a smart move, combining both work skills and life skills, which are both very important in our daily lives.

From the on shore small training the center showed to us, it was a good impression to realize the course was undertaken by a young woman. In most cases, such life-threatening activities, especially in my country, are carried out by men mostly in the maritime sector.

The trainers seem competent, vibrant, experienced and within the required standards from the way they answered our questions and showing us around their premises to know the kind of training courses offered as well as the various equipment and facilities available at the center. Their presentation was well-articulated and straight forward, since the courses offered at the center are more practical than theory.

It was also encouraging to know the center takes safety matters in serious consideration. They made us wear protective clothing, water shoes and other regalia when inside the practical grounds during the tour which I find to be very professional and realistic because water itself can be a hazard. The places were also marked to show how to keep off some hazardous or slippery areas to avoid any mishap when in their training premises.

In this regard, suffice to say that the center is above standards. The fact that they offer STCW and other internationally accredited courses shows the seriousness the center has towards providing quality education to the people of Japan and others. I am glad to have had the golden opportunity to visit the center.

Appreciation.

This is to offer my special thanks to the Chairman of The Nippon Foundation and staff of Sasakawa Peace Foundation, the various institutions visited across Japan for such an amazing and life changing opportunity. A word of gratitude to WMU President, Mr. Max Mejia and the Assistant Student Registrar, Ms. Lyndell Lundahl for organizing and permitting us to visit Japan.

Thursday, May 11, 2023

Visiting

Port of HAKATA

KANMON KAIKUO Vessel Traffic Service Center

●Port of HAKATA

●KANMON KAIKYO Vessel Traffic Service Center

Port of HAKATA

Suraya Yaesmin Jui (Bangladesh)

Introduction

Hakata Port is a historically significant port located in Fukuoka, Japan, with a rich maritime heritage dating back over 2,000 years. Throughout its existence, Hakata Port has played a crucial role in trade, cultural exchange, and economic development. This report provides an overview of the history of Hakata Port, its current economic impact, status, major trading activities, passenger transportation, logistics systems, ecological initiatives, and measures for terminal operations during times of disaster.

1. Historical Significance of Hakata Port

Hakata Port has a long-standing history of trade and exchange with China, spanning more than 2,000 years. In 57 AD, during the time when Hakata was known as "Nakoku," the Chinese Emperor Guangwu of the Later Han Dynasty presented the Gold Seal to the region. This event marked the beginning of Hakata's connection with China and set the stage for future trade relations.

In 1899, Hakata Port was designated as an open port, formally establishing it as an international trade hub. This designation enabled the port to engage in global trade activities, further contributing to its historical significance. In 2019, Hakata Port celebrated its 120th anniversary as an international trade port, highlighting its enduring presence and importance in the region.

2. Economic Impact of Hakata Port

Hakata Port, in conjunction with Fukuoka Airport, has a substantial economic impact on the region. The combined trade volume of both entities exceeds 5 trillion yen, accounting for approximately 30% of Kyushu's total trade. Moreover, Hakata Port handles around 50% of the foreign container cargo within Kyushu, demonstrating its pivotal role in supporting the regional economy.

3. Status of Hakata Port

a. Port Performance

In 2021, Hakata Port witnessed the arrival of approximately 24,160 domestic and foreign vessels, with a cumulative gross tonnage of around 51.53 million tons. The total freight transported through the port amounted to about 32.23 million tons, maintaining a consistent volume compared to the previous year. Additionally, the number of international seaborne containers reached approximately 890,000 twenty-foot equivalent units (TEUs), reflecting a minor decline from the previous year.

b. Foreign Trade

In 2021, Hakata Port facilitated a foreign trade volume of 18.62 million tons, with exports and imports accounting for 45.0% and 55.0%, respectively. Notably, the majority of imports consisted of daily necessities consumed in neighboring areas, while industrial products and recycled materials dominated the export market.

c. Domestic Trade

The domestic trade volume of Hakata Port in 2021 amounted to 13.62 million tons, with inbound cargo constituting 71.2% of the total trade. These figures emphasize the importance of domestic trade in sustaining the port's operations.

4. Major Trading Items at Hakata Port (2022)

a. Export and Outbound

Hakata Port serves as a significant hub for exporting various goods. The major export destinations for key products in 2022 were as follows:

1. Rubber products: USA, UAE, and Saudi Arabia
2. Industrial machinery: China, Korea, and the USA
3. Auto parts: Korea, UAE, and the USA
4. Automobiles: UAE, China, and South Africa
5. Dye, pigment, synthetic resin, and other chemicals: China, Korea, and Taiwan

b. Import and Inbound

Hakata Port also plays a vital role in importing goods. The major import partners for key products in 2022 were as follows:

1. Furniture: China, Vietnam, and Korea
2. Animal/plant feed and fertilizer: Korea, USA, and Australia
3. Clothes, personal belongings, and shoes: China, Vietnam, and Korea
4. Electric machinery: China, Thailand, and China (Hong Kong)
5. Processed food: China, Korea, and Thailand

5. Passenger Transportation and Cruise Hub

Hakata Port serves as a gateway to the sea, with approximately 580,000 people passing through it annually. The port operates two significant wharfs, Hakata Wharf and Chuo Wharf, located in the heart of the city, which function as crucial transportation hubs for passengers.

a. International Passenger Route

In 2011, the cities of Busan and Fukuoka established a shipping route named the Busan-Fukuoka Friendship Sea Road, facilitating cultural and economic exchanges between Korea and Japan. However, due to the impact of the novel coronavirus, international passenger liner routes are currently suspended.

b. Cruise Ships

Hakata Port is Japan's leading cruise hub, welcoming numerous domestic and foreign cruise ships. It regularly receives prominent Japanese cruise liners such as Asuka II, Nippon Maru, and Pacific Venus, along with several foreign cruise ships.

6. Hakata Port Logistics IT System (HITS Ver. 3)

Hakata Port offers an advanced logistics IT system called Hakata Port Logistics IT System (HITS Ver. 3). This system provides real-time information through its website, enabling efficient and speedy logistics operations. Users can access information about import/export containers, administrative procedures, cargo location, and operational instructions, fostering collaboration among logistics stakeholders. HITS Ver. 3 has significantly improved efficiency, reduced paperwork, and minimized errors in data input.

7. Ecological Initiatives and Terminal Operations during Disasters

Hakata Port is committed to achieving an advanced ecological container terminal. It has implemented various measures, including the introduction of fully automated rubber-tired gantry cranes (RTGs), hybrid straddle carriers, and roof shades to conserve electricity at the reefer container facility. The port aims to decarbonize its container terminals and promote carbon neutrality.

Furthermore, Hakata Port has developed strategies to ensure terminal operations continue smoothly during times of disaster. It has installed anti-seismic gantry cranes and secured alternative power sources for reefer containers and terminal systems in the event of power failures, safeguarding logistics operations and minimizing disruptions.

Conclusion

Hakata Port's historical significance, economic impact, and current status as a prominent international trade port underscore its importance to the region. With its strategic location, diverse trading activities, passenger transportation services, advanced logistics systems, ecological initiatives, and disaster preparedness measures, Hakata Port continues to play a vital role in facilitating trade, promoting tourism, and supporting regional development.

Adama Jatta (The Gambia)

PORT INFORMATION

The Port of Hakata is located in Fukuoka City which has expanded as a Port hub connecting Asia to the world has been into existence for 123 (one hundred & twenty-three) years. It enjoys a competitive advantage of being very close to major east-Asian cities like Busan (200km), Shanghai (500km), Osaka (500km) and Tokyo (1,000 km). the volume of international marine containers it has handled from 2009 has grown from 660,000 (six hundred and sixty thousand) TEUs to 888,000 (eight hundred and eighty-eight thousand) TEUs in 2022. As a historical port, the port of Hakata has been in exchange with China for more than 2,000 years.

However, the Japanese port ranking declined to a 5th ranking in 2021, which made the government to take the decision of creating a Japanese port policy. The port policy created three categories of Japanese ports into strategic international hub ports (Kobe, Osaka, Tokyo, Kawasaki and Yokohama Ports), international hub ports (up to 18 ports, including Hakata), and major ports (up to 102 ports).

The Japanese port policy aimed achieving the following:

- ✓ strengthening international competitiveness and supply chain resiliency
- ✓ realizing carbon neutrality and marine environment policy
- ✓ ensuring the safety and security of the people
- ✓ strengthening the competitiveness of key industries in the region and creating a vibrant atmosphere.

Ina bid to strengthen the functions of the ICHs (international container hubs), the Japanese port policy continues to make efforts to make information concerning containers visible for the port and harbor users, examples include the positions the containers and their expected time of arrival. With respect to the promotion of environmentally friendly business, as well as increasing the competitiveness of international hub ports including Hakata, the ports offer onshore power supply for the anchorage of ships, low carbon fuels for vessels and low/zero-carbon cargo handling equipment.

SERVICES

The port of Hakata handles dry bulk cargo, ro-ro and container cargo, metals, forest products, oil, gas products and many more. It provides 216 monthly services on 41 international container routes as at 2023, with twenty-five routes in three Asian countries (Korea, China and Russia), one route in north America, 13 routes in southeast Asia, 1 route in Taiwan and 1 route in Guam. It also offers import and inbound services for products like furniture, animal/plant feed fertilizer, clothes and personal belongings, electric machinery and processed food, as well as export and outbound services like rubber products, industrial machinery, auto parts, automobiles and chemicals. These and more services are offered to main shipping lines which are frequent clients to the port, like CMA-CGM, Hapag Lloyd, Maersk, Mediterranean Shipping Company, Submarine, Evergreen and many more.

The port of Hakata has 44 mooring berths with depts over 7.5 meters and 27 mooring berths with depths below 7.5 meters as well. It also harbors 25 transit sheds for general cargo, 2 vegetable sheds, 3 inspection sheds and 30 repair facilities as well as reefer points. The port also has a site which handles petroleum products, heavy oil, liquified petroleum gas and chemicals for the consumption of Fukuoka and Kyushu cities.

It is also connected by road and rail modes of transportation to other Japanese canters through the Hakozaki Wharf. This is the port of Hakata's biggest wharf and it creates direct access to the Kyushu expressway, the Fukuoka airport and the Japan Freight Railway Lines.

The port also has two foreign trade container terminals with state-of-the-art facilities which can handle large container vessels and cargo. The terminals are equipped with post-panamax gantry cranes, transfer cranes and many modern cargo handling equipment.

FUTURE OF HAKATA PORT

In March 2016, the Port of Hakata creates three pillars, with which a policy was developed for the future development of the port. These three pillars are to

- ✓ create a port that tows urban growth (logistics related)
- ✓ create a familiar port that promotes interaction (people exchanges)
- ✓ create a port that protects and nurtures the environment (environment related)

the port also plans to implement efforts of decarbonization with collaboration of public and private entities in Japan, with the main aim of GHG emission reduction by 5o% in 2030 and zero emission by 2040.

FUN FACT: the Port has a 100 meters long giraffe pattern crane located close to the Fukuoka's Children's hospital around the port. the purpose of the crane and its location is so that the children in the hospital can see the crane and watch it operation in their hospital beds.

Minna Rasheed (Maldives)

WMU Sasakawa fellows of 2023 visited the port of Hakata on 11th May 2023. The port is one international hub in Japan that provides services directly to Korea and mainland China with passenger and cargo services. This is one of the most interesting sites visits the student has made, which gave the whole glimpse of the port facility by a boat tour and how the port is operated.

The Port of Hakata is a historical port which had been trading with China for over 2000 years and began its first international trade officially in 1899. The port will be celebrating its 125 years anniversary next year. By May 2023 it has established 41 international container routes and 216 monthly services on these routes.

The Port of Hakata is a very shallow bay and with the expansion of the ports and the bay area's dredging was done to serve the needs of the port. This dredged sand was used further for construction and land reclamation in the port area. Green and Red Lines canaries between Busan, South Korea carry both Passengers and Cargo which is known to be one of the busiest facilities in Port of Hakata. It is a vibrant area with lots of exchanges between South Korea and China and the Port of Hakata has the geographical advantage of being near these 2 countries.

The cruise vessels arriving at Port of Hakata however have declined after the Covid19 pandemic. However, the container terminals have been in excellent operation in recent times with further expansions at the port. Getting a round tour on the cruise was a remarkable opportunity for the students to explain the facility while being on the cruise and on the bus. The scenery of the views around the tour was breathtaking and students were able to observe the maritime trade activities happening in the area. The staff further explained the trade statistics around the area and the Hakata Port's national and international trade commitments during the past few years.

The privilege to observe various cargo handling processes and the seamless coordination and precision with which the goods were loaded and unloaded from the vessel was a remarkable experience, especially from a developing nation with smaller facilities and infrastructures available back home. Advanced equipment and a smooth process of loading and unloaded and other operational movements of goods without any hindrances proved how well managed the whole port system was and how skilled and committed the staff are trained to perform well with so much discipline. This is one main policy initiative for strengthening international competitiveness and supply chain resiliency.

One of the most interesting Japanese port policies is its establishment of the Carbon Neutral Port (CNP) as a policy initiative of carbon neutrality and marine environment policy. This contributes to achieving

carbon neutrality by 2050. The port policy of ensuring the safety and security of people and strengthening the competitiveness of key industries in the region and creating a vibrant atmosphere was highlighted in the presentation.

Large quantities of imports and exports take place in this port where the main exported items are rubber products, automobiles and auto parts, industrial machinery, and chemicals. The main imported items are furniture, fertilizers, clothing and personal items, electric machinery, and processed food.

Port of Hakata aims to be Japan's hub port to Asia in the future with its full vibrancy and presence. For this new policy initiative was implemented which is creating a port that tows urban growth, creating a familiar port that promotes interaction, and creating a port that protects and nurtures the environment.

Port facilities are one area close to my professional work, as I am working in Maldives Customs Service. I have also worked at the Port of Maldives as a custom checking officer for one year. This has made me realize the importance of ports for the country's trade and development. The knowledge we gained from the port of Hakata enhances our capacity to serve our countries to establish what is lacking at our ports. The professionalism and expertise in communication and information sharing at Hakata Port by its staff and officials are exemplary. Their dedication, knowledge, and work ethic presented is truly praiseworthy.

KANMON KAIKYO Vessel Traffic Service Center

Rathanakvuth Sourm (Cambodia)

KANMON KAIKYO Vessel Traffic Service Center's mission is to maintain and improve safety and efficiency of vessel traffic in the Kanmon Strait, has been established and operated by Japan Coast Guard. This Center Provide necessary information, recommendations, instructions, etc. to prevent marine accidents and ensure orderly navigation in Kanmon Strait. In addition, they work to prevent collisions with important facilities and prevent accidents caused by anchor ships dragging their anchors.

Kanmon Strait has total length 28km, it bends in an S shape, and the narrowest part is Hayatomo Seto with the wide is 500m wide and the current is rapid. Approximately 500 ships pass through the knots a day, and approximately 1,000 ships in the entire strait. In order to ensure the effectiveness of information provision, the Act on Port Regulations stipulates areas where information listening is mandatory. The officer is monitoring. The ship's position, speed, and course are displayed as vectors on the radar screen, and the ship is automatically tracked. It also provides information on fishing boats operating near the Kanmon Strait and live camera footage.

Kanmon route is based on information and the movements of ships in the surrounding waters. The international VHF radio is used to communicate with the ship and by telephone to make a safe navigation with the tidal currents and weather and for the communication is Japanese and English. For safe traffic and contributing to safe navigation of vessels, "Kanmon MARTIS" and essential information while navigating in the Kanmon Strait.

They use the AIS (Automatic Identification System) for monitoring the ship position, speed, and course, etc. Information and safety information is transmitted and received between ships and between ships and land using VHF (very high frequency) band radio waves. It will automate ship position reporting, which is reduce manpower. Moreover, it will prevent communication congestion, and improve mutual communication between ships. This system is expected to prevent collisions of the ship.

The following Rule, executive decrees, ministerial regulations, public announcements, and administrative guidelines govern how the Kanmon MARTIS is run. Refer to these regulations for the precise implementation of the laws.

- Act on Aids to Navigation
- Act on Port Regulations
- Cabinet Order for Enforcement of the Act on Port Regulations

- Ordinance for Enforcement of the Act on Port Regulations

Pursuant to the Act on Port Regulations, Kanmon MARTIS may provide advice to a specified vessel to take any necessary action such as altering the vessel's way and so forth, when it is found that such vessel is likely to navigate not keeping the navigational rules applied in the navigation passages or when it is found that a dangerous situation for such vessel such as risk of closing in on any other specified vessel or an obstruction, is likely to occur, and when Kanmon MARTIS considers necessary to have such vessel keep the navigational rules or avoid the dangerous situation.

Kanmon MARTIS maintains and enhances the Kanmon Strait's maritime traffic safety by gathering, confirmation, and keeping track of vessel traffic data using sensors including RADAR, ITV, AIS, and VHF radiotelephone. Additionally, it offers navigational guidance to ships when it is deemed essential to do so to avoid danger that is imminent and potential traffic rule. It is also directing ships to wait outside the navigational channel in conditions of poor visibility and other circumstances as defined by the Act on Port Regulations. They also broadcast the information on the passage entrance schedule of large vessels, weather, sea, tidal current according to the schedule and frequency. Emergency information such as occurrences of collision and so forth is broadcast whenever necessary. In addition to the information supplied through VHF radio transmission, Kanmon MARTIS also offers information on tidal currents, big vessel traffic, and other navigational help via radio broadcast, phone, and website.

Kla-Edward TOOMEY II (Liberia)

Background

On Saturday May 6, 2023 the S23 Cohort of Sasakawa Fellows departed Malmo, Sweden for a One-Week Field Study in Japan. The Sasakawa Fellows are students sponsored at the World Maritime University by The Nippon Foundation through the Sasakawa Peace Foundation run by its Chairman, Dr. Yohei Sasakawa. Each year The Nippon Foundation sponsors students from across the world, particularly from developing countries. This year's cohort of which I am a member, comprises of thirty students from twenty-eight countries. During this year's field trip, we were accompanied by Assistant Registrar Ms. Lyndell Lundall and Professor Max Mejia. During the one-week field study, we had the opportunity to meet with our sponsor, Dr. Yohei Sasakawa and tour several maritime facilities across the country. This report represents my individual task and exclusively covers Thursday, May 11, 2023 visit at the KANMON KAIYO Vessel Traffic Service Center.

The VISIT at the KANMON KAIYO Vessel Traffic Center

On Thursday, May 11, 2023 at about 2 P.M., our delegation arrived at the KANMON KAIKYO Vessel Traffic Center in Japan to mark Day Four of our visit. The KANMON KAIKYO Vessel Turning Center is located around the Kanmon Port area, and is one of seven such centers across the country. Upon our arrival at the center, we were welcomed by officers of the Japan Coast Guard, headed by the Director of the Center who made a presentation providing an overview of the center; ranging from its founding to the scope of operations. The presentation was made on a power point and lecture materials were provided to each member of the delegation for in-depth understanding of the operations of the center.

From the presentation, we learned that the KANMON KAIYO Vessel Traffic Service Center falls under the Ministry of Land, Infrastructure, Transport and Tourism of Japan and is controlled by the Japan Coast Guard which was established in 1948. As part of its responsibilities, the Japan Coast Guard provides protection to the country's coastal borders; protect sovereignty, prevents crimes and illegal trade, conducts rescue activities, etcetera. The rescue program is conducted in collaboration with private companies and local governments.

The KANMON KAIYO Vessel Traffic Service Center was established in 1989. The center is particularly important due to its strategic geographical location. It is located between two Islands and a port area, which makes it vulnerable to serious economic and security problems should there be traffic in the area. The total length of the area is 15 miles, and it is curvy. It is comprised of banks and straits, which makes it unusual. There is a particularly narrow area where about 440 vessels pass a day. Climate and environmental factors make this place even more difficult to deal with. At some time of the year, ocean current in the area is about 10 N, the third highest in Japan. These natural complexities and peculiarities

of the region further explain why the center is necessary to control vessel traffic to avoid congestion and accidents.

Following the presentation by the Director of the center, we had a guided tour of its various departments. The center is comprised of the departments of operations, control service and information. The department of operations collect data from AIS, television camera, radar, etcetera, and give information for safety operations. The operations and control make use of data to predict and advise vessels. The Information Control Session provides information to vessel and the public through radio broadcast. Information provided include accident in passage, construction, weather, etcetera. We did not cover the service department due to the lack of time, as we had to leave the area for an overnight ferry trip to our next destination.

The operations of the Japan Coast Guard at the Center are enhanced by the use of technology. There is a total of 94 AIS in use by the Japan Coast Guard, which makes it easy to detect vessels in the range of at least 30-mile radar. The center also has in its operations, electric signal boats to report tidal current. The strait is divided into three sessions for ease of monitoring, and each session is controlled by a separate monitor. Vessels are also coded in the following categories to aid effective monitoring: Yellow for cargo; pink for tanker, and blue for passenger.

Joseph Shoro Diwanga (Namibia)

DATE OF VISIT:

On the 11th of May 2023, it was the turn for fellows to visit the KANMON KAIKYO Vessel Traffic Service Center in Wakamatsu Ku, Kanmon Port. We were welcomed by the President of the Center, Mr. Kazuaki Muramatsu. The group was divided into two groups after the briefing for a guided tour of the place under the care of experienced supervisors of vessel traffic service operations.

SITE:

KANMON KAIKYO Vessel Traffic Service Center,

LOCATION:

Kanmon Port, Wakamatsu Ku, Kitakyushu, Japan.

MISSION (MANDATE):

The KANMON KAIKYO Vessel Traffic Service Center, under the Wakamatsu Japan Coast Guard is mandated to provide maritime traffic information and signal controls to vessel traffic passing through or around Kanmon Passage (waterway) based on the port regulations law of Japan.

KEY FINDINGS (OBSERVATION):

The center is well-manned and well-resourced with qualified personnel, inclusive of all gender and age. Automatic processing and fusion of data from various sensors - such as radars, AIS, CCTV, RDF, GMDSS, and weather stations provide the operators with dynamic information about the VTS area. Traffic management tools provide a basis for traffic coordination. Communication equipment allows for interaction with vessels. An advanced decision support system helps operators recognize a dangerous situation long before it escalates and thus increases safety. 3D VTS significantly enhances situational awareness. Open interfaces enable information exchange between VTS and other services. The recording system stores all data for post-voyage debriefing and accident analysis. Complete traffic overview with a combination of electronic chart overlay, vessel positions, and sensor data is in place. Timely monitoring of vessel traffics and preventing collisions and grounding contribute to environmental protection.

CONCLUSION (TAKE-AWAY LESSON):

Vessel Trafficking Services are an integral part of maritime safety and security. A coordinated system for vessel traffic control enables information sharing between relevant stakeholders, as per need and access level. Dynamic information about the VTS area resulting from automatic processing and data fusion from various sensors increases awareness and safety. Better traffic coordination with advanced

management tools and distribution of shared data to several operations stations improves VTS teamwork and efficiency. Accurate detection, tracking, and identification of small and high-speed targets by employing advanced technology. VTS also enhances environmental protection.

I personally learned a lot from the center and left with a better understanding of the VTS operations as well as the most important part of having a functional navigational aid system in ports and waterways. This enhances the overall safety and security in the maritime industry.

Once again, thank you very much (The Nippon Foundation and the Sasakawa Peace Foundation) for this great learning lifetime opportunity. I will always cheer you for your outstanding service and contribution to the maritime industry and beyond - all the way from Namibia. Long live SPF, long live WMU!

Friday, May 12, 2023

Visiting

FURUNO – Miki Factory
HSN-KIKAI KOGYO Co., Ltd.

●FURUNO – Miki Factory





●HSN-KIKAI KOGYO Co., Ltd.







FURUNO

Ahmed Mohamed Ismail Mohamed Ismail (Egypt)

Introduction

On May 12, 2023, our field study program provided us with the unique opportunity to visit Furuno Electric Co., Ltd., a renowned manufacturer of marine and industrial electronic equipment in Japan.

During our visit, we were warmly welcomed by the staff and the general manager, who shared valuable insights about the company's history, product divisions, manufacturing processes, and quality testing procedures. This report aims to provide a comprehensive overview of our visit, highlighting Furuno's commitment to excellence, innovative technologies, and its significant contribution to the marine and industrial electronics industry.

Introduction to Furuno Electric Co., Ltd.

The general manager initiated the visit by introducing us to Furuno Electric Co., Ltd., a renowned manufacturer of marine and industrial electronic equipment. He highlighted the company's commitment to Japanese manufacturing, with 80% of the products being produced in Japan. Additionally, we learned that Furuno operates another factory in China. This dual manufacturing strategy allows Furuno to effectively cater to domestic and international markets.

History of Furuno

We were provided with a brief company history to understand Furuno better. Furuno was Founded in 1938 in Japan, Furuno initially focused on developing and manufacturing radio communication equipment. In 1956, Furuno began exporting its products, marking the start of its global expansion. The company's dedication to innovation and customer satisfaction led to relocating its headquarters in 1964, providing a more extensive research, development, and production space. Over the years, Furuno continued to grow and established vital facilities such as the Miki Factory in 1979, the Furuno International Centre in 1989, the Furuno European Distribution Centre in 2004, the Furuno INS Training Centre in 2005, and the South Wing in 2021. These strategic expansions allowed Furuno to meet the increasing demand for its products while maintaining its commitment to quality.

Product Divisions

Furuno Electric Co., Ltd. operates through two primary divisions: the Marine and Industrial Business divisions. Each division focuses on specific markets and offers a range of innovative solutions.

The Marine Business division plays a vital role in the fishing industry, providing advanced equipment to enhance fishing practices and ensure sustainable resource management. Furuno's fish finders utilise cutting-edge technology to detect and locate fish, enabling fishermen to optimise their catch while minimising environmental impact. The division also offers radio communication equipment such as AIS (Automatic Identification System) and Satellite Communication Terminals, facilitating efficient and secure communication between vessels. In addition, Furuno's navigation equipment, including VDR (Voyage Data Recorder), ECDIS (Electronic Chart Display and Information System), GPS, and compasses, contribute to safe and accurate navigation on the open seas.

The Industrial Business division focuses on diverse sectors, offering solutions that promote disaster prevention, security monitoring, and efficient operations. Furuno's weather radar systems provide critical real-time information to aid disaster response and ensure public safety. The division also specialises in GPS (GNSS) products, manufacturing high-precision receivers, chips, and modules used in various industries for precise positioning and navigation. Furthermore, Furuno provides ITS (Intelligent Transportation Systems) products, including wireless LAN solutions for effective vehicle management and medical equipment such as clinical chemistry analysers, supporting advanced diagnostics and healthcare solutions.

Global Reach and Manufacturing Excellence

During our visit, we discovered that Furuno Electric Co., Ltd. has a significant global presence, with 60% of its sales occurring internationally and 40% within Japan. This global reach is a testament to Furuno's reputation for producing high-quality, reliable equipment that meets customers' demanding requirements worldwide. To maintain stringent quality control, Furuno manufactures all components of its equipment in-house. This vertical integration ensures that each product undergoes meticulous quality checks and guarantees the reliability and performance that Furuno is renowned for.

Manufacturing Processes and Quality Testing

Our tour of the Furuno factory provided us with valuable insights into the company's manufacturing processes and extensive quality testing procedures. We observed the production of radar antennas, including both X-band and S-band Radars. Skilled technicians meticulously assembled the components, ensuring precise alignment and proper connection. This attention to detail is crucial in maintaining the accuracy and effectiveness of the radar systems. Following the assembly process, the antennas were connected to the radar systems for thorough testing. To simulate real-world conditions, special elevators were used to transport the equipment to the testing floor, where rigorous tests were conducted. The radar systems underwent comprehensive performance evaluations to ensure optimal functionality and reliability. Additionally, Furuno subjected the radar systems to water immersion tests, simulating harsh weather conditions that vessels may encounter at sea. This stringent testing process guarantees that

Furuno's products can withstand the most challenging environments and perform reliably under any circumstances.

Furthermore, we had the opportunity to witness the production and testing of PCBs at Furuno. PCBs are integral components of electronic equipment, and their precision manufacturing is crucial for optimal performance. Furuno demonstrated its expertise in producing high-quality PCBs, showcasing its state-of-the-art facilities and adherence to stringent quality standards. We observed the intricate production process, including the placement of electronic components and the soldering of connections. After the production phase, thorough testing procedures were implemented to ensure the functionality and reliability of the PCBs. These rigorous testing protocols reflect Furuno's commitment to delivering products of the highest quality.

Conclusion

The visit to Furuno Electric Co., Ltd. provided us with valuable insights into the company's history, product divisions, manufacturing processes, and quality testing procedures. We witnessed the dedication and expertise of Furuno's staff in producing high-quality marine and industrial electronic equipment. Furuno's commitment to Japanese manufacturing, innovative technologies, and stringent quality control measures solidifies its position as a global leader in the industry. As we concluded our visit, it was evident that Furuno's continuous pursuit of excellence and its dedication to meeting the evolving needs of its customers have positioned the company for continued success in the marine and industrial electronics market.

Tawfiq Soud Jukhoydom Alataywi (Jordan)

Our trip to FURUNO, a world leader in marine electronics, was a highlight of our time in Japan. This trip was long awaited because of FURUNO's fame as an industry leader in innovation and technological advancement. I was excited to get first-hand experience with the creation and testing of cutting-edge navigation and communication devices as a maritime studies MSc student.

During our arrival, we were warmly welcomed by FURUNO's professional team, who gave us a comprehensive overview of the company's background, core beliefs, and areas of specialty. The employees' obvious excitement and interest set the tone for a fun and educational tour right off the off.

We were taken on a thorough tour of their facilities, which included their R&D labs, testing facilities, and assembly lines. It was impressive to see the stringent steps used to ensure quality at every level of production. It highlighted FURUNO's dedication to providing high-performance marine electronics that can be relied upon.

One of the highlights of the trip was seeing their cutting-edge navigation and communication technology in action. We learned about their radar systems, which are equipped with cutting-edge features including high-resolution imaging, target tracking, and collision avoidance mechanisms. Radar devices' extraordinary accuracy and precision highlighted the critical role they play in protecting mariners.

We were also given a tour of their Global Positioning System (GPS) equipment, which demonstrated the company's dedication to supplying ships with accurate and dependable location data. The GPS units worked exceptionally well, were easily connected to the rest of the ship's electronics and had cutting-edge capabilities like chart plotting and route optimization.

Another notable aspect of our visit was the introduction to FURUNO's sonar technologies. The company's expertise in this field was evident in their cutting-edge fish finders and sonar imaging systems. We learned about the principles behind underwater acoustic technology and how it contributes to various maritime activities such as fishing, exploration, and research.
Throughout the visit, the FURUNO team provided detailed explanations, answered our questions, and engaged in insightful discussions. Their expertise and deep understanding of the maritime industry were evident, and their willingness to share knowledge and experiences with us was greatly appreciated.

As a maritime student, I will always remember the impact that the trip to FURUNO had on me. The importance of technical innovation in the maritime sector was further highlighted by witnessing the latest innovations and their applications in navigation, communication, and underwater sensing. The

dedication of FURUNO to both research and development and to the ever-changing demands of their business was impressive.

Moreover, the visit to FURUNO showcased the collaborative nature of the maritime industry. FURUNO's partnerships with shipyards, navigation authorities, and other stakeholders exemplify the importance of working together to advance maritime technology and ensure safer and more efficient maritime operations.

In conclusion, I gained a great deal of knowledge about maritime electronics and technology through my trip to FURUNO. My knowledge of how technological advancements improve maritime security and productivity was expanded by this encounter. Thank you for the chance to see FURUNO's groundbreaking work firsthand; it has motivated me to do my part in advancing maritime technology for the betterment of the entire industry.

We were quite impressed by FURUNO's production facilities, which run smoothly and efficiently. It was clear from our time there that the organization is dedicated to quality, lean manufacturing practices, and careful inventory control.

FURUNO places a premium on quality assurance, and their manufacturing facilities reflect that commitment. We saw stringent quality control techniques at work throughout the production cycle. The quality control procedures at FURUNO were seamlessly integrated from the sourcing of raw materials through the final testing and inspection.

The factory's layout and procedures gave away the company's commitment to lean manufacturing. With distinct separation between the various stages of production and clearly defined workstations, the production areas were planned for maximum efficiency. The layout was adjusted to cut down on extra steps, which in turn cut down on mistakes and increased output.
Just-in-time (JIT) inventory management was an integral part of FURUNO's transition to lean manufacturing processes. FURUNO planned to minimize waste and maximize production efficiency by keeping a tight inventory and keeping up with consumer demand. This method ensured timely product delivery to clients while minimizing the expense of storing inventory and the amount of space needed to store it.

In the course of our tour, we learned that FURUNO uses cutting-edge production planning and control technologies to make the most of its resources. Effective scheduling, real-time monitoring of production progress, and interdepartmental cooperation are all made possible by these technologies. FURUNO can

swiftly adjust to production difficulties or shifts in client demand because of the company's use of data and technology.

Furthermore, FURUNO emphasized employee training and empowerment in their production facilities. We observed a strong sense of teamwork and collaboration among the employees. Regular training programs were conducted to enhance skills and ensure that the workforce stayed updated with the latest production techniques and quality standards. The employees were actively engaged in continuous improvement initiatives, contributing their ideas and expertise to streamline processes and enhance overall efficiency.

Overall, FURUNO's production facilities showcased their dedication to quality, lean manufacturing, and efficient inventory management. By implementing rigorous quality control measures, optimizing production layout, adopting JIT inventory management, and empowering their workforce, FURUNO strives to deliver high-quality products efficiently to meet customer expectations. The company's commitment to excellence and continuous improvement was evident throughout the visit, and it left a lasting impression on us as a testament to their organizational prowess in manufacturing marine electronics.

Alysious Forbie (Sierra Leone)

On the 12th of May, we had the privilege of visiting FURUNO, a leading manufacturer of marine electronics and navigation systems. The purpose of the visit was to learn about the company's innovative products, technological advancements, and its contributions to the maritime industry.

Upon arrival, we were warmly welcomed by the FURUNO team, who provided an in-depth introduction to the company's history, vision, and product portfolio. FURUNO's commitment to delivering high-quality and reliable marine electronics was evident throughout the visit.

During the visit, we had the opportunity to explore FURUNO's research and development facilities, where cutting-edge technologies were being developed to enhance navigation, communication, and safety at sea. The company's engineers and technicians showcased their expertise in areas such as radar systems, chart plotters, fish finders, and communication equipment.

FURUNO's dedication to innovation was impressive. They emphasized the importance of staying ahead of technological advancements and continuously improving their products to meet the evolving needs of the maritime industry. I learned about FURUNO's collaborations with research institutions, industry partners, and regulatory bodies to develop solutions that improve efficiency, reduce environmental impact, and enhance navigational safety.

Furthermore, we had the opportunity to discuss market trends, customer requirements, and industry challenges with FURUNO representatives. Their customer-centric approach and commitment to providing comprehensive support and service to their clients were evident. The discussions provided valuable insights into the evolving needs of the maritime industry and the role that technology plays in addressing those needs.

In conclusion, the visit to FURUNO offered valuable insights into the company's position as a leader in marine electronics and navigation systems. Their commitment to innovation, technological advancements, and customer satisfaction was evident throughout the visit. FURUNO's contributions to the maritime industry through the development of cutting-edge products and their dedication to addressing industry challenges were truly commendable.

HSN- KIKAI KOGYO Co., Ltd.

Abu Md Safiul Alam Foisal (Bangladesh)

HSN- KIKAI KOGYO Co. Ltd

It was the last site we visited on our Japan field study trip. The site is one of the best sites we visited as it is the manufacturer of one of the most important pieces of equipment on board ships covered by IMO regulation. I am working as a superintendent at Bangladesh shipping corporation, I am familiar with bilge separators and realize how important this is for a ship. It was a great experience to get the physical overview of the production line of the separator along with another facility of the site and their business. The visit was divided into four parts. Following is a brief description of the visit.

The Bilge Separator (Oily-Water Separator): The 15-ppm bilge separator was the most interesting part of the visit. The demonstrations were based on the working principle of bilge separator with the identification of different parts physically. It clears my view regarding how mixed water is collected and passes through the different parts of the separator and different stages of operation. The demonstrations covered the filters, controlled, by-pass line, and output line. The oil discharge monitoring and control system showed how the discharge is controlled and any sort of overflow is controlled. The precise control mechanism makes it easier for the crew to operate and ensures the safeguarding of oily discharge. We even understand different stages of water mixture and the final outcome from the different water they already prepared for better understanding. Overall, it was excellent and the understanding was very clear.

Pump manufacturing and assembly: The next part was the Heishin pump manufacturing section. Here first we were shown different types of impellers made from different materials. Even the physical properties with the percentage of the mixture were also demonstrated. The polishing area and fine-tuning of the propeller blade were impressive. Different types of pump impeller and design were there which are of great source of knowledge. The motors for the whole assembly are not manufactured in HSN Kikai. But the whole assembly is done in the next section. They have the testing Facility and it was a very informative session to understand the pump assembly and work with demonstrations. The finishing section was the packing area of the pumps. They stacked the pumps in a very well-organized and systemic manner to identify and deliver easily.

Hydroponic System for ships: Very interesting section for me to visit. I am very fond of Japanese anime and I like 'one piece' most. In one of the episodes, Luffy, the captain of the vessel happened to be in an area with no food. And afterward, they planned to grow their own food on board. I found the

practical establishment of this idea in the HSN Kikai agriculture section. They manufacture the equipment which can produce different types of plants on board a ship within very limited space. All the merchant vessel relies on frozen vegetables and most of the time they have less opportunity to get proper vegetables as they cannot be stored for a long time. This system will enable the vessel to cultivate its own vegetables and to get the freshly plucked ones at any time. This is a very good initiative and will enhance the crew's health and the environment of the vessel.

Hydroponics system "Ondine VH": The most amazing final part was the cultivation site. How they are doing research and development for the betterment of humanity. How to use limited space for the production of heavy nutrients and foods. The Hydroponics shows well designed and calculated cultivation can save both land and resources. Very less requirement for water also as they maintained a Ph controller and auto control system for watering. It even reduced the timing of cultivation as proper temperature and other resources required for the plants were maintained precisely. The excitement was enormous when we were able to get information regarding their research activity for cultivation in space with Japan's space agency. It was a lifetime experience to gather. We even tested some of their amazing-grown leaves and flowers and juice.

The Site was one of the most informative and interesting of all the sites we visited. The experience was excellent and knowledge regarding the site is enormous.

Yara Hortense Alberto Tembe (Mozambique)

Introduction

In compliance with the study visit program to Japan from the 6th to 14th of May 2023, which involved 30 students from the World Maritime University – WMU, from different specializations and beneficiaries of the Sasakawa scholarship, the visit, and interaction with companies and professionals that provide services and products in the maritime area was one of the targets.

The agenda established for 12th May 2023 highlighted the visit to **HSN-KIKAI KOGYO Co., LTD**, which is a company mainly dedicated to the design and construction of engine room pumps. However, the firm offers a vast production line of equipment designed to reduce marine and air pollution, as well as products to reduce fuel consumption and technology for growing vegetables on board.

The company was founded in 1929 and has 9 locations, and 150 employees (both male and female). With 90 years of history of hard work, determination, and success, the corporation has tem developed innovative products that ensure that the shipping industry is more sustainable, economically and environmentally, through its vast product line.

On the other hand, the company is concerned with the well-being and health of the seafarer, who, because of the long travel journeys, may have their diet compromised due to the lack of fresh vegetables, so the company has created a food production system in captivity adapted to the conditions from the ship.

In carrying out its activities, the company employs its commitment to the United Nations Sustainable Development Goals - SDGs and investment in the education and well-being of its human resources.

Human Resources and Work Environment

The staff is very mixed, and it can be seen that women participate in various activities to which the company is dedicated, demonstrating in this way, the concern with gender equality. Women carry out their activities on the same level of equality as men, in addition, the work atmosphere and commitment to worker safety are to be congratulated.

The company is also dedicated to external training with a main emphasis on IMO regulations, it also trains its employees in the same content, giving the opportunity for training on board and in communication in English in order to provide employees with the ability to communicate in the international market.

Mission

The company's mission is environmental protection fighting against air pollution, ocean, and air pollution through the production of diverse equipment, the second mission is to contribute to the health and welfare of the seafarer mission is a contribution to the health and welfare of the seafarer through the

cultivation of fresh vegetables in a hydroponic vegetable grower, farming on land and onboard shipping and space station.

On the other hand, the optimization of the maritime industry through its products that are designed to reduce fuel consumption from ships.

Line of Services

The company provides training courses on land and on board for its employees and for the maritime industry in the following areas:

- IMO regulations;
- Port State Control
- On-board ship training
- Handling of products manufactured in the company
- English language

Line of Products

- **Prevention of Ocean Pollution**
  - Bilge treatment equipment;
    - 5 ppm/15 ppm Bilge Separator;
    - 5 ppm/15 ppm Bilge Alarm;
    - Electro-Oil Log;
    - Master Track 588 for Bilge Alarm;
  - O. D. M. (Oil Discharge Monitor and Control System);
- **Prevention of Ocean Pollution**
  - GreenMon;
  - Wash Water Monitor;
  - Nox/O2 Analyser for Exaust Gas
  - Pum for Sox Emission Control
    - Sea Water Pump for Scrubber
    - M. G. O. Gear pump
  - SPM (Ship Performance Monitoring System)
- **Reduction of fuel consumption**
  - Cooling Sea Water Control System
- **Welfare and Health of the Ship's Crew**
  - Hydroponic Vegetable Grower
- **Engine room pumps (centrifugal, gear, piston, and screw)**
  - F. O. Modular

Factory and Production Field Visit

The program at the company included a visit to the pump production, bilge water separator, hydroponic system section, and the production field.

Pumps

In the pump production section, it was possible to see how the equipment is made, as well as the final result ready to go to the market.

Bilge Separator

In the bilge separator production section, it was learned that the bilge water treatment system was designed to prevent marine pollution by filtering and separating mixed fuel water, oils, and unwanted materials. The process takes place in 4 phases and filters produced internally are applied. The filter are equipped with membranes prepared to clean the water to be deposited in the sea at the acceptable level and established by the Marine Pollution and Environment Committee of the IMO, 15 PPM. The system has the capacity to clean two cubic meters of water per hour.

Hydroponic System

The cultivation area has a hydroponic, advanced production system that increases productivity and the effective use of the area, this is mainly used for the cultivation of leaves. For customers, the system is designed according to their specifications and needs.

The same system was innovated and developed to be used on board, meeting the conditions and specifications of the ships, this allows the crew to plant and harvest fresh vegetables and thus balance the diet compromised for long days on board.

According to what was ascertained during the visit to the production line and stated in the company concept, the products are designed in accordance with the provisions of the International Maritime Organization (IMO) and the Maritime Labor Convention (MLC).

Conclusion

The visit was very informative and well-designed. The company's commitment is evident in the enthusiasm of each employee.

The role that the company plays for the maritime industry in ensuring that the activity is carried out in a sustainable way and the concern with the human factor through the provision of a system that allows balancing the seafarer's feeding is notorious.

On the other hand, custom-designed cultivation systems promise to increase productivity and ensure proper use of the space available for cultivation.

The concern to train employees internally demonstrates the company's commitment to quality and good service to its customers.

Jorge Alfonso Gomez Prado (Nicaragua)

12-May we visited HSN-KIKAI KOGYO Co, Ltd, which is a company founded in 1929, it is specialized in manufacturing a large variety of pumps for marine use, and pioneering in agricultural technology, land technology and food industry. During this visit we learned that this company identifies its strength in the human factor, and we were able to witness that by interacting with the designated staff, and watching on-site the performance of the personnel, they were very efficient and overall professional in their work.

We first had a guided tour on the pump manufacturing facilities, where we witnessed how a variety of marine pump are manufactured, I'm familiarized with the use of pump, because of my background (I used to operate small hydraulic pumps, gear pumps and Bilge separator), thus for me the fact that I was able to witness how this equipment is manufacture was very rewarding, therefore I'm grateful for the experience. I was really impressed to see the way the company takes care of every little detail in order to be able to produce a high-quality product.

In the Bilge separator area, I was amazed with the technology used in the manufacturing of these equipment, and its efficiency, as a navy officer I'm required to have basic knowledge on the theory on how bilge separator works, but being able to witness on-site how the separation of oil is performed in order to return clean water onto the ocean, so pollution is effectively avoided, was really impressive. It was especially satisfying to see the great effort that is given to the manufacture of Bilge Alarm (Oil content monitor). It is very important to monitor the level of oil in the container in order to avoid overflow and spillage of oil inside the ship.

The insight on the hydroponic equipment for ship was satisfying, I believe it is an invaluable contribution to the maritime field the cutting-edge technology that it is developed and used in order to provide seafarers with the possibility of cultivating fresh vegetable on board, supplying the crops with fresh water directly from the ship's water generator, I was amaze with the fact that this equipment is meant to keep working even in the event of bad weather, they can do this because in the HSN-KIKAI KOGYO they simulate the movement of the ship in order to study how this movement affects the crops, however, they don't just simulate the movement of the ships, they go a little bit further by also simulating vibration and shocks. They have divided the whole cultivation process into seeding, propagation, planting and at the end harvesting of fresh vegetables. Like I stated before it is a great contribution, because there is nothing like having fresh food on board.

We also had a guided tour on the agricultural facilities of the company, where we saw and had the chance to taste the products that represent the culmination of experience that the company has accumulated over the years by contributing in the maritime field. In the agricultural field the company not only researches

but also provides advice based on the results of its researches, the company also keeps monitoring the advancement of agricultural technology in order to be able to keep its technology up to date.

I personally believe that this company is making great contributions in various fields. We learned that currently they are developing the required technology in order to be able to cultivate fresh vegetables in space (International Space Station), and possibly even further.

At the end of the visit we had the privilege to meet the Chairman of the company Mr. Kimio Tomofuji, who gave us insights of the company's work on the marine division the company aims that the ships have a safe and economical voyage, avoiding pollution of the ocean, and now with the possibility of having fresh food every day of the that voyage.

I was grateful for the overall experience of this visit, as it was very rewarding on a personal level, and again the contributions that this company is making to the world is invaluable they are providing a safe environment for seafarers and also the capacity of having fresh food, and that for every seafarer is very rewarding.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4 shi 9 kyu
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2003/ 9/25


KANDAYA


JUST DO IT

Overall Impression on Field Study Trip to Japan

Contents

Xavier Stephen Roger Perry (Antigua and Barbuda)

The 2023 WMU Sasakawa fellows had the pleasure of going to Japan from the 6-14 of May. I will start by saying that I have never experienced such warm and welcoming hospitality in my life. Even coming from an island that prides itself in tourism and customer service, it was unmatched, starting with the welcoming smile and personality of Miyo San and Emma San and then later Mr. Kudo San. We had a really packed itinerary from the start but everything was so well-planned and organized and flowed seamlessly. It was good to get a briefing on the visit on the first day so that why had a good idea of what to expect for the trip.

During our visit to Japan we had many site visits but some stood out to me more than others. The courtesy visit to the maritime bureau (MLIT), the courtesy visit to Mr. Yohei Sasakawa, Ariake Water reclamation center, Kyokuyo Shipyard Corporation, Furuno and Heishin Pump Works Co., Ltd.

It was an honor to be able to visit the Ministry of Land, Infrastructure, Transport and Tourism and be addressed by the Deputy Director General of Maritime Bureau, Mr. Yoshifumi Miyatake and the Director of Ocean Development and Environment, Mr. Akihiro Tamura. Being such a large and important ministry, I really appreciated the time they took to explain to us how the maritime and transport industry is governed in Japan.

One of the biggest highlights of the Japan visit for me was meeting the man who made all of this possible for my Sasakawa fellows and myself, Dr. Yohei. I think I can speak for the other fellows as well that we were all bursting with excitement and anticipation while waiting for him to enter the room at The Nippon Foundation. As he entered these feelings magnified into so much admiration and gratitude while he made his way to the front. As he spoke the room was filled with smiles. We all couldn't wait to introduce ourselves and take a picture with him. Words cant express how much this opportunity means to us. That memory is forever etched in my heart.

An exciting stop on the trip was the visit to Ariake Water Reclamation Center. Starting with the UFO-shaped building that we saw as soon as we came off the bus. Never did I think water and sewage treatment could be so exciting. After a very interesting and informative presentation on the processes carried out by the center, we had a complete tour of the facilities. It was very cool need I say. At some points, it felt as though we were in a video game with all of the animations and videos. It really grabbed my attention and kept me interested throughout. A nice touch was seeing the fish swim around in the water, that once was sewage, at the end of the process.

Kyokuyo Shipyard Corporation was one of my favorite site visits. As a seafarer and engineer, seeing the ships being built from scratch to being launched and getting a tour of a new build was priceless. The passion and expertise shown by both the workers and the management team was clearly visible in the work environment and the products being produced. Walking through the shipyard I kept thinking to myself it must be really nice and satisfying to work in that shipyard environment. The same goes for Heishin Pump Works Co., Ltd. I have worked on those types of pumps and separators on board vessels many times so it was nice to see them being made and the quality of workmanship that goes into producing these important pieces of equipment.

Last but not least is the visit to Furuno. Apart from being a seafarer boating is also something I do for pleasure in Antigua. Furuno is a very popular brand that I've seen and used even before studying to be an engineer so it was a good experience to see such coordination and precision in the large factory line work. That was another first for me.

Site visits and educational presentations were an integral part of the field study to expand our understanding of Japan and its maritime industry but what felt even more wholesome was the bonds we created both at and in between these visits. Invaluable networking and genuine friendships and connections that will help us as we go out into our careers in the maritime industry and will last a lifetime.

This was a once in a lifetime experience that I will never forget!

Mahmud Suleymanli (Azerbaijan)

I'm writing to express my sincere gratitude for the chance to take part in the recent field trip the Sasakawa Peace Foundation offered for WMU students. I am incredibly appreciative of your organization's commitment to developing educational opportunities for students since this great experience has been priceless to me. It was my first time in Japan, and aside from seeing a new place, this trip was a really rewarding and humbling experience for me.

Our first outing was to our orientation meeting, where every aspect of our week in Japan was discussed. This meeting was useful since it allowed us to learn about the organizations that will host us for the entire week. We also received a folder with all the trip information.

Monday 8th May

To learn more about the value of education, science, and technology for a maritime nation, Monday's activities began with a visit to the Tokyo University of Marine Science and Technology (TUMSAT). The high standard of instruction, the commitment of the instructors and staff, and the friendly atmosphere among the students all left a lasting impact.

We went to the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT) after lunch. Here, we learned about the duties this institution has in relation to the advancement of Japan as a maritime nation; on the subject of shipping and sustainability, Mr. Shohei Goto delivered a presentation about the Decarbonization of the Maritime Sector, in which he described Japan's stance on the International Maritime Organization initiative.

The most memorable part of Monday was visiting The Nippon Foundation; during this visit, we met with Dr. Yohei Sasakawa, introduced ourselves, and heard from him about his path and some kind words for us. It was a great honour for me to meet with Dr. Yohei Sasakawa face-to-face. After that, we had time to take photos with Dr. Yohei Sasakawa as an individual and group.

With a welcome reception for us, the day came to an end. The opportunity to network with ambassadors from our nations and inform them of our intentions for the maritime sectors was really good at this reception.

Tuesday 9th and Wednesday 10th May

On Tuesday, we went to the Ariake Water Reclamation Center and the Tokyo Metropolitan Government Waste Landfill Site, where we learned crucial information about Japan's efforts to promote sustainability and preserve the environment.

The next day, Wednesday, we left Tokyo and flew to Kitakyushu. Our first trip was to the Kyokuyo shipyard, where we were given a presentation of all of its work and given a tour of the design department;

Engineering department, it was amazing to watch the processes involved in building the ships. Japan is one of the leading countries in the world in the shipbuilding industry. I work in Baku Shipyard, so it was interesting for me to learn the practices which Kyokuyo Shipyard applies. One of the newly built cargo ships was being delivered to its owner when we were in the yard.

The instructors at the Nippon Survival Training Center (NSTC), which we later had the chance to visit, informed us about the survival training programs there. Finding out more about the education that sailors must obtain to earn their credentials is interesting.

Thursday 11th May

We went to Port Hakata. While observing the presentation of the port activities, we took the bus around the container downloading area. We then got the chance to take a ferry around the port.

After that, we had the option of boarding a ferry to travel around the harbour. Following the events, we travel to the Shinmoji Port for an overnight ferry to Kobe. It was a great chance to gain some further knowledge about Japan throughout our ferry ride. The Tea ceremony's procedure was generously shared with us by Miyo-san. It was an honour for me to take part in this ceremony.

Friday 12th May

We arrived at the Kobe Port early and then drove to the FURUNO Miki Factory. We first listened to a talk about FURUNO's mission and how its work advances society and business.

We took a tour of the various factories after the talk. This visit gave us a fresh perspective on the systems we employ on board; we could see how much time, work, and responsibility goes into creating each piece of machinery and system that facilitates navigation and improves marine activity.

We went to the HSN-Kikai Kogyo Co. Ltd. headquarters in the afternoon, where we were given a presentation on the company's goals and dedication to preserving the maritime environment. After taking a tour of the business, we were able to see their products, including their bilge water separator, and learn how it was made in accordance with the specifications required for marine protection. We also observed their ship-based hydroponic vegetable planter.

Saturday 13th May

On Saturday, we went on a guided tour of Kyoto, where we learned about Japanese culture and history. Visiting the Kinkaku-ji Temple, Ryoanji Temple, Heian Jingu Shrine, and Kiyomizu-Dera Temple were wonderful and fascinating for me.

I was fortunate to have the opportunity to explore a variety of maritime-related disciplines during the field study trip. The well-planned itinerary gave us a thorough comprehension of the material, and the practical exercises allowed us to thoroughly immerse ourselves in the application-based parts of our study.

This field study trip offered a chance for cultural and personal development in addition to the academic component. My horizons were expanded, and it enabled me to have a more global view as a result of interacting with local communities, seeing things from many angles, and experiencing the local culture. I'm sure that this trip's experiences and lessons will have a long-lasting effect on how I develop personally and professionally.

I'd want to express my sincere gratitude to the Sasakawa Peace Foundation once more for planning and supporting this outstanding field research trip. I'll have a lifetime's worth of memories based on the knowledge I've received, the experiences I've had, and the experiences I've lived. I am extremely proud to have been a part of this amazing trip, and I thank you for your contribution, which has significantly improved my education.

Thank you for your generosity, backing, and commitment to expanding educational possibilities. It is very amazing that you are so dedicated to empowering students like me.

Abu Md Safiul Alam Foisal (Bangladesh)

I feel the luckiest, to get the chance to be a part of Sasakawa Fellows through the scholarship awarded by The Nippon Foundation. The gratitude was enhanced by the experience of visiting Japan, getting the opportunity to know more about the society and culture and most importantly meeting beloved Dr. Yohei Sasakawa.

Meeting Dr. Sasakawa: The most precious moment of the Japan field study visit was meeting with Dr. Yohei Sasakawa. I never thought to get the chance to greet him in person even having a photo. The memory will remain cherished in my mind to be one of the most amazing and memorable moments.

Accommodation & Food: Need to emphasize the accommodation and food throughout the journey because the arrangements are just amazing and mesmerizing. All the foods were delicious and those varieties concerning all dietary conditions give a brief glimpse of how the Japanese ensure other thoughts and gives importance to everyone's requirement and choice. The accommodation was all impressive with very modern facilities. Feeling very satisfied throughout the journey for these arrangements.

Transportation: Another notable part of the trip was the arrangement of different sorts of transportation systems in a well-prepared and concise plan. We traveled by buses, trains, and planes even through e ferry. The interesting part was traveling on the bullet train (shinkansen). Well maintained and clean environment in all the transport reminds me of the tidiness of the Japanese.

Site visit: The sites we visited throughout the journey were very informative and a hub of knowledge. We visited different types of institutions, organizations, and facilities for a different mixture of purposes.

Educational Institutions: Visit to the Tokyo University of Marine Science and Technology enables us to gather knowledge on different sorts of marine and biodiversity technology. The fish culture and the tunnel for model testing showed the outstanding research facilities of the University. The Japanese culture of octopus and research on octopus cultivation makes understanding how to proceed with any research work and based on community requirements how to solve problems efficiently and sustainably. The Nippon survival training center is another training institute we visited during the trip. It demonstrated the operation of lifeboats and amazingly we met the record-holding female trainer. To meet the current requirement of off-shore wind turbine technicians, the survival and diving training facility showed how to cope with current requirements and ensure safety for all sorts of critical works.

Municipal & Government Facilities: MLIT shows how the ministry works in Japan and how they incorporated all the mediums of transport under the ministry. We had the chance to know their contribution in IMO and their constructive proposals for the betterment of the maritime industry. The water reclamation center showed how a system design can solve a vital problem and conserve our precious water. The step-by-step procedure of taking every little point into account is amazing. Interestingly the final clean water was tested through fishes and it was nice to see small fishes moving on the treated water. The waste landfill site showed to protect the environment through proper sorting of waste and converting waste into resources. Another interesting site was the Kanmon Kaikyo VTS. The control mechanism was amazing for a narrow very busy and important passage. Finally, the Port of Hakata exhibits the governance of the municipality. Their ambition and contribution to the economy, trade, and transport are well designed and observed the planned development towards their aim.

Manufacturing Sites: We visited several manufacturing sites. All the maritime stakeholder knows the name of Furuno because of VHF which is one the most important part of ship communication and navigation. The visit enables us to understand their process, preciseness, and care for the equipment to serve the safety of the vessel. The fish finder technology also demonstrated innovation for fishing. The shipyard has some uniqueness in its design and exhibits the distinct capability of Japan in shipbuilding. HSN-Kikai was the most interesting manufacturing site. The bilge separator, 15-ppm monitor, the onboard hydroponics equipment, and the farming sites all are very important and innovative equipment for vessels. The onboard hydroponics will enable ships to enjoy fresh vegetables by cultivating them on the ship. Hydroponic farming shows how to utilize limited resources efficiently and serve the nation with proper nutritious food.

Monumental and Sightseeing: The sightseeing day was amazing. The historical structures enhance our knowledge regarding culture and society and the transformation. The architecture of all the places was very influential.

The Japan field trip was one of a kind. It was well-planned, very well-organized, and considered every little detail to be a memorable one. I am feeling proud to be a part of the magnificent trip.

Suraya Yeasmin Jui (Bangladesh)

Site Visit:

During my recent various maritime-related site visit in Japan, I had the privilege of exploring various institutions and sites related to marine science, technology, and maritime affairs. One of the highlights was the Tokyo University of Marine Science and Technology (TUMST). Located in the heart of the city, TUMSAT impressed me with its cutting-edge facilities and commitment to excellence in marine education and research. The university's faculty members were not only highly knowledgeable but also passionate about their respective fields, making the learning experience truly engaging.

Next, I had the opportunity to visit The Nippon Foundation, a renowned organization dedicated to maritime research, education, and philanthropy. The Foundation's commitment to oceanic conservation and sustainable practices was evident through their various initiatives aimed at protecting marine ecosystems and promoting maritime safety.

Another notable visit was to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), where I gained insights into the government's policies and strategies concerning marine transportation, infrastructure development, and coastal management. It was fascinating to witness the collaborative efforts between the ministry and other stakeholders to ensure the efficient and safe functioning of Japan's maritime sector.

Furthermore, I visited the Tokyo Metropolitan Government Waste Landfill Site, which showcased the city's commitment to waste management and environmental sustainability. The site's innovative approaches, including recycling and waste-to-energy conversion, demonstrated Tokyo's dedication to reducing its ecological footprint.

My exploration continued with a visit to the Ariake Water Reclamation Center, a state-of-the-art facility responsible for treating and reusing wastewater. This center's advanced technologies and efficient processes highlighted Japan's efforts to ensure water resource management and reduce environmental impact.

Additionally, I had the privilege of touring the Kyokuyo Shipyard, witnessing firsthand the meticulous craftsmanship involved in building and maintaining maritime vessels. The shipyard's expertise and attention to detail were truly impressive, contributing to Japan's reputation as a leader in shipbuilding.

Another remarkable experience was at the Nippon Survival Training Center, where I learned about safety protocols and survival skills necessary for individuals working in maritime industries. The center's realistic simulations and comprehensive training programs were crucial in preparing personnel for emergencies and ensuring their well-being at sea.

Visiting the Kanmon Kaikyo Vessel Traffic Service Center offered a glimpse into Japan's bustling maritime trade and its dedication to efficient vessel traffic management. These sites showcased the nation's commitment to safety, navigation, and coordination in busy waterways.

Lastly, I had the opportunity to visit Furuno Electric Company, a renowned manufacturer of marine electronics. Their state-of-the-art navigation and communication systems played a pivotal role in ensuring maritime safety and efficiency. The company's commitment to innovation and quality was evident in the cutting-edge technologies on display.

My journey concluded with a visit to HSN-Kikai Kogyo/Heishin Pump Works, a leading manufacturer of pumps and equipment for marine applications. Their expertise in providing reliable and efficient solutions for various marine industries was commendable, contributing to the smooth operation of vessels and offshore structures.

Overall, my visit to these institutions and sites related to marine science, technology, and maritime affairs in Japan was enriching and eye-opening. The dedication, innovation, and collaboration displayed by these organizations reaffirmed Japan's position as a global leader in the maritime sector.

Food:

Thanks to the thoughtful arrangement by The Nippon Foundation, my week-long Japan study field trip became an extraordinary journey into the world of culinary delicacies. From the very first bite, I was captivated by the intricate flavors and impeccable presentation that exemplify Japanese cuisine. Each day brought new discoveries and culinary adventures as we explored renowned restaurants, traditional markets, and participated in hands-on cooking classes. Whether savoring the delicate slices of sashimi, ancient tea ceremony with its graceful precision, every moment was a testament to the depth of Japan's gastronomic heritage. The Nippon Foundation's commitment to providing a comprehensive and immersive culinary experience allowed us to develop a profound understanding of the delicacy and cultural significance of Japan's cuisine, enriching our overall study tour of the country and leaving us with memories that will last a lifetime.

Accommodation:

Throughout my week-long Japan study field trip, The Nippon Foundation ensured that our accommodation facilities were not only comfortable but also infused with a warm and inviting atmosphere. From the moment we arrived, we were greeted with exceptional hospitality and attention to detail. The carefully selected accommodations provided a cozy haven after long days of exploration and learning. Each room was thoughtfully designed to showcase elements of Japanese aesthetics, offering a serene retreat where we could relax and rejuvenate. The seamless fusion of modern amenities and traditional charm allowed us to experience the best of both worlds. The Nippon Foundation's meticulous planning ensured that our accommodations were conveniently located near the study sites, enabling us to make the most of our time in Japan. The cozy accommodation facilities arranged by The Nippon Foundation played an integral role in creating a truly immersive and memorable study experience.

Rathanakvuth Sourm (Cambodia)

It is great opportunity, that World Maritime University (WMU) arrange the field study for students to visit which is important part of WMU's Master of Science (MSc) in Maritime Affair Program as they give the course's practical example, which helps the students have a deeper grasp of the marine sector.

As a student coming from developing country. Fortunately, by that time there is no restriction because of the COVID-19, which would be able for the students to have a chance to have a field trip. Moreover, it was a great opportunity for me and other international student to have a field study on maritime industry in Japan. In my point of view, Japan is a really developed country especially in technology. Hence, the maritime industry in Japan is also advanced. In maritime sector, Japan is dedicated to marine challenges and has strong technological skills. During the field study, I had a chance to visit the Ministry of Land, Infrastructure, Transportation and Tourism in Tokyo. In addition, the program also allows the student to visit other parts of Japan which are Kobe, Hakata. Sasakawa Fellow Student also obtains a chance to meet with other people who are working in maritime industry in order to exchange some experiences as well.

Japan is also considering on the environmental issue and need be sustainable in the used of land as well. Then, we got the chance to visit the Tokyo Metropolitan Government Waste Landfill, a crucial element of the country's dedication to environmental management, as part of our tour of Japan's offshore facilities. The landfill was a location where we could observe Japan's cutting-edge waste management techniques and dedication to achieving a sustainable future. Furthermore, we got the chance to directly see the outstanding accomplishments and steadfast devotion of the individuals working at these facilities during our travels to many marine sites around Japan. Additionally, we saw waste management techniques that are problematic all over the world and were reminded of the complexity and significance of sustainable waste disposal on a worldwide level. Landfilling is regarded as a typical waste management method. Since, Waste production has significantly increased because of urbanization and rapid population development. Moreover, It is a well planned infrastructure and It necessitates a little amount of space, potential environmental hazards, and long-term monitoring and maintenance. The facility presented us with a complete waste management plan that included trash reduction, recycling, and the utilization of renewable energy.

As we know, Japan is also had a strong economic in international trade as well. Port of Hakata is playing a crucial role in maritime in Fukuoka prefecture. Since Fukuoka is an Innovative city, academic, smart, advanced, are some adjectives that describe Fukuoka. With eyes focused on the future, the city takes

leadership in both industry and academia as a model city. The Port of Hakata is surrounded by many the industries area with good transportation connectivity. Since, the city has a good access to the port, port of Hakata also has cruise terminal which provided the compactness enables for tourism in Japan as well.

Last but not least, as a Sasakawa fellowship student, We would like to thank Chairman Sasakawa and the Sasakawa Peace Foundation for providing us with such an invaluable opportunity. In addition, we have studied a lot from this field study trip which is related to maritime field and getting to know other industries as well. Fortunately, we also have a chance to visit many different places in Japan as well which is really for us to know more about Japanese Culture.

Daniela Jimena Andrade Tamayo (Ecuador)

From May 6th – 14th, 2023, the WMU Sasakawa fellowship students had the opportunity of visiting Japan. This trip happened for the first time after the 2019 pandemic interrupted these field trips. I am very grateful and honored with this opportunity; it was my first time in Japan, and besides visiting a new country, this trip was an enriching experience.

On May 6th, we had a long flight to Tokyo; the excitement about the trip kept me awake for almost 13 hours. I could not leave out that we could meet Risa and Raika at the airport, our classmate Daiki Maeno's wife and daughter. At our arrival, Miyo-san and Emi-san welcomed us warmly; the feeling was nearly the same as when you came home after a while away. They also received us like family; I had a few minutes in Japan and already was feeling why the Sasakawa fellows bond goes beyond a professional network.

Our first activity was lunch, which happened in a buffet place. I have nothing but great things to say about Japanese cuisine; I immensely enjoyed this meal and any other during the week. After that, we went to our orientation meeting; in this meeting, every detail regarding our week in Japan was shared. This meeting was beneficial since we could learn a little about the institutions which will welcome us throughout the week, and we also got a folder containing every detail for the trip; these materials added up to the information that Emi-san already sent built the framework for our visit.

Later in the evening, I had dinner with some classmates at Warayakiya Shinagawa restaurant; I tried seafood I had not eaten before, like whale and eel, and enjoyed it.

Monday, May 8th

Monday activities started by visiting the Tokyo University of Marine Science and Technology (TUMSAT); this was an opportunity to understand more about the importance of education, science, and technology for a maritime nation. The quality of education, dedication of the faculty and staff, and welcoming community of students all made a lasting impression.

After lunch, we visited the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT). Here we learned about the responsibilities of this Institution with the development of Japan as a maritime nation; on the topic of shipping and sustainability, Mr. Shohei Goto gave a presentation about the Decarbonization of the Maritime Sector, in which he explained the approach of Japan to the International Maritime Organization initiative.

Also, there was a presentation about the Japan Coast Guard. I am part of the Coast Guard in Ecuador; it was fascinating to learn about the Institution and compare it with my organization. The main difference is that the Ecuadorian Coast Guard is under the Command of the Ecuadorian Navy (Ministry of Defense).

The highlight of Monday was visiting The Nippon Foundation; during this visit, we met with Dr. Yohei Sasakawa, introduced ourselves, and heard from him about his path and some kind words for us. Before going to Japan, we knew that we would most likely not have time for individual photos with Dr. Sasakawa due to his limited time; however, he offered to take a picture with each of us. I cherish this opportunity since Prof. Max Mejia joined in the picture too, and back in 2012, he was the person who introduced the World Maritime University (WMU) to me when teaching at the US Coast Guard Academy.

The day concluded with a Welcome Reception for us. This reception was an excellent opportunity to network with diplomats from our countries and let them know our plans within our Maritime sectors.

Tuesday, May 9th

On Tuesday, we visited the Tokyo Metropolitan Government Waste Landfill Site and the Ariake Water Reclamation Center; in both places, we received important information regarding Japan's work to ensure sustainability and contribute to environmental protection. Processing waste, recycling, and water treatment are not something that Ecuador puts its effort into; from these visits, I could comprehend the importance of such procedures for the future of the country.

During the evening, most of the group went to Asakusa to enjoy some Tokyo spots and delicious food.

Wednesday, May 10th

Wednesday started early; we left Tokyo and flew to Kitakyushu. This flight was short and pleasant. Some of us had the opportunity to see Mt. Fuji while flying.

Our first stop was Kyokuyo shipyard, where we had a presentation of all its work and a tour through the design department; it was fascinating seeing the scenes behind the ships' construction. When we were in the yard, one newly constructed cargo ship was delivered to its new owner; we had the opportunity to bid farewell to this ship, singing our iconic WMU song.

Later, we had the opportunity to visit the Nippon Survival Training Center (NSTC), where the instructors shared information regarding survival training courses with us. It is interesting to learn more about the training seafarers need to complete to get their qualifications. I am currently an auditor of the International Safety Management Code; among other things, I verify the training completed by seafarers. Then, seeing how this activity is conducted was interesting.

During this evening, we tried Fugu. We enjoyed "hot pot" and sashimi accompanied by sake; our Japanese classmates guided us during this experience.

Thursday, May 11th

We checked out from our hotel early on Thursday and went to the Port of Hakata. We rode the bus around the container downloading area while listening to the presentation of the port activities. Afterward, we had the opportunity to board a ferry around the port. At the beginning of the day, I thought

that more than the bus ride around the port was needed to appreciate the area and its activities; however, after the ferry ride, I could verify how big and important this port is.

After lunch, we visited the Kanmon Kaikyo Vessel Traffic Center, in where we learned a little about the Japan Coast Guard roles and the Japanese Vessel Traffic Service. This activity was also relatable to my job. Also, I did my Coast Guard training with the United States Coast Guard; therefore, my previous knowledge helped me to understand the role of the Kanmon Kaikyo Vessel Traffic Center and to contrast the work of Ecuador, the United States, and Japan Coast Guards in the role of Safety to Navigation.

At the end of the activities, we drive to the Shinmoji Port and enjoy an overnight ferry ride to Kobe. This ferry ride was an excellent opportunity to learn a bit more about Japanese culture. Miyo-san was kind to share with us the procedure of the Tea ceremony. I felt honored to be part of this ceremony.

Friday, May 12th

We arrived early at the Kobe Port and drove to the FURUNO Miki Factory. First, we received a lecture on the vision of FURUNO and how its work contributes to the development of society and industry.

Following the lecture, we had a tour of the different factories. This tour was also an opportunity to have a new perspective on the systems we use on board; we were able to observe how much time, effort, and responsibility takes to build each of the equipment and systems that aid navigation and enhance maritime activities.

During the afternoon, we visited the HSN-Kikai Kogyo Co. Ltd. headquarters; there, we received a lecture on the company's mission and its commitment to protecting the marine environment. After we went on a tour of the company, among their products, we could observe their Bilge Water Separator and understand how they built it up in compliance with the standards needed for marine protection. Also, we watched their hydroponic vegetable grower for ships.

The tour concluded with a visit to the HSN Farm, in which we observed the greenhouses and cultivation benches. We learned about an ongoing project seeking to bring this cultivation system to the space station and tried some fresh vegetables cultivated on the farm.

I want to point out the effort and kindness of the HNS group; they prepared their speeches in English and ensured we got the best out of the visit.

The day concluded with our trip to Kyoto on board the bullet train. With this experience, we have tried all means of transportation in Japan.

Saturday, May 13th

Saturday activities involved a guided tour of Kyoto; we could learn about Japanese culture and history during this tour. It was a great morning and afternoon visiting the Kinkaku – ji Temple, the Ryoanji Temple, the Heian Jingu Shrine, and the Kiyomizu-Dera Temple. A couple of days before the tour, we asked Miyo-san about dressing in traditional Japanese clothes, and she helped us to find a place.

Before Saturday, we learned about the Kimonos and the meaning of each piece of clothing to get the best out of the experience. Indeed, this day's highlight was visiting the temple in traditional clothes and enjoying this experience with classmates and other tourists.
We finished our activities with a small get-together in which we could share with Emi, Miyo, and Kudo-san our experiences during the week.

Sunday, May 14th

Early on Sunday we give our farewells to the beautiful Japan and came back to Sweden filled with memories and experiences that will enhance our personal and professional paths.

Every activity planned reflected effort, commitment, and a great sense of responsibility. I could not thank the Sasakawa Peace Foundation enough for this experience; and each person who put in their time and will to make us feel like the family we are.
As mentioned during the wrap-up meeting, each of the fellows has a different background; it is difficult to make a program that suits everybody. However, we must take each opportunity and get the best out of the experience. The Japan Field Study Trip 2023 made me realize that development is a matter of determination and will, to responsibly work toward your goals, manage your time and resources well and, most importantly, believe in your capabilities. Also, it tied the bonds among the fellows giving us the sense of a big family.

Ahmed Mohamed Ismail Mohamed Ismail (Egypt)

The SASAKAWA field trip, from 6th May to 14th May, gave me an extraordinary and unforgettable experience. As I am a sea captain who has explored numerous countries, including Japan, this visit held the promise of something unique. Little did I know that this time would offer me a deeper understanding of Japanese culture and an opportunity to connect with its people in a way I had never experienced before.

Arrival Day:

Our journey began with a long flight from Copenhagen to Tokyo Airport, a comfortable and pleasant experience. Upon arrival, we were greeted by the courteous and efficient airport staff, who ensured a smooth and seamless transition through the necessary formalities. It was a promising start to our adventure in Japan. Awaiting us at the airport were Miyo-san and Emi-san, who warmly welcomed us as representatives of the Sasakawa family, our gracious hosts for our trip. Their presence immediately conveyed the spirit of hospitality deeply ingrained in Japanese culture. Accompanied by our guides, we boarded the bus, eager to explore.

Our first stop was a delightful Japanese Hotel restaurant, where we savoured an authentic and flavoursome meal. The carefully prepared open buffet dishes tantalised our taste buds and introduced us to the rich culinary traditions of Japan. It was a true feast for our senses, setting the tone for the gastronomic delights that awaited us throughout our stay.

Next, we went to the TKP GINZA business centre, where an informative orientation awaited us. This session proved invaluable as it provided us with a comprehensive overview of our itinerary, enabling us to familiarise ourselves with the details of our upcoming adventures. Following the orientation, we proceeded to the hotel for check-in, allowing us to settle in and recover from the effects of jet lag induced by the long flight. The comfortable accommodations provided a much-needed respite, allowing us to recharge ourselves for the exciting days ahead.

1st Day (8th May)

Our day commenced at 9:00 as we departed from the hotel and went to the Tokyo University of Marine Science and Technology (TUMSAT). This visit proved to be a remarkable opportunity to delve deeper into the vital role of education, science, and technology in shaping a maritime nation like Japan. The insights gained during our time at TUMSAT were enlightening, emphasizing these fields' significance in advancing maritime knowledge and innovation.

After a productive morning, we indulged in a satisfying lunch that replenished our energy for the afternoon's activities. Our next destination was the Ministry of Land, Infrastructure, Transport, and

Tourism (MLIT). I was particularly thrilled to discover their involvement in a green shipping corridor initiative with the Australian government—an area of research that aligns closely with my dissertation. The knowledge and expertise shared by the MLIT representatives during our engaging discussions provided invaluable insights and significantly enriched my understanding of this vital topic.

Continuing our journey, we had the incredible privilege of visiting The Nippon Foundation, where we were fortunate enough to meet Mr. Yohei Sasakawa himself. His speech was truly inspiring, and his warmth and kindness were evident as he graciously posed for a photograph with us. The encounter left an unforgettable impression, further solidifying our admiration for Mr. Sasakawa's contributions and commitment to positive change. The welcome reception was an excellent platform for networking and connecting with esteemed individuals from various fields. It was a day filled with enriching experiences and promising opportunities for further exploration.

2nd Day (9th May)

On our second day, we commenced at 8:30 as we visited the Tokyo Metropolitan Government landfill site. This eye-opening experience provided valuable insights into waste management practices and the efforts undertaken by the Tokyo Metropolitan Government to address environmental concerns. Witnessing the scale and efficiency of the landfill operations underscored the importance of sustainable waste management for a densely populated metropolis like Tokyo.

Following the enlightening visit, we sat down for a satisfying lunch, And then we proceeded to the Ariake Water Reclamation Centre. The knowledge shared during our time at the centre was incredibly enriching. We delved into the intricate processes involved in water reclamation. We gained a deeper understanding of the innovative technologies and practices employed to ensure the preservation and purification of this vital resource.

3rd Day (10th May)

On our third day, we commenced with an early start at 6:00 as we embarked on a short flight from Haneda Airport to Kitakyushu Airport. The anticipation of the day's activities filled the air as we arrived at our destination.

Upon reaching Kitakyushu, we made our way to the Kyokuyo shipyard. To our delight, a pleasant surprise awaited us as we witnessed the handover of a new ship to its owner. The culmination of this event was made even more special as we were invited for an exclusive tour of the vessel. Exploring the intricacies of the ship and witnessing its features. As the ship set sail, we bid it farewell, filled with well-wishes for its safe voyages.

Continuing our day, we had the privilege of visiting the Nippon Survival Training Centre (NSTS). This facility provided a fascinating insight into the training programs conducted for seafarers and those working in the oil and gas and wind turbine industries.

4th Day (11th May)

On our fourth day, we commenced at 8:30 as we departed from the hotel and made our way to the Port of Hakata. The day's highlight was a fascinating boat tour that allowed us to explore the bustling port from a unique perspective. Cruising through the harbour, we marvelled at the impressive array of ships and witnessed the intricate logistics of managing a busy maritime hub.

Following the invigorating boat tour, we gathered to enjoy a delightful lunch, refuelling our energy for the remaining activities of the day.

Our next destination was the Kanmon Kaikyo Vessel Traffic Service Centre. Here, we saw the complex operations of controlling and monitoring the Kanmon Strait, a vital waterway connecting the Sea of Japan and the Seto Inland Sea. Witnessing the technologies and the meticulous coordination employed by the personnel left us with a deep appreciation for the crucial role of such traffic service centres in ensuring the safety and efficiency of maritime navigation.

As the day drew close, we embarked on a unique and memorable experience by spending the night on the Hankyu Ferry. This overnight stay aboard the ferry allowed us to immerse ourselves in the maritime environment.

5th Day (12th May)

Our day commenced with an early morning arrival at Kobe Port at 7:10. Following a satisfying breakfast, and we made our way to Furuno Electric Co., Ltd. This visit proved to be an enlightening experience as we delved into the company's rich history, explored its various product divisions, and gained a deeper understanding of its manufacturing processes and quality testing procedures. The insights provided by Furuno Electric Co., Ltd. shed light on the cutting-edge technologies and innovative solutions driving advancements in the maritime industry.

After a fulfilling morning, we gathered for a well-deserved lunch. After that our next stop was HSN-KIKAI KOGYO Co., Ltd., where we were immersed in another remarkable experience. The visit to HSN-KIKAI KOGYO Co., Ltd. allowed us to witness their expertise in manufacturing and gain insights into their contributions to the maritime sector. The encounter left us with a deep appreciation for the intricate processes and engineering excellence of producing maritime machinery.

As the day progressed, we went to the train station and embarked on a thrilling journey aboard the bullet train to Kyoto Station. The high-speed train ride offered us a quick and efficient mode of transportation and a unique experience, showcasing Japan's renowned advancements in railway technology.

Upon reaching Kyoto, we settled into our hotel, ready to rest and recharge for the exciting adventures in this historically and culturally rich city.

6th Day (13th May)

The sixth day of our field study in Japan was dedicated to exploring the beautiful tourist attractions of Kyoto City. Our itinerary took us to several remarkable destinations, allowing us to immerse ourselves in this enchanting city's rich cultural and historical heritage.

Our first stop was the awe-inspiring Kinkaku-ji Temple, the Golden Pavilion. The glistening golden structure against the backdrop of a serene pond and meticulously maintained gardens left us in awe of its beauty and architectural grandeur.

Next, we visited the tranquil Ryoanji Temple, famous for its Zen rock garden. The simplicity and serenity of the rock garden, adorned with carefully placed rocks and raked gravel, provided a meditative atmosphere, inviting introspection and contemplation.

Continuing our journey, we arrived at the Heian Jingu Shrine, a grand Shinto shrine known for its vibrant colours and stunning architecture. The vast grounds and beautiful gardens surrounding the shrine created a peaceful ambience, allowing us to appreciate this sacred place's spiritual significance and cultural heritage.

Our next destination was the iconic Kiyomizu-Dera Temple, renowned for its wooden terrace overlooking the city of Kyoto. The panoramic views from the terrace and the intricate craftsmanship of the temple's structure left a lasting impression, offering a glimpse into Japan's rich history and spiritual traditions.After a day filled with exploration and cultural immersion, we returned to our hotel to prepare our belongings and reflect on our remarkable experiences throughout our field study. The wrap-up meeting allowed us to discuss and share our thoughts, insights, and memorable moments from the trip, fostering a sense of camaraderie and appreciation for our journey together.

Departure Day (14th May)

On the final day of our field trip in Japan, we bid farewell to the beautiful country that had provided us with countless enriching experiences and memories. We departed from our hotel with nostalgia and gratitude and went to Kansai International Airport.

As we embarked on our journey back to Copenhagen, we carried the special memories of our time in Japan. The diverse cultural encounters, insightful visits to maritime institutions, and exploring renowned tourist attractions left an indelible mark on our hearts and minds.

Words cannot adequately express our gratitude to the SASAKAWA family for organizing and hosting this remarkable trip. Their generosity, support, and commitment to promoting cultural exchange and maritime education made this experience unforgettable. We are immensely grateful for the opportunities provided and the knowledge gained throughout our time in Japan.

In conclusion, the SASAKAWA field study in Japan has been an extraordinary journey. We extend our heartfelt appreciation to the SASAKAWA family and everyone involved in making this trip successful. The memories and lessons learned will forever remain etched in our minds, constantly reminding us of the transformative power of cultural exploration and educational exchange.

Adama Jatta (The Gambia)

PURPOSE OF THE TRIP

The organization of the Japan field study for the WMU class of 2023 Sasakawa fellows was as follows;

- ✓ To get the fellows well acquainted with one and another during their one week stay in Japan. This was to be achieved through networking opportunities provided within the students and also between the students and professionals in the industry
- ✓ To assist the students in understanding the maritime system of Japan, thereby getting an idea of how Japan as a country was able to acquire development, and contributions made by the maritime industry in the development process

In addition to the purposes above, we were privileged to meet our benefactor, Dr Yohei Sasakawa, in person.

WELCOME TO JAPAN

We finally arrived in Japan at some minutes after 15 hours. We were welcomed at the airport by Miyo-San and Emi-San.

DR YOHEI SASAKAWA

We paid a one-hour courtesy visit to chairman Dr Sasakawa. on the 7th of May at The Nippon foundation headquarters whilst in Tokyo. The two representatives of the university, president-elect Professor Max Meija and Assistant university registrar, Lyndell Lundahl, thanked the chairman on behalf of the university as well as extending greetings from the current President Dr Cleopatra Doumbia Henry. Fellows were given the opportunity to introduce themselves, this was done according to countries in alphabetical order, based on our names, country and to also mention the significance of the fellowship to ourselves and to our countries. This was followed by a welcoming speech by the Chairman who was very delighted to have met us finally. He made mention of the fact that based on our countries of origin, he realized that he had not visited some of the countries the fellows are from. He further promised to visit these countries which the fellows are always informed when the chairman is visiting a country where his fellow comes from.

Meeting Chairman Yohei Sasakawa was a new year resolution I made after witnessing the virtual meeting he had with the Sasakawa fellows of the class of 2022.

FIELD STUDY VISITS

- ✓ Tokyo University of Marine Science and Technology
- ✓ Maritime bureau MLIT

- ✓ Tokyo metropolitan government waste landfill site
- ✓ Ariake water reclamation site
- ✓ Kyokuo Shipyard cooperation
- ✓ Nippon survival training center
- ✓ Port of Hakata
- ✓ Kanmon kaikyo vessel traffic service center
- ✓ Furuno
- ✓ HSN-KIKAI KOGYO Co ltd

JAPAN AND IT'S PEOPLE

One thing I have learnt from the people of Japan is their respect for time. Time is very essential in their everyday lives and this spreads through out to public services like the buses, trains, public sanitation places and even supermarkets and the rest. Popularly said to be living in the future, Japan will continue to be a country of amazing technological advancement as they regularly come up with significant and sustainable innovations and research. This could be seen in places like the Ariake water reclamation center where water is being recycled from various significant sources, like the port of Hakata which is well equipped with the right and modern. The 100 meters long giraffe gantry cane was something which shows that in all that the country puts in place for work and development, it also takes into consideration it's surrounding environment. Having a crane painted into the giraffe colors for the entertainment of the children lying in their beds in the children's hospital which is just close to the port is something worth emulating.

The people of Japan are one of friendly and welcoming people around the world. We have been welcomed with all smiles and love since our arrival at the arrivals. I personally had a cough when I was coming to Japan, a night before our flight, and there has been nothing but support from the guides provided to us and from the staff and people we met the sites we visited. Throughout our stay in Japan, we were able to visit some towns, with the guidance of two of our Japanese colleagues, one thing which was remarkable was the Japanese willingness and excitement in providing assistance to us or other visitors in Japan, even though most of them did not understand English. We were amazed that some were even willing to go as far a using translators, just to communicate with us in the bid to provide us some assistance.

The one-week field study in Japan will forever remain a cherish able and valuable experience which, myself and my colleagues, will never forget for the rest of our lives.

Teona Khabeishvili (Georgia)

I am writing to express my deepest gratitude for the opportunity to participate in the recent field study trip organized by the Sasakawa Peace Foundation for the students of WMU. This incredible experience has been invaluable to me, and I am immensely grateful for your organization's dedication to fostering educational opportunities for students.

During the field study trip, I had the privilege of exploring various aspects of maritime connected fields. The carefully crafted itinerary provided us with a comprehensive understanding of the subject matter, and the hands-on experiences allowed us to truly immerse ourselves in the practical aspects of our studies. This trip has undoubtedly expanded my knowledge and has given me a deeper appreciation for the subject.

Presentations provided on sites, were informative and presenters were well prepared. I took a lot from them, took notes and I will try to implement best practices in my country.

Furthermore, the expertise and guidance provided by the professionals and experts who accompanied us on the trip were exceptional. Their enthusiasm, willingness to share their knowledge, and commitment to our learning were truly inspiring. They went above and beyond to ensure that we gained the most out of this experience, and I am incredibly grateful for their support and mentorship.

Beyond the academic aspect, this field study trip also provided an opportunity for personal growth and cultural enrichment. Interacting with local communities, witnessing different perspectives, and immersing ourselves in the local culture broadened my horizons and helped me develop a more global mindset. I am confident that the experiences and insights gained during this trip will have a lasting impact on my personal and professional development.

I would also like to acknowledge the generosity of the Sasakawa Peace Foundation for providing us with the necessary resources to make this trip possible. The financial support, logistics, and overall organization of the trip were seamless, allowing us to focus on our studies and make the most of this unique opportunity. Your dedication to supporting education and facilitating experiential learning is commendable, and I am grateful for your commitment to the growth and development of students.
Once again, I extend my heartfelt gratitude to the Sasakawa Peace Foundation for organizing and sponsoring this remarkable field study trip. The knowledge gained, the experiences lived, and the

memories created will undoubtedly stay with me for a lifetime. Your contribution has made a significant difference in my education, and I am truly honored to have been a part of this enriching journey.

Thank you for your generosity, support, and dedication to advancing educational opportunities. Your commitment to empowering students like me is truly admirable.
Sincerely,

Salahudeen Abdallah Mustapha (Ghana)

Introduction

On the 6th of May 2023, a group of Sasakawa fellows embark on a memorable and exclusive field trip to Japan which I was fortunate and happy to be part of the 2023 Sasakawa fellows' family. It was an 8 days trip of memories and great exposure with information and understanding of the people of Japan with their rich culture and technological advancement.

The journey from Malmo through Copenhagen airport and landed at Narita airport in Japan with a transit at Amsterdam was a very long flight but the visits to different government and private institutions as well as some agencies and tourist sites made us almost forgot the stress of the travel and the first day jet lagged.

Places and sites visited.

- Day 1. Arrival and orientation
- Day 2. **Morning-** Tokyo University of Marine Science and Technology **Afternoon-** ministry of Land Infrastructure Transport and Tourism (MLIT) **and** Visit to The Nippon Foundation
- Day 3. **Morning-** Tokyo metropolitan government waste landfill site **Afternoon-** Ariake water reclamation centre
- Day 4**. Morning-** Port of Hakata **Afternoon-** Kanmon Kaikyo vessels traffic service centre
- Day 5**. Morning-** Furuno Electric Co., LTD **Afternoon-** HSN - KIKAI KOGYO
- Day 6. Sites seeing

The visit to The Nippon foundation to meet Dr. Yohei Sasakawa was one of my best moments in the field trip, we had a good reception and after a formal introduction of the fellows by our names and country of origin, we all had the chance to say the specialization we are majoring in and what we will be doing and what how will it benefit our country. The most interesting part is also getting to have an individual pictures with Dr. Sasakawa after the group one.

Tokyo University of Marine Science and Technology was established on 1st October 2003 with two campuses in Shinagawa and Etchujima. The university have three majors which are, School of marine science, School Marine resources and environment and School Marine technology.

We were taken to the fishing gear or net laboratory and to the transgenic room laboratory where they nurse and hatch some species like Rainbow trout (salmon), Japanese flounder (flat fish) and Shrimps.

At the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), we had lectures on maritime policy on decarbonization of internal shipping and Japan coast guard overview.

We were told how they reclaim land from the ocean where they turn to landfill to reclaim the land. They no longer use garbage or rubbish to do landfill because of advance technology. They garbage gathered from 23 wards of Tokyo are separated into three categories Combustible, Incombustible, Large size garbage before crushed into pieces and sands to for the landfilling.

Ariake water reclamation centre is a water treatment separate sewage system built in Tokyo. Operation started in 1995 and currently have a treatment capacity of 30,000m3/day. The process goes through several process Grit chamber, Primary sediments tank, Reaction tank and Secondary sediment tank to have a complete reclaim water to pump back to the main water body for the survival of the marine species.

We had a chance at Kyokuyo shipyard corporation to witness and be part of a farewell of a newly built ship and a chance to have tour in the ship. The company was established in 1942 as Hikoshima shipbuilding company and later five local companies came together to form the Kyokuyo shipyard corporation in 1961.

We paid a visit to the Nippon Survival Training centre which was established in 2011 and the aim is to train to protecting the lives of people working at sea. They have marine training facility and firefighting training facility.

Port of Hakata Port policy are into 4 categories
1.Strengthening international competitiveness and supply chain resilience (function of ICHs international container hubs)
2.Realizing carbon neutrality and marine environment
3.Ensure safety and security of the policy
4.strengthening competitiveness of key industries in the region and creating a vibrant atmosphere
In 2022 the volume of international marine containers was 888 TEU and rank 6 best in Asia.
The port is winning at reducing GHG emissions by 50% by 2030 and zero emissions by 2040. We had a chance for an hour cruising in boat for a nice experience on the water.

We had the opportunity to visit some exiting sites for sightseeing which are the Golden Pavilion, Ryoan-ji Temple, Heian Jingu shrine and Kiyomizu-dera Temple.

The trip was a very educative and successful but with little recommendation, I would like to appeal to the organizers to allow the fellows rest on the first day after a long flight with heavy jet lag, I suggest orientation should be on the next day.

Finally, I would like to thank Dr. Yohei Sasakawa and the supporting staff for organizing this trip and making it possible for us to attend the field trip. And not forgetting the welcome reception with lot of dignities and lot to eat and drink.

Rahul Lodhi (India)

Sasakawa Fellows of 2023-batch of the World Maritime University visited Japan from 6 – 14 May 2023 as part of the Sasakawa Fellowship programme. During the visit many activities and site visits very planned for the group to familiarize the group with the Japanese Culture and Maritime industry of the country. Also, as part of the visit, a cultural tour of the city of Kyoto was also organized on 13 May 2023. Various agencies such as MLIT, KANMON KAIKYO Vessel Traffic Service Center, Nippon Survival Training Center (NSTC), Ariake Water Reclamation Center, Courtesy Visit on The Nippon Foundation and many more were visited and interactions were held with the officials present. The wide array of aspects that were touched during the short visit of one week was outstanding and this provided a glimpse into the might and strength of Japanese Maritime sector and society. The methodical approach and precision with which such a major trip for 32 personnel were organized and executed stands testimony to the dedication and an eye for details to the people behind the scenes.

At the outset let me convey my heartfelt gratitude to Dr. Sasakawa for making this enriching field trip a reality. The first and foremost thing which you realize after sending few hours in Japan is that, the hospitality and culture of Japan has no comparison. I was really touched with the warmth with which we were received and hosted during our stay in Japan.

Also, it was an eye-opening experience for me to see the technological advances Japan has made and the details in which Japanese people work. The diligence with which people perform their assigned task is one of the big take ways for me. The visit to Kyokuyo Shipyard on 10 May 2023 was specially enriching is showcasing the work ethics of the Japanese people, a shipyard with two fully functional docks and construction round the year is only run by less than 400 personnel, including the administrative persons and sub-contractors. Also, the technologically advancement of Japan was evident from the visit to Tokyo Metropolitan Government Waste Landfill Site and Ariake Water Reclamation Center on 9 May 2023, both facilities used high tech processes and innovative ideas for recycling and re-introduction of waste product in an environmentally friendly manner.

Japan has not been blessed with the abundance of natural resources, in fact 90% of the raw material in imported from outside. In the absence of resources, the Japanese society has learned to innovate and use whatever is available to them. Also, they have successfully been able to establish world class manufacturing companies, like FURUNO, which provides majority of the shares in marine equipment used onboard ship. The visit to FURUNO on 12 May 2023, also made us realize the high standards in quality which they maintain is part of the aim and objective of the company. Also, the visit to HSN-

KIKAI KOGYO Co., Ltd. on the same day, where, research for growing fresh vegetables onboard ships (for which pilot projects have already been launched) and also on International Space Station gave a glimpse into the innovative spirit and commitment to develop new and advance technology.

The role played by The Nippon Foundation and specially Dr. Sasakawa, in assisting and promoting many of the activities which has been maintained above cannot go unmentioned. Dr. Sasakawa is a role model for the society and has been doing a phenomenal job is promoting new and advance thinking in the society.

The time spent with Dr. Sasakawa, during our visit to The Nippon Foundation was memorable. I am deeply appreciative for the valuable time he was able spent with us. I hope, I will be able to meet him again in future.

Let me affirm my commitment towards maintaining and expanding the ever-growing network of Sasakawa fellows and continue to share the knowledge which we gain in life. The visit to Japan was an enriching experience which has introduced us to a concept of innovation and development with minimal resources and also the humility which one can maintain in each and every aspect of life and work. Best regards to the team of The Nippon Foundation who was worked tirelessly to make with visit a big success.

Abbas Falih Madhi Aldwyah (Iraq)

First Day 6th May

On May 6th, from Copenhagen Airport (KL1126), we set off for Japan to conduct their on-the-ground investigation. There was an air of influence and excitement as we set out on our incredible mission to discover Japan's wonders. The little layover we had at Amsterdam Airport (KL863) ratcheted up the anticipation, as we got a taste of the vibrant atmosphere and multiculturalism that unite through global flight. The tone for the forthcoming immersive and intellectually fascinating interactions in Japan was set at the beginning of this initial phase of the journey.

Second Day 7th May

We entered Japan at Narita International Airport after transiting via Amsterdam Airport. Our first steps on Japanese land were bizarre. Narita International Airport's efficiency and organisation demonstrated Japan's dedication to excellence.

On May 7, we bused from Narita International Airport to begin our first official day in Japan. Anticipation and surprises permeated the bus as we travelled. The stunning landscapes and glimpses of Japanese culture along the voyage were intriguing introductions to the country.

Our lunch location served authentic Japanese food. The food was delicious and presented beautifully, exceeding our expectations.

After a nice lunch, we went to the TKP GINZA Business Centre for orientation. This session introduced our field research goals and schedule. We were well-prepared by the organisers. Discussing and sharing ideas with other participants fostered camaraderie and excitement for the voyage.

Our hotel check-in followed the orientation. After a long day of travel and events, our accommodations were peaceful and comfortable. Our field research was made more enjoyable by the hotel's amenities and helpful employees.

From our arrival at Narita International Airport through our orientation and hotel check-in, our field study in Japan began with an intensive and informative experience. We were already excited about cultural inquiry, academic involvement, and personal improvement.

Third-Day 8th May

On May 8, our third day of field study in Japan, we left the hotel early, excited for the day ahead.

TUMSAT hosted us from 9:30 to 11:30 a.m. This esteemed institution taught us marine science and technology. We investigated field studies and advancements with professors and students. Knowledge and ideas exchanged increased our grasp of marine sciences.

We had lunch after a productive morning. We could refresh and reflect on our amazing experiences.

Lunch showed off Japan's culinary prowess with its flavours and presentation.

We visited the Maritime Bureau, MLIT, and met Deputy Director-General Yoshifumi Miyatake. This seminar provided a rare opportunity to learn about the bureau's role in the maritime industry and its regulations to promote safe and sustainable operations. We gained fresh respect for the complexity of maritime issues from the enlightening conversations and firsthand industry exposure.

We visited The Nippon Foundation again in the afternoon. We were delighted to meet The Nippon Foundation's Chairman, Mr. Yohei Sasakawa, and discuss the foundation's humanitarian efforts and their impact on marine affairs. Public-private collaborations are crucial to positive transformation.

An evening gathering celebrated a productive day. Participants, organisers, and prominent visitors networked and shared culture during this event. We toasted our Japanese friendships and collaborated in a warm and friendly setting.

We had free time at the hotel after the reception. This allowed us to explore the local area, immerse ourselves in Japanese culture, and reflect on our amazing day.

The third day of our field study in Japan showed us the fascinating possibilities. From academic insights at TUMSAT to courtesy visits to the Maritime Bureau, MLIT, and The Nippon Foundation, each event left a lasting impression on our understanding of the maritime business and charitable activities pushing positive change. The welcome event and evening free time strengthened our journey's friendship and cultural interaction.

Fourth Day 9th May

After breakfast on May 9, our fourth day in Japan, we left via bus. The business casual or casual clothing code was crucial. Skirts and high heels were prohibited, assuring us comfort and safety throughout the day.

We initially visited the Tokyo Metropolitan Government Waste Landfill Site around 9:00 a.m. This location gave us a rare glimpse of the Tokyo Metropolitan Government's garbage management efforts. We learned about their trash reduction, recycling, and sustainability efforts through tours and talks. The experience deepened our awareness of appropriate garbage management.

After the landfill site visit, we had a lovely lunch from 11:30 to 12:30 to rest and ponder. It was a chance to enjoy Japanese food while talking to other attendees, sharing ideas, and bonding.

After lunch, we visited the Ariake Water Reclamation Centre separately. This institution demonstrated advanced water treatment technology that conserves water. We learned about water management issues from specialists and cutting-edge processes. These visits increased our understanding of sustainable water practises.

After the visits, we had time to explore and experience the culture. This allowed time to explore the city and see sites.

We planned for baggage transfers later in the day to make our impending travels easier. This service freed us from luggage, letting us enjoy the rest of our field research.

Our field study in Japan's fourth day revealed waste management and water conservation practises. The Tokyo Metropolitan Government Waste Landfill Site and Ariake Water Reclamation Centre visits highlighted sustainable waste management and water treatment technologies, respectively. Educational experiences and personal exploration deepened our understanding of Japan's environmental commitment.

Fifth Day 10th May

Flight SFJ73 from Haneda Airport started our journey. We took in the spectacular vistas from the aeroplane window during the short flight with excitement.

We took a bus to Kyokuyo Shipyard from Kitakyushu Airport. We learned a lot about shipbuilding on this 11:00 AM–3:00 p.m. shipyard visit. We saw the incredible building procedures, technical advances, and attention to detail of these massive warships in groups. It was enlightening and showed Japan's maritime engineering prowess.

We visited NSTC after Kyokuyo Shipyard. This unique facility helped us learn about and prepare for marine emergencies. We practised survival and safety skills in small groups. The hands-on activities at NSTC helped us build practical skills and comprehend maritime safety.

We returned to the hotel at night for free time. We relaxed, reflected on the day, and immersed ourselves in the local culture. Some individuals explored the neighbourhood, while others used hotel amenities.

We learned a lot on our sixth field study day. The flights to Kyokuyo Shipyard and the Nippon Survival Training Centre helped us comprehend marine safety and industry. The evening free time allowed us to relax and enjoy our time in Japan, making lasting memories and enhancing our respect for the country's rich culture and outstanding achievements.

Sixth Day 11th May

On May 11, our sixth day of field study in Japan, we left the hotel by bus. Business casual or casual wear was required, with skirts and high heels prohibited. We went exploring again, dressed properly.

We started with a boat tour of the Port of Hakata. We saw cargo loading and unloading, nautical activities, and port operations during this unique trip. The boat excursion illuminated marine logistics and infrastructure.

After the boat excursion, we had a lovely lunch from 12:30 to 1:30 PM to refresh and enjoy the local cuisine. It was a chance to taste local cuisine and bond over dinner.

In the afternoon, we went to the Kanmon Kaikyo Vessel Traffic Service Centre. Groups 1, 2, and 3 went on a guided tour of Kanmon Strait vessel traffic operations. We learned about the sophisticated systems and technologies used to safely and efficiently move ships through this crucial waterway through educational presentations and interactive demonstrations. We learned more about maritime traffic coordination at the Kanmon Kaikyo Vessel Traffic Service Centre.

At 6:40 PM, we left Shinmoji Port, ending our day. We left the harbour to begin a new adventure.

On the sixth day of our field study in Japan, we visited the Kanmon Kaikyo Vessel Traffic Service Centre, the Port of Hakata, and a boat excursion. These efforts helped us comprehend port operations, maritime traffic management, and how these infrastructures support trade and transportation. The day's events combined learning and appreciation of Japan's maritime sector.

Seventh Day 12th May

On May 12, our seventh day of field study in Japan, we visited Kobe, a wonderful city. We arrived excited to discover the wonders. Breakfast from 8:00 to 9:00 AM fuelled us for the eventful day ahead. We visited FURUNO from 9:30 to 11:30 AM, excited to learn more about Japan's industries. The tour illuminated their cutting-edge technology and breakthroughs.

After our informative visit to FURUNO, we took a lunch break from 12:00 to 1:00. We explored HSN-KIKAI KOGYO Co., Ltd. from 1:30 to 4:30 PM after refuelling. We studied specific areas of interest in three groups (1, 2, and 3), learning more about their operations and Japan's industrial landscape.

We left Kobe for Nishi-Akashi Station at sunset. We took the bullet train to Kyoto. From 5:24 PM to 6:02 PM, we saw beautiful Japanese scenery from Nishi-Akashi Station to Kyoto Station.

We were awestruck by Kyoto Station's architecture and the city's history. We were warmly welcomed at the hotel afterward. We had the rest of the day free to explore Kyoto's charms.

Our seventh day of field study included trips to FURUNO and HSN-KIKAI KOGYO Co., Ltd. and a thrilling Bullet Train ride. Technology, culture, and nature have shaped our minds and hearts.

We enjoyed Kyoto's rich history and lively environment during our leisure time. Our leisure time allowed us to get to know Kyoto by walking through historic neighbourhoods, eating great local food, and visiting famous monuments.

On our seventh day of field study in Japan, we explored, discovered, and revelled in Kobe and Kyoto's rich tapestries. Our memories, experiences, and knowledge would always remind us of our great adventure.

As we returned to our hotel rooms, we enthusiastically anticipated the following days of our field study, knowing that each new experience would further our awareness of Japan's culture, industries, and traditions.

Eighth Day 13th May

We left the hotel via bus on May 13, anxious to explore Kyoto's rich cultural history.

Kinkaku-ji, the Golden Pavilion, was our first stop. We visited this stunning temple from 9:15 to 10:15 AM. We were captivated by its golden façade and peaceful surroundings, revealing the country's architectural splendour.

We then visited Ryoanji Temple's Zen rock garden. We enjoyed the temple's tranquilly and rock garden from 10:30 to 11:30 AM. We enjoyed tranquilly and contemplated Japanese mindfulness.

After visiting the temples, we had lunch from 12:00 to 1:00. We tasted local foods and explored the area, appreciating Kyoto's gastronomic treasures.

The Kyoto Shinto shrine Heian Jingu was our afternoon destination. We experienced the shrine's spirituality, admired its design, and learned about Shinto customs and beliefs from 1:30 to 2:30 PM. Heian Jingu Shrine helped us comprehend Japanese culture's spirituality.

The Kiyomizu-dera Temple, a UNESCO World Heritage Site, was our last stop. Its wooden terrace gives stunning city views. We explored the temple grounds from 3:00 to 4:30 PM, admiring its complex architecture and panoramic views. We enjoyed Kiyomizu-dera Temple and reflected on Kyoto's splendour.

After a day of cultural immersion and discovery, we returned to the hotel for leisure. This allowed us to explore local markets, try traditional food, and enjoy Kyoto's bustling city atmosphere.

A hotel gathering concluded our field study. Participants shared their ideas, reflected on their trip, and discussed their Japan highlights at the gathering.

Cultural and spiritual connections culminated on the eighth day of our field study in Japan. We learned about Japanese history, architecture, and spirituality at Kinkaku-ji Temple, Ryoanji Temple, Heian Jingu Shrine, and Kiyomizu-dera Temple. After the wrap-up meeting, we reflected on our transformational journey.

Ninth Day 14th May

We sadly left Japan on May 14, the ninth and final day of our field study. We left the hotel by bus with melancholy emotions, cherishing our Japan memories.

We arrived at KIX at 8:30 a.m. We returned home from the contemporary, efficient airport.

We left KIX for Paris at 10:35 AM, starting our trip home. As we sat down, we thought about the life-changing events, new knowledge, and wonderful memories.

Our field research ended at 22:50 in Copenhagen after a long trip. We said goodbye to our classmates and the wonderful memories we shared with thanks and nostalgia.

Our nine-day field study in Japan ended with cultural immersion, learning, and personal growth. The experiences and knowledge we obtained in Japan would continue to shape our perspectives and improve our lives. We returned to Copenhagen from Kansai International Airport with a newfound love for Japanese culture, curiosity, and a desire to share our experiences.

Japan lets us experience its rich heritage, modern advancements, and unique traditions. We arrived in Copenhagen feeling grateful for the chance to do this field study and for the experiences that will always remind us of Japan's beauty and mystery.

Conclusion

Japan was a thrilling field study. From Tokyo's busy streets to Kyoto's peaceful beauty, our voyage was full of amazing moments and unique encounters. Daily discoveries and surprises kept us excited. The mix of cutting-edge technology, colourful culture, and stunning scenery captivated our senses and piqued our interest. It was an unforgettable event that exceeded our expectations.

Daiki Maeno (Japan)

As Japan's economy is heavily dependent on maritime transport, visiting Japan's maritime facilities was a very interesting experience that allowed me to see the deep connection between Japan and the sea. As a Japanese student, I have spent a lot of time in contact with Japanese maritime governance in the past, but this visit was a very good opportunity for me to visit maritime facilities with students from various countries and to rediscover how Japan relates to the sea from a different perspective. From ports where large numbers of containers are loaded to shipyards incorporating the most advanced technology, these facilities embody Japan's solid technological capabilities and dedication to maritime issues. Furthermore, during our visits to several maritime facilities throughout Japan, we had the opportunity to witness firsthand the remarkable achievements and unwavering dedication of the people working in these facilities. This visit was also an opportunity to visit maritime facilities not only in Tokyo, Japan's capital and economic center, but also in other parts of Japan such as Hakata, Moji, and Kobe. The cultural experience of taking the ferry from Moji to Kobe and visiting famous sightseeing spots in Kyoto with the Sasakawa Fellow students also provided an opportunity for the students to interact with each other. For many of the students, it was their first experience to directly experience Japanese culture. We would like to express our deepest gratitude to Chairman Sasakawa and the Sasakawa Peace Foundation for providing us with such a valuable experience. Below, I would like to delve into some of the places and experiences that were particularly impressive to me.

Metropolitan Government Waste Landfill

During our exploration of Japan's offshore facilities, we had the opportunity to visit the Tokyo Metropolitan Government Waste Landfill, a key component of the country's commitment to environmental management. Nestled in a seaside landscape, the landfill was a place where we could see Japan's innovative waste management practices and commitment to creating a sustainable future. We were impressed by the meticulous planning and advanced technology employed to minimize the environmental impact of waste disposal. We also witnessed waste management practices that are a challenge around the globe and were reminded of the complexity and importance associated with sustainable waste management on a global scale. Rapid population growth and urbanization have resulted in a significant increase in waste generation. Landfill is considered a common waste management method. However, it requires limited space, potential environmental risks, and long-term monitoring and maintenance. The facility presented us with a comprehensive approach to waste management regarding waste reduction, recycling, and the use of renewable energy.

HSN-Kikai Kogyo

Our visit to HSN Mechanical Industries provided a fascinating insight into their cutting-edge technology and engineering expertise. The facility was filled with highly skilled engineers and technicians working diligently on complex machinery and advanced marine equipment. During our tour, we had the opportunity to witness the development and manufacturing process of various marine components. One aspect that stood out during our visit was the company's commitment to sustainability and environmental responsibility; HSN-Machinery had been actively seeking ways to minimize the environmental impact of its operations, including the development of an oil-water separator. The company was quick to catch on to the issues facing maritime governance around the world and confirmed that it was making a very significant contribution not only in the development of marine equipment but also in the formulation of standards to the IMO. In addition, including they are currently involved in the welfare of seafarers and in the development of marine plant cultivation equipment that allows them to eat fresh vegetables on board, their dedication to pushing the boundaries of innovation and breaking new ground in maritime engineering was truly inspiring.

Introducing Japanese Culture

As a Japanese student, I felt that sharing and introducing Japanese culture to the Sasakawa Fellows was something I could contribute to. Through taking many people on sightseeing tours of the Asakusa shrine and Sky Tree and introducing them to the diverse flavors of Japanese cuisine during our off-site time, we sought to foster a deeper understanding and appreciation of the rich culture of Japanese society. One of the most memorable parts of the trip was being able to share with them the delicacies of traditional dishes they were unfamiliar with, such as raw fish (sashimi and sushi) and fugu (blowfish). We were able to show them how deeply connected Japanese culture is to fish, since we are all people who work at sea. At first, many of the students were confused by the raw fish and the different flavors, but many of them were satisfied with the food and it was an honor to share the deliciousness with them.

Takanori Uzumaki (Japan)

First of all, I would like to express my utmost gratitude for the opportunities given that made me able to trip around my country with classmates from all over the world and everyone who made the trip possible. That was a most exciting experience from either my personal and professional perspectives.

The trip gave me a chance to travel a wide part of Japan with all my colleagues together from the Kanto region to the Shimonoseki region. It was more than a week trip starting on 6th May and finishing on 14th May while visiting a wide range of maritime industry contributing companies and associations from a government office, and seafarers training association to private companies. I would like to take this report as a chance to express my gratitude and appreciation for something that I could learn from my colleagues during the trip.

The first thing I would like to write about was something that happened when we were visiting the Ariake water reclamation center and the Tokyo Metropolitan Government Waste Landfill Site. Those places displayed how society is handling waste and provided a basic understanding of its levels, and to what extent the society is seeing the waste material circulation and recycling. The water reclamation and recycling systems are not something really new for me who grew up in the society.

However, the reactions my colleagues gave me were completely different from what I had. One of my colleagues explained to me in detail how he was impressed. Waste material is burned and its energy is extracted as electricity and still, the burnt remains are used as resources for concrete or the blocks we saw there on the road. He told me that trash is literally utilized as resources and that's unbelievable. He explained the situation back in his country and also asked me what kind of incentives or enforcements are implicated for garbage separations in Japan. Because he realized the systems he was seeing there were fundamentally based on the separations. He was very surprised when I explained that there are no incentives for sorting and no penalties for violations. He said it is impossible in his country. This experience made me realize that while the hardware infrastructure naturally differs from country to country, the software used to operate the facilities must also differ accordingly to society.

The next experience that I would like to mention is also about a story my colleague told me. The friend told me that finally, he could understand what my job, "ship surveyor", is after the visits to the University and the shipyard. Those university and shipyard features are just something familiar to me because I have done my study in those related subjects area and I am working in shipyards daily basis but those

are something totally new to the friend. He told me that shipping industry or shipbuilding industry are not something really common in his place. When he thinks of ships, he usually thinks of small fishing boats made of wood or plastic, and it is not easy to imagine an industry related to the operation and construction of large steel vessels. It may seem trivial, but it made me realize once again that people with completely different backgrounds are taking lectures in the same class.

The ship we saw at the shipyard was something one of the biggest he has ever seen. The facilities in the shipyard and the research at the university are also something not really familiar with. He and I are working together in the maritime sector but with quite a few different perspectives and regions. The view of how we see a ship and related industries are totally different. It was a good opportunity to rethink such things and also how it shall be difficult to cooperate together with such a diverse society having potentially different interests in order to achieve sustainable ocean management.

This trip made me recognize some cultural and occupational background differences between me and my classmates. One friend asked me how municipalities imply penalties for cases where garbage is not properly sorted when we are visiting the site. Another friend gave me a chance to think about how our backgrounds are different, even though we have been studying together in the same class.

Thus, this Sasakawa Japan trip gave me a chance to spend more than a valuable week with colleagues. I would like to reiterate my utmost gratitude to everyone who made the trip happened. We were able to exchange ideas and opinions together on so many topics with friends with whom we had previously interacted and with whom we had not had much of a chance before. I would like to thank the Foundation for making this program possible, as well as the various site-visiting contributing companies and the related organizations for their support. I believe that the experiences and networks we achieved there will surely contribute to the future development of the global maritime industry.

Tawfiq Soud Jukhoydom Alataywi (Jordan)

Location: Tokyo University of Marine Science and Technology

During our field trip to Japan, we had the opportunity to visit the **Tokyo University of Marine Science and Technology**. As an MSc student specializing in maritime studies, this visit was particularly exciting for me. The university's reputation as a leading institution in marine research and education preceded our arrival, and I was eager to explore its facilities and interact with the faculty and students.

Upon arrival, we were warmly welcomed by the university staff and given a comprehensive tour of the campus. The state-of-the-art laboratories and research facilities were truly impressive. The university's commitment to cutting-edge research and innovation in marine science and technology was evident in the advanced equipment and resources available to the students and researchers. I was particularly inspired by the interdisciplinary approach to research, with collaborations between oceanographers, marine biologists, engineers, and policy experts.

The discussions with faculty members and graduate students further enhanced my understanding of the latest advancements in marine science. The exchange of ideas and knowledge during our visit was invaluable, and I was encouraged to delve deeper into my research interests. The enthusiasm and passion displayed by the faculty and students were infectious, and it motivated me to pursue further studies and contribute to the field of maritime research.

Location: Maritime Bureau (MLIT) and Japan Coast Guard

Our visit to the **Maritime Bureau** and the **Japan Coast Guard** provided a unique opportunity to learn about maritime policy, specifically focusing on decarbonization efforts. The lectures delivered by experts in the field highlighted Japan's commitment to reducing greenhouse gas emissions in the maritime sector and the challenges they face in achieving their goals.

The discussions surrounding alternative fuels, technological innovations, and policy frameworks aimed at decarbonizing the shipping industry were enlightening. Witnessing the dedication and collaborative efforts between government agencies and industry stakeholders was truly inspiring. It reinforced my belief in the importance of international cooperation and policy initiatives to address global environmental challenges.

Visiting the Japan Coast Guard and understanding their role in ensuring maritime safety and security was eye-opening. Their commitment to protecting the marine environment and responding to emergencies showcased the critical role played by maritime organizations in safeguarding our oceans. The professionalism and expertise demonstrated by the Coast Guard personnel left a lasting impression on me.

Location: Tokyo Metropolitan Government Waste Landfill Site and Ariake Water Reclamation Center

Our visit to the **Tokyo Metropolitan Government Waste Landfill Site** and the **Ariake Water Reclamation Center** shed light on Japan's efforts in waste management and environmental conservation. Witnessing the scale of waste management operations and learning about the innovative technologies implemented to reduce environmental impact left me in awe.

The Tokyo Metropolitan Government's commitment to waste reduction and recycling was evident in its comprehensive waste management systems. The landfill site showcased the importance of responsible waste disposal and the need for sustainable waste treatment practices. Additionally, the Ariake Water Reclamation Center demonstrated the effectiveness of advanced water treatment methods, emphasizing the importance of water resource management in a densely populated city like Tokyo.

These visits underscored the significance of integrated waste management and environmental stewardship in creating a sustainable future. Japan's emphasis on technological advancements and public awareness campaigns left a profound impact on me, and I was inspired to explore similar initiatives in my research and future endeavors.

Location: Kyokuyo Shipyard, Nippon Survival Training Center (NSTC), Port of Hakata, FURUNO, and HSN-KIKAI KOGYO Co., Ltd.

Our visits to various maritime industry sites offered a practical understanding of the maritime sector's operations and technological advancements. The **Kyokuyo Shipyard** provided insights into shipbuilding processes and the integration of cutting-edge technologies to improve vessel efficiency and environmental performance. The flow process of manufacturing was very efficient, and they adopted the lean tool to eliminate the waste of time and waste processes to increase productivity. Moreover, we were delighted to witness the launch of the new ship leaving the shipyard facility.

At the **Nippon Survival Training Center (NSTC)**, we were exposed to the rigorous training and safety measures undertaken by maritime professionals. Witnessing the simulations and practical exercises aimed at preparing individuals for emergencies at sea was both eye-opening and humbling. It highlighted the immense responsibility shouldered by seafarers and the paramount importance of their training and preparedness.

Visiting the **Port of Hakata** provided insight into the active maritime industry and its economic significance. The sight of cargo ships, containers, and the efficient operation of the port showcased the intricate logistics involved in global trade. It was interesting to observe the coordinated efforts between port authorities, shipping companies, and other stakeholders to ensure smooth operations and optimize efficiency. Furthermore, the port authority reduced the KgCo2/ container handling from 10 kg Co2 to 6 kg Co2 by adopting electrification.

Our visit to **FURUNO**, a leading manufacturer of marine electronics, introduced us to state-of-the-art navigation and communication technologies. Witnessing the development and testing of advanced radar

systems, GPS equipment, and sonar technologies emphasized the crucial role of technological innovation in enhancing maritime safety and efficiency.

HSN-KIKAI KOGYO Co., Ltd. offered a unique insight into marine engineering and shipbuilding. The company's commitment to designing and manufacturing innovative marine machinery and equipment showcased its contribution to advancing the maritime industry's capabilities. Learning about their research and development initiatives was truly inspiring, highlighting the potential for future breakthroughs in maritime technology.

Overall Impressions:

The site visits throughout Japan had a significant influence on me as a marine MSc student. The institutions and organizations we saw were outstanding in their levels of creativity, knowledge, and dedication. The Japanese government's commitment to environmental preservation, technical progress, and marine safety is exemplary and should be studied by other countries.

The interdisciplinary collaboration between academia, government agencies, and industry players was evident on every visit. This cohesive approach is essential for addressing complex maritime challenges, such as decarbonization, waste management, and ensuring the safety and security of our oceans.

I now know a lot more about the marine business thanks to what I learned on the field trip, and I'm even more driven than before to make a positive difference there. So, I feel motivated to help with the research, policymaking, and technology improvements that are needed to make sure the growth of marine activities is both good for the environment and good for business.

Moreover, the cultural immersion and visits to historical and religious sites, such as Kinkakuji Temple, Ryoanji Temple, and Kiyomizu-Dera Temple, provided a deeper appreciation for Japan's rich heritage and spiritual traditions. These visits offered a balance between academic pursuits and cultural exploration, creating a well-rounded experience that broadened my perspective.

In conclusion, my time spent in Japan during the MSc field trip was an incredible experience that changed my perspective, enriched my education, and compelled me to pursue academic greatness in my chosen subject of marine studies. Thank you for the opportunities and encounters that will have such a profound impact on my future studies and career.

Aziza Mohammed Swazuri (Kenya)

First and foremost, I would like to offer my appreciation to Dr. Sasakawa and The Nippon Foundation for organizing such an educational tour in Japan. The lessons learnt, the places visited, the ideas and information shared was worthy and important especially for the maritime industry both at national and international level. The tour was well organized from the first day we landed in Japan to the last day we departed.

From the pick-up from Narita airport, to lunch at Villa Fontaine and to the orientation session when we arrived, the reception was welcoming and friendly. I felt that the orientation was important so that we all know what were supposed to do, not just as fellowship students for Sasakawa, but as visitors in a foreign country. This is especially for those of us who were visiting Japan for the very first time. It was comforting to be with The Nippon Foundation staff due to their calm and well-organized reception and the overall facilitation and logistics for the entire trip.

The stakeholders' official dinner was a great opportunity to meet and network with Japan's professional and dignitaries. The variety of food in Japanese cuisine and venue was extraordinaire. It was a heartwarming and humbling experience.

The organizations we visited received us with warmth. They were friendly, professional and kept time in all the places we went. The technological advancement and innovativeness that was showcased in almost all the places we visited was top-notch. It was interesting to notice the amount of land that has been reclaimed in Japan to open up new projects/activities, showing that what can be done on land can as well be extended to the sea and still be able to work normal like other features on land. However, time was a constraint in some places because there were still several places to be visited all in one week.

One of the most outstanding point for the trip was that we used almost all modes of transport within Japan for our activities for the entire week. Indeed, it was amazing to realize that we used a domestic flight, bullet train, we went on a sail, boarded a ferry and were transported on a bus around the country, which to me was very well organized and convenient yet adventurous at the same time.

The visit to the shrines and temples was epic. It was interesting to learn of historical Japanese heritage in beautiful architecture and gardens worth hundreds of years ago yet still kept fresh and detailed.

The trip tour guide Miyo San did a very excellent job in ensuring everything went as planned and we were well taken care of. Her enthusiasm through-out the stay was truly humbling. She gave briefs at every stop and all the important land marks and history behind the different places around Japan.
The hotels we stayed in were top-notch, clean, safe and secure with good meals and great ambience. The drivers that drove us around were very disciplined and accommodative because to attend to such a large group of people can be cumbersome and overwhelming.

The warmth nature of culture and the people of Japan generally is very humbling. They are friendly and supportive. The staff Emi San and Mr. Kudo, the translators and the other various guests who accompanied us at every destination were very receptive and gave us a sense security to all the places we visited. Many appreciation to them for their humanity to serve others beyond and out of their comfort zone. I can imagine the hustle and bustle of ensuring from the itinerary, each and every detail of the entire field study went seamlessly, was no mean fit. It is a calling. I will forever be grateful to them and the entire The Nippon Foundation under the able Chairman, Dr Sasakawa. The field study was a success.

Lastly, I would also like to pass my gratitude to WMU university for agreeing with The Nippon Foundation and allowing us to take part in the field study. Indeed, it was eye-opening and life changing experience for me and I will treasure the memory for many years to come.

Mark Mikely (Liberia)

Acknowledgement

Special thanks go to the World Maritime University through Ms. Lyndell and Prof. Max, The Nippon Foundation and the Sasakawa Peace Foundation, Dr. Yohei Sasakawa and his team, the different institutions visited in Japan, and the people of Japan.

During my visit to Japan in May, I had an extremely amazing time and a memory that live with me forever and I cherished so much. While in Japan, I had the opportunity to visit several institutions which together broadened my knowledge about the maritime sector.

<u>On the first day</u>

1.Tokyo University of Marine Science and Technology

2.Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

3.The Nippon Foundation

An introduction to education and training was offered by the university during our visit. Additionally, the presenter gave an overview of their training and technology for artificial reproduction of octopus resources were discussed as well. Following that, a technical tour of the fish tank was conducted. Later, the same day, there was a presentation on the decarbonization of international shipping in Japan's maritime strategy and a description of the Japan Coast Guard were available at the venue and lastly; The WMU Delegation [we] had the chance to show our deep gratitude to Dr. Sasakawa at The Nippon Foundation through individual and group statements as well as a group photo. Also, Dr. Sasakawa was also overwhelmed and appreciated our appreciation.

<u>On the second day,we also visited the:</u>

4.Tokyo Metropolitan Government Waste Landfill Site-

5.Ariake Water Reclamation Center

When we toured the plant, the methods and processes used for waste treatment piqued our interest. The landfill region, where soils above garbage are covered with one layer above another using the sandwich approach, was, in my opinion, the facility's most intriguing location.

An overview of the sewage system was given before the excursion began. The entire system, from the factories and homes that provided the initial sources to the final stage of discharge into the open water, was thoroughly explained. After that, the reaction tank and the sedimentation tank were closely examined on a site trip.

<u>On The third day,we were also very delight as we visited</u>

6.Kyokuyo Shipyard-

7.Nippon Survival Training Center (NSTC)

8.**Port of Hakata**

-The facility greeted the delegation and gave us briefings on how the shipyard operates. Following the presentation, each phase of shipbuilding was explained to us in person. Finally, we had the chance to board a newly constructed ship and take part in the ceremony marking the start of her first trip.

-The organization gave us a brief summary of the training center and the courses they are offering. We also had the opportunity to view the lifeboat embarkation and launch site.

-The port agent gave us a brief introduction that included the premises, port policy in Japan, features, and current port status.

Following that, the delegation boarded a cruise ship for a tour of the harbor.

<u>On the fourth day:</u>

9.Kanmon Kaikyo Vessel Traffic Service Center

10.FURUNO-

11.HSN-KIKAI KOGYO Co., Ltd.

-The VTS Center gave us a thorough introduction to the daily activities and operator watch. Additionally, we had chances to talk to and ask questions of the Center's operators and managers.

-We went to the FURUNO plant. The presenters went into great detail on the many stages of manufacture for things like navigation radar and doppler sonar.

-The company gave us an informative tour of their facility that included explanations of the creation of bilge separators, several types of pumps, and technologies for on-board vegetable gardens.

<u>On the fifth day, we lastly visited:</u>

12.Kinkaku-ji Temple-

13.Ryoanji Temple and Kiyomizu-dera Temple

The building complex is situated inside a sizable Japanese garden. The main temple's style is emphasized by its golden hue and distinctively Japanese curled roofs.

The shrine is a sprawling structure with a huge yard in front of the main temple with the usual orange and red color scheme.

On top of a hill is where you'll find this gorgeous temple. Buddhist statues can be found all over the compound in various locations. Rain brought new energy to the visit. On the way downhill, guests can purchase authentic Japanese goods at any one of the numerous shops.

Kla-Edward Toomey II (Liberia)

On Saturday May 6, 2023 the S23 Cohort of Sasakawa Fellows departed Malmo, Sweden for a One-Week Field Study to Japan. The Sasakawa Fellows are students sponsored at the WMU by the Sasakawa Peace Foundation, run by its Chairman Dr. Yohei Sasakawa. Each year, The Nippon Foundation sponsors students from across the world, particularly from developing countries. This year's cohort of which I am member, comprise of thirty students from 28 countries. During this year's field trip, we were accompanied by Assistant Registrar Ms. Lyndell Lundahl and Professor Max Mejia. During the one-week field study, we had the opportunity to meet with our sponsor, Dr. Yohei Sasakawa and expressed our gratitude for his support. We also toured several maritime facilities across the country. This report represents my overall impression of the trip in a day-by-day dairy format.

Sunday, May 7, 2023:

The delegation arrived in Japan on Sunday, May 7, 2023. The major event on Sunday was an orientation session by the Sasakawa Peace Foundation and our tour guides, followed by booking. Upon our arrival, the reception received from the Sasakawa Peace Foundation Team and our tour guides was quite impressive and gave us a glance of what was expected from our visit.

Monday, May 8, 2023:

After our first night in Japan, our Monday tour began with a visit to the Tokyo University of Marine Science and Technology, followed by a courtesy visit on the Maritime Bureau, MLIT, and a visit at The Nippon Foundation to meet with our sponsor, Dr. Sasakawa. The day was climaxed with a welcome reception held in our honor. For me, this was the most important day of the entire trip. Having the opportunity to meet with Dr. Sasakawa in-person and express my gratitude for affording me a life-changing opportunity to enhance my professional development brought me so much joy. I was also particularly grateful for having been designated to make a speech of appreciation on behalf of the delegation at an elaborate welcome reception. The visit to the Tokyo University of Science and Technology provided an opportunity to see first-hand the research contribution of the university towards advancing the protection of marine biodiversity. The visit to MLIT was also very interesting given that it touched on Japan's progress on some trending issues in the maritime industry, including decarbonization and MASS.

Tuesday, May 9, 2023:

Tuesday's visit covered the Tokyo Metropolitan Government Waste Landfill Site and the Ariake Water Reclamation Center. There was time provided during the late afternoon hours for us (fellows) to relax

and attend to personal matters. The visits to these two sites were quite impressive. It provided an eye-opener to the Japanese approach to protecting the marine environment from both onshore and on sea. It was quite revealing how Japan is reclaiming a vast portion of the oceans and keeping its urban and marine environments clean through the use of cutting-edge technology. The Landfill site represents Japan's way of pushing back the oceans to reclaim some land space for other productive activities, including port expansion.

Wednesday, May 10, 2023:

On Wednesday, we visited the Kyokuyo Shipyard and the Nippon Survival Training Center. The visit at the Kyokuyo Shipyard was a massive experience for me. It provided me with first-hand experience of how ships are built and my first ever opportunity to enter a vessel. The visit at the Nippon Survival Training Center provided me with practical understanding of how safety at sea is carried out. The knowledge acquired at these centers enhanced my understanding of some of the things I have been taught in the classroom.

Thursday May 11, 2023:

Thursday's visit covered the Port of Hakata and the KANMON KAIYO Vessel Traffic Center. The visit at the Port of Hakata demonstrated the practical aspects of some of our classroom lessons, including the trending single window concept of port management, digital shipping and decarbonization.

At the KANMON KAIUYO Vessel Traffic Center, I was particularly impressed by the efficiency of the Japan Coast Guard in directing vessel traffic and tackling maritime crimes. The natural geographical peculiarity of the area exposes vessels to accidents and traffic congestion. However, with the help of the center, these risks are effectively controlled. The Thursday visit was climaxed by an over night ferry ride to our next destination.

Friday May 12, 2023:

Friday's visit covered the FURUNO Factory and the HSN-KIKAI KOGYO Co., Ltd.

The FURUNO Electric Factory is the producer of the world's first fish finder and a global producer of marine technologies, including radar, echo sender, sonar, speed log, etcetera. The company was founded in 1951 and continues to maintain its global brand with subsidiaries in China, Korea, France, etcetera.

The HSN-KIKAI KOGYO Co., Ltd. is specialized in the production of fuel pumps for ships. The company is currently testing the production of vegetables to be grown on ships for seafarers and eventually hopes to test its production on the moon as well. The company also has a partnership with Sweden in the development of its marine hardware.

The visit to these two centers was an eye-opener to the leading role of Japan in producing marine technologies.

Saturday May 13, 2023:

Our visit was climaxed on Saturday, May 13, 2023 with a tour of major cultural heritage centers in the old city of Kyoto, including a UNESCO World Cultural Heritage Center and several religious shrines.

Conclusion:

The visit to Japan is the best field trip and travel experience I have had so far. It served three remarkable purposes:

1. it was a learning experience that enhanced my professional knowledge of the maritime industry.
2. It provided the opportunity to meet with Dr. Sasakawa in person and express my gratitude for his support towards my professional development; and
3. Served as an opportunity to understand the beautiful culture and people of Japan. Japan is the most beautiful country I have ever visited. Its people are uniquely humble and tolerant.

Minna Rasheed (Maldives)

We, the Sasakawa fellows of 2023 were excited to visit Japan and get the unique experience of culture, technology, nature, and some authentic Japanese food. On 7th May 2023, we arrived at Narita International Airport in Japan. We were guided by Emi San and Miyo San about the trip schedule. We were also briefed about the importance of punctuality for which Japan has a reputation. In general, it was expected for us to arrive 10 minutes before the scheduled time.

An orientation session was held, and clear instructions were given regarding travel, dress up and food arrangements. Japan is amongst the safest countries in the world. The session also covered safety and emergency instructions. A booklet was given to the students which had various information including emergency contacts and detailed schedules and times. After the orientation session, we checked in our rooms and were free to explore the city for the rest of the day.

The morning session on 8th May 2023 was at Tokyo University of Marine Science and Technology (TUMSAT) where research work related to fisheries as well as movements of tide was presented. In the afternoon a courtesy visit to the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and The Nippon Foundation was made. It was a dream come true to meet Dr. Sasakawa face-to-face and take pictures with him individually. Professor Max Mejia joined us in the session giving an appreciation speech on behalf of the university. He thanked Dr. Yohei Sasakawa for giving us this great opportunity for several students to study under the sponsorship of The Nippon Foundation. Each student was also given the opportunity to give a brief introduction about the work we do and our vision after graduation.

On 9th May 2023, we visited two important Government Sites, the Tokyo Metropolitan Government Landfill site and Ariake Water Reclamation Center. We were briefed about garbage disposal and water reclamation from wastewater. The collection, transport, processing, landfill and covering operation were displayed. We were also introduced to wastewater treatment flow. We were amazed by the advanced technology and more ever about the introduction of these technologies in Japan years back. Japan's environment policy covers zero waste policies, advanced technology, and the use of all available resources.

The next phase of our trip was tight and consisted of a lot of travel to the other parts of the country. On the morning of 10th May, we departed from Haneda Airport to Kitakyushu Airport and took a bus to Kyokuyo Shipyard. The shipyard was established in 1942 as Hikoshima Shipbuilding Company by the combination of five neighboring shipbuilding companies. The presentation covered the entire process

of shipbuilding. We were briefed about the Shipbuilding and repair facilities and equipment. The factory has a weather Blasting Plant and a Block assembly plant where all the processes were shown to us while it was practically done. We were lucky to witness the launching of a vessel as it was about to sail. We were now part of its history and waved to the vessel during its delivery.

In the afternoon we went to Nippon Survival Training Center (NSTC) which is Japan's premier offshore survival training center, complying with internationally recognized training standards, needed for the safe operation. We were briefly introduced to the ship and helicopter survival technics training and of course not practically involved in the training programs.

On 11th May 2023, we visited the Port of Hakata and Kanmon Kaikyo Vessel Traffic Service Center. The port is one international hub in Japan that provides services directly to Korea and mainland China with passenger and cargo services. We were provided with the remarkable opportunity to witness the cargo handling operations and transportation of goods and passengers at the port. The Port of Hakata is a very shallow bay and with the expansion of the ports and the bay area's dredging was done to serve the needs of the port. This dredged sand was used further for construction and land reclamation in the port area. The facilitators from the port gave us valuable information about the port works, handling of materials, and history of the place detailing the current situation.

The Kanmon Kaikyo is bordered north and south by Kanmon Port and the traffic of vessels passing through the port is assisted by the Vessel Traffic Service Centre. This was followed by a visit to FURUNO and HSN-KIKAI KOGYO co. Ltd the next day. The Chairman and President of the company were kind enough to meet and spend some time with us. He shared his vast experience at IMO for the past 30 years. On the afternoon of 12th May, we took a bullet train to Kyoto. The bullet train can reach a maximum speed of 320kms per hour and offered us an exceptionally unique and memorable experience.

13th May 2023 the last day of field study was kept exclusively for sight-seeing. That was an unforgettable day of my life. There are an estimated 80,000 temples and shrines in Japan of all sizes, and some are over 1,000 years old. We were delighted to visit 4 important temples Kinkaku-ji Temple, Ryoanji Temple, Heian-jingu Shrine, and Kiyomizu-dera Temple respectively. Kinkaku-ji Temple in Kyoto is a National Special Historic Site known as the Temple of the Golden Pavilion. We are so blessed to be able to see these wonderful places. Words are not enough to thank the organizers of The Nippon Foundation for the well-planned and wonderful trip. The day ended with an exchange of gifts and pleasantries. The student expressed their deepest gratitude for the opportunity given to Kudo San, Emi San and Miyo San who represented on behalf of The Nippon Foundation.

Due to the time constraints, we were left hungry to see more although the trip ended in a lot of learning and incredible experiences which we will never forget in our life. Every day of the Japan trip gave us wonderful experiences, life lessons, and gratitude for life. It is indeed an honor and privilege for being part of the Sasakawa family.

Yara Hortense Alberto Tembe (Mozambique)

1. INTRODUCTION

Japan Filed Study Trip involved 30 WMU students from different specializations and nationalities, beneficiaries from the Sasakawa Fellowship for the academic year of 2023, and took place from 6th to 14th of May 2023.

The students traveled in the company of His Excellency Professor Maximo Mejia, future president of the World Maritime University, and Ms. Lyndell Lundahl Assistant Register at World Maritime University. Locally, the group was accompanied by His Excellency Admiral Eisuke Kudo, Ms. Emi Shimada from the Sasakawa Peace Foundation, and the tour guide Ms. Miyoko Wada.

The agenda included visiting 11 organizations and a free day for sightseeing and visiting 3 temples in Kyoto. The institutions visited provide products and services of various forms in the maritime sector, to accommodate the various areas into which the visit was divided, the group was divided into several modalities.

The production of images was restricted in certain places in respect of the privacy and secrecy of patents and production processes, however, the openness of the institutions in showing their production processes was remarkable.

2. THE HIGHEST POINT OF THE FIELD STUDY TRIP

The visit to The Nippon Foundation was one of the most memorable moments of the trip, and the students had the honor of meeting the Honorable Dr. Yohei Sasakawa the chairman of The Nippon Foundation and the benefactor responsible for the scholarships the fellows benefited from.

The program included the individual presentation of each scholarship holder and the vote of thanks for receiving the sponsorship. The future perspectives after completing the master's program and returning to respective workplaces was also and individual task.

From the generalized comments, the gratitude of the students for the scholarship was clear, as well as the commitment to make a difference in the maritime sector after returning home.

In Sequence, His Excellency Dr. Yohei Sasakawa the chairman of The Nippon Foundation delivered a speech in a greeting of the visit, followed by Excellency Professor Maximo Mejia who praised the partnership between The Nippon Foundation and the World Maritime University and the warming reception.

It should be noted that the Chairman of The Nippon Foundation provided a unique moment in which each scholarship holder had the honor of taking a picture with Him, and additionally, the fellow students proudly sing the WMU song for The Nippon Foundation Chairman.

Personally, being the first Mozambican to benefit from Sasakawa's scholarship was an inexplicable emotion and the feeling of gratitude is immeasurable.

After the meeting, there was a reception gala, attended by high-level leaders of the maritime sector (private and state), as well as consular representatives of the countries to which the Sasakawa scholarship holders belong. The event was memorable and unique, it was possible to exchange experiences and make connections of great value.

3. REMARKABLE EXPERIENCES

It was noticeable that the choice of places to visit was made with great care and attention and all of them were of relevance to the maritime area and particularly to my chosen specialization "**Maritime Safety and Environmental Administration**", in this aspect, all the locations provided an experience increased and contributed to the consolidation of the contents taught in the classroom, however, two points were the most outstanding that should be highlighted:

3.1. Ariake Water Reclamation Center

The Ariake Water Reclamation Center is an example of the sustainability, treatment, and use of a scarce resource, water. On the other hand, improves river and sea water quality by preventing sewage water contamination.

The center is located in the city of Tokyo and is dedicated to the treatment of sewage water through the A2O method and biological filtration, it can treat 30,000m3 per day. The system covers an area of 46,600 m2 and contains a series of sedimentation and reaction tanks.

The project demonstrated an immense commitment to the environment and an example of the use of waste resulting from water treatment that was used to make bricks for the landscaping of the center itself. The system is an example to follow in protecting the environment and preserving resources for future generations.

3.2. Furuno

The company is dedicated to the manufacture of various equipment for fishing and merchant vessels, from antennas, and fishfinders to radar navigators. Contributing to the safety of navigation, as well as to the preservation of fishing resources and marine species.

The antennas and other equipment are entirely produced in the company, depending on other factories only for small complementary parts.

The visitors had a tour of the factory, and antenna testing, assembly, and cell production sector were some of the places visited.

The experience was magnificent since it is usually during the exercise of activities in the Maritime Administration to inspect vessels that have equipment of this brand, and being able to know the place

and how they are manufactured was a guarantee of fidelity and confidence in the equipment to guarantee the navigation in my country and region.

4. OVERALL IMPRESSIONS

The visit provided unique moments and experiences, from gastronomy to contact with culture, and local habits, and exposure to magnificent places.

The attention to detail given to the preparation of the delegation's reception was impressive, from specific food taking into account health conditions and other restrictions to medical assistance for those in need. Without taking credit for the choice of points to visit that fit perfectly with the areas of specialization of all scholarship holders.

A feeling of thankfulness and fulfillment sums up the experience of the Japan field study trip, gratitude to the Benefactor who provided the scholarship, as well as the professionals who dedicated themselves to preparing the visit, being those from Japan and Malmo.

However, the only aspect worth noting that could have been improved was the fact that the visit to The Nippon Foundation was very brief, as I was looking forward to getting to know the foundation's activities in loco, as well as interacting with the staff with whom correspondence is usually exchanged and has kindly taken care of the Sasakawa fellows.

Even so, the merit of the view remains untouched, as it was one of the best moments and opportunities I had.

Joseph Shoro Diwanga (Namibia)

Brief introduction:

Over the years, the World Maritime University and Sasakawa Peace Foundation have established a tradition of arranging annual one-week-long field study trips for the Sasakawa fellows to Japan. This field study exposes the fellows to the different Japanese maritime academic institutions, leading maritime industry agencies and companies, a courtesy call to the Chairman, Dr. Sasakawa, and sightseeing of cultural and heritage sites. This year's field study trip took place from 6-14 May 2023.

Meeting the Chairman, Dr. Sasakawa:

As Sasakawa Fellow at the World Maritime University, we were so fortunate to meet Chairman Dr. Yohei Sasakawa in person. Out of his busy schedule, he made sure to meet with us, engage in talks, and of course for each fellow to have a picture with this great man. This was the moment everybody was waiting for, a dream come true for all. We all expressed our appreciation and the admiration can all be seen on all the fellows' faces. It was a great moment. It is fascinating to know that Chairman Sasakawa sponsors over thirty master's students at World Maritime University through betting games and other activities. His philanthropic work for people suffering from leprosy is just heartwarming too. Lastly, the World Maritime University Sasakawa Fellows, class of 2023 also presented a portrait to Chairman Sasakawa as a token of appreciation.

Institutions, agencies, and companies visited.

All institutions, agencies, and companies we visited were carefully selected and represent the mission and aim of the maritime industry we want, now and beyond - that of saving lives and properties at sea, marine environment protection, and promoting maritime interest through research and innovation.

I enjoyed the wonderful and educational experience in Japan with field study visits to companies and government agencies making significant improvements in the Maritime industry, like Furuno, Kanmon Kaikyo Vessel Traffic Service Centre, Tokyo University of Marine Sciences and Technology, Kyokuyo Shipyard, Port of Hakata, Maritime Bureau, Tokyo Metropolitan Government Waste Landfill Site, Nippon Survival Training Center and many more.

Among the sites we visited, I was very much impressed with the Ariake Water Reclamation Centre. It was really nice to know that Japan utilizes every drop of water. Rainwater and water used at home, passing through the drains end up in the plant for treatment and thereafter used in the kitchens and bathrooms again, also used as drinking water after several safe treatment processes.

Furuno is a renowned manufacturer of marine electronics. Their state-of-the-art navigation and communication systems play a pivotal role in ensuring maritime safety and efficiency. The company's commitment to innovation and quality was evident in the cutting-edge technologies on display.
HSN-Kikai Kogyo/Heishin Pump Works is a leading manufacturer of pumps and equipment for marine applications. Their expertise in providing reliable and efficient solutions for various marine industries was commendable, contributing to the smooth operation of vessels and offshore structures. Their new research on growing food at sea onboard vessels was all very interesting.

Sightseeing of the Temples.

In the second biggest city in Japan, Kyoto, we had the chance to visit the Kinkaku-Ji Temple in which the “Golden Pavilion” is found. The original which was built in 1397 is said to have been burnt down by a mentally challenged monk.
We also visited the Ryoanji Temple on which the 'Rock Garden' can be found. Unlike a garden with trees and flowers, this unique garden has only 14 rocks (14 are found in the rectangular Zen Garden and the 15 are said to be in your heart).
Then the next stop was Heian Jingu Shrine which has the same settings as depicted in classic Asian movies. And finally, our last stop was the well-known Kiyomizu-Dera Temple. While here, we experienced a heavy downpour of rain and the presence of a large crowd, we couldn't explore this temple like the previous ones but it had the most beautiful mountain scenery right behind the main temple.

The Japanese culture.

One thing I have learned in Japan is the exceptional discipline of its people have with respect to courtesy irrespective of age, position, or status and great respect for someone’s time. No wonder this country continues to grow in all aspects. When we were departing the sites, the Japanese custom of waving until you are out of sight was very beautiful. At some point, you feel like not saying goodbye anymore. The land of the rising sun really has amazing people.

Food, accommodation, transport, and tour guides.

The food was great, and most students were eager to experience and taste as much as they can with Japanese food. The accommodation and transport arrangements were excellent. Our very fascinating, friendly, and welcoming tour guides did an exceptional job. I miss them a lot, especially the head count on the bus!

Conclusion.

The Japan field study trip for the class of 2023 was really an eye-opener for many students. We got the chance to finally meet the man behind our dreams, Dr. Sasakawa. It is my wish and hope that this lifetime opportunity is accorded to all incoming students and may it last as long as we can imagine. A big thank you to all, our accompanying faculty and fellow students. You truly represented WMU and our respective countries very well.

Thank you, SPF!

Jorge Alfonso Gomez Prado (Nicaragua)

First of all, I want to say that the visit to Japan was a life changing experience, since I have never even dreamed with visited Japan, of course I have general knowledge of Japan, its culture, some history and technological development, but never thought possible a visit, I was very excited when Ms. Lyndell officially told us about the trip. Again, I don't think it is possible to thank Dr. Yohei Sasakawa enough for making this possible, the Sasakawa Peace Foundation even gave us money for us to take care of every meal that was not covered in the program.

Since arriving in Narita airport, it was a great experience because even though Ms. Miyo didn't know us, she was very warm when welcoming us. I liked the way we were received, because we were given information about every detail that we needed to know about our visit to Japan.

Overall, the feeling in every facility was pretty much the same, incredibly impressive for the technology development in Japan. All the personnel that welcomed us and gave us insight into their work was so eager to do it well. That was really impressive for me.

We visited Tokyo University of Marine Science and Technology. The MLIT, the Tokyo Metropolitan Government Waste Landfill Site, visited the Ariake Water Reclamation Center, the Kyokuyo Shipyard Cooperation, the Nippon Survival Training Center (NSTC), the Port of HAKATA, the KANMON KAIKYO Vessel Traffic Service Center, the company FURUNO, the HSN-KIKAI KOGYO Co, Ltd. I want to especially make remarks on visit we conducted to The Nippon Foundation, because we had the privilege of knowing Dr. Yohei Sasakawa, we were able to thank him in person everything he and his foundation were doing for us, and even we had the honor to listen to his insight and thoughts, and at the end of the meeting we had the chance to have a picture with him, which I will keep and proudly show to everyone once I return to my home country, for me is very special to know how he helps people and his fight against leprosy is simply admirable, his actions display unparalleled altruism, and now it is a true honor to know that we are part of his legacy.

The last event of the first official day was a lovely reception organized by the Sasakawa Peace Foundation, in which the ambassadors from our countries were invited, I had the chance to meet with the ambassador from Nicaragua in Japan, and not only the ambassador from my country but ambassadors from a lot of countries, and also, I had the chance to meet important people from Japanese's institutions and agencies. That was a very rewarding experience, the week after I met the ambassador from

Nicaragua in Japan she told me that she officially informed the Nicaraguan government about that event, and it was published in Nicaraguan press.

On May 10 we took a domestic flight from Haneda Airport to Kitakyushu Airport, and on May 11 we had the chance to go on board the Hankyu Ferry and we sailed from Shinmoji Port, to Kobe Port. I had the chance to see when we passed under the bridge of Akashi at 05:47 of 12-May, and on the same day we had the chance to travel onboard the "Shinkansen" in which if I remember correctly we recorded a max speed of 279 km/h.

Mr. Kudo and his staff Ms Miyo, and Ms Emi, they were so kind, always concerned that we lacked nothing and that we were always well, and enjoying every aspect of our trip, they were very interested in us being able to forge bonds of friendship among ourselves, and they hired very good interpreters in order to us understand every explanation that was given in Japanese. Personally, I enjoyed Ms. Miyo teaching on the tea ceremony.

The final day, we had the chance to visit different temples, where I saw things that I had only seen on TV, the temples were so clean, with very peaceful ponds, and a lot of colorful vegetation. Like I stated before, I had basic knowledge about Japan, but didn't know about religions in Japan, I had already seen the symbols of Shinto temples on TV, but I never knew what they represented or what the religion was about, it is fascinating to know about the meaning of respecting nature and all living and nonliving things as they do. About the last temple that we visited, the Kiyomizu-dera Temple, I was especially amazed by the impressive view of the landscapes, and having the opportunity to see so many people in traditional costumes, that was very rewarding to me.

I can't overlook the fact that despite the great work performed by all the staff, sometimes we failed to comply with meeting the required time, I personally believe that WMU made a flawless work by trying to take care of every detail. I remember the meetings with Ms. Lyndell, in those meeting she was always remarking that in Japan to be polite and punctual is more than important. That makes me believe that continually emphasizing these aspects is always necessary (even though Ms. Miyo, Ms. Lyndell and Professor Mejia did it all time).

The schedule was very tight, however, I can only imagine how incredibly expensive it must be to take a group of 30 people with all expenses covered to Japan, but I would have enjoyed having a bit more free time to walk around and explore the cities even further. Japan is a beautiful country with a lot of fascinating things to do. For instance in Tokyo I was amazed at the number of pedestrian bridges, it was hard for me to walk around without losing track of my location, that is something that I would have liked to experience more.

Personally, the visit was a life changing experience, the food was very good, the hotels where we stayed were luxurious, I really enjoyed the experiences on the bullet train and the ferry, every aspect of the facilities we visited were really impress, and of course the chance to met Dr. Yohei Sasakawa, was the best experience of all.

Beauty Ebiere Maghoromi (Nigeria)

DAY 1 – Monday 8th May, 2023

On Monday, 8th May 2023, we visited the **Tokyo University of Marine Science and Technology** (Shinagawa Campus) in Japan. It was mentioned that the University has two campuses, Shinagawa and Etchjima, with 243 academic staff members and approximately 2,600 students enrolled. The university has been known for its research in maritime and fisheries industries since it was established on October 1st, 2003.

The tour of the Tokyo University of Marine Science and Technology was an insightful and enlightening experience. The institution's steadfast commitment to education and research left a profound impression on me. The tour was highly educational, offering us a comprehensive comprehension of the university's noteworthy contributions to the field.

During our trip, we explored the Maritime Bureau, which operates under the **Ministry of Land, Infrastructure, Transport, and Tourism (MLIT).** The event was marked by a gracious welcome from Mr. Yoshifumi Miyatake, the Senior Deputy Director General of the Maritime Bureau (MLIT). He shared interesting facts about Japan, such as its large population, vast land area, long coastline, and 47 prefectures.

The next presenter was Mr. Shohei Goto. His presentation covered several topics, including the International Maritime Organization, technology advancements, and the obstacles Japan encounters, such as natural calamities and scarcity of resources. He proposed Japan's feebate system that promotes clean energy and targets eradicating greenhouse gas emissions in global shipping by 2050.

During the following lecture, Mr. Ito, **the Coast Guard International Relations Administration Department Director at the Japan Coast Guard (JCG),** explained that the JCG is primarily a maritime law enforcement agency with no military role. He emphasized the JCG's key objectives, which include Maritime Rescue, Maritime Disaster Prevention, Maintaining Maritime Safety and Order, Maritime Surveillance, Preserving the Marine Environment, and fostering collaboration and cooperation with relevant countries. The visit ended at 3:30PM, following a Q&A session.

Our following visit itinerary was to **The Nippon Foundation**. We were welcomed by the chairman, Dr. Yohei Sasakawa. We took turns introducing ourselves with a heart of gratitude, and after that, he encouraged us to excel and positively impact our community and country. As a gesture of appreciation, we presented him with gifts. By 6:00 pm, we were treated to a lavish reception hosted by the Ocean Policy Research Institute, sponsored by The Nippon Foundation, to cap off a wonderful day.

DAY 2– Tuesday 9th May, 2023

On day two, May 9th, 2023, we had the opportunity to tour the **Tokyo Metropolitan Government Waste Landfill Site**. The officer in charge of environmental management stated that the site was created by reclaiming land from the ocean to manage waste. We had the opportunity to see this reclaimed area, which is now being used as a landfill. We finally learned valuable lessons to pass on to future generations known as the 3 R's: Reduce the number of unnecessary items, Reuse bottles instead of discarding them, and recycle.

During our trip, we visited the **Ariake Water Reclamation Center (AWRC),** a significant cultural asset to the Japanese. We learned about the fascinating wastewater treatment process at the facility. The process involves five stages, starting with the sewage flowing into a grit chamber, where large particles and waste are removed, and smaller sediments are allowed to settle.

This process contributes to improving Tokyo's living environment. We were divided into two groups for a tour of the center. Overall, it was an insightful visit to the AWRC, and we learned a lot about its critical role in maintaining safe water resources.

DAY 3 – Wednesday 10th May, 2023

We left Haneda Airport for Kitakyushu on Wednesday, May 10th, 2023. At 11:00 am, we visited **Kyokuyo Shipyard** at Shimonoseki. We had the honor of meeting the President. Kyokuyo is the only company capable of constructing a diverse range of ships within a restricted timeframe, so prominent ship manufacturers frequently showcased and commended them. Throughout the tour, we witnessed their expertise in constructing vessels from beginning to end and their adaptability in the manufacturing process. Also, we had the opportunity to tour the newly built ship.

At 4:00 PM, we had the opportunity to tour **The Nippon Survival Training Center (NSTC),** the first survival training company. Mr. Seiichi Hashimoto (Chief Operating Officer) further highlighted that their primary training courses are approved by Opito, including Bosiet, Foet, Huet, and STCW. These courses provide essential safety training, including STCW refresher. During our visit to the center, we had the opportunity to witness the lifeboat training process and engage in informative Q&A sessions to conclude the tour.

DAY 4 – Thursday 11th May 2023-

We had a tour at the **Port of Hakata** on Day 4. The port is in **Fukuoka city,** in the southwest region of Japan. Knowing about the Japanese port policy is categorized into four main areas: strengthening international competitiveness and supply chain resiliency, achieving carbon neutrality and marine environment protection, ensuring the safety and security of the people, and enhancing the competitiveness of key industries in the region to create a thriving atmosphere is a great deal to me and the implementation plan for the CNP is scheduled to establish a carbon-neutral effort through partnerships with private and public entities.

Next was a courtesy call to the President, Mr. Kazuaki Muramatsu of **Kanmon Kaikyo Vessel Traffic Service Center.** During the presentation, we learned that the VTS strives for zero marine accidents by providing maritime traffic information and signal controls to prevent accidents. The center is responsible for maintaining and enhancing the safety and efficiency of vessel traffic in the Kanmon Strait. It is essential to know that they offer technical assistance to foreign nations to enhance their maritime safety and security expertise and abilities.

Day 5 -Friday 12th May, 2023

On Friday, the 12th of May 2023, we visited **Furuno,** which specializes in manufacturing marine and fishery equipment which supports safe and secure navigation. We were told Furuno envisions the future of marine technologies and marine travel in bringing together the most census of marine technology and marine recreation. Also, 80% of their products are manufactured in the Furuno milky factory. The most exciting part about the tour is how the factory maintains control of parts and equipment drawings and production.

Next was the visit **HSN-KIKAI KOGYO Co. Ltd**. During the presentation, we were briefed on the company's history. Afterward, we had an exciting factory tour of the exhibition rooms, pump factory, and bilge separator factory to understand the complexity of the product, which is designed under IMO specifications, and we visited the HSN leafy vegetables farm using the hydroponic systems (Ondine VH); which uses sunlight.

Day 6- Saturday 13th May 2023

We visited **Kinkaku-Ji Temple, Ryoanji T, Helan Jingu Shrine**, and **Kiyomizu – Dera Temple.** We returned to the hotel and had our wrap-up meeting by 8:00 PM to show our appreciation to everyone, including Mr. Kudo, Emi, and Miyo.

The field study provides a greater appreciation and comprehension of Japan's culture and global contribution. The study broadened my horizons and deepened my comprehension of a different country. There is much to learn and possibly implement into our educational systems.

Special appreciation to Kudo San for his seamless assistance. Your service to humanity is, service to God, and Emi San and Miyo San, whom we adore, thank you very much for the tour and for participating in the tea ceremony. Long live Sasakawa.

Elgene Jalon Francisco Gregorio (Philippines)

Tokyo University of Marine Science and Technology

On or about 9:30am, 8 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit the Tokyo University of Marine Science and Technology. We were warmly welcome by the faculty and staff of the university upon arrival. Thereafter, we proceeded to their auditorium for a presentation of the effort that they are being conducted towards octopus fishery.

Accordingly, Octopus fishery started at least 2000 years ago in Japan. Japanese people love octopus and some of the famous Japanese dishes from octopus are sushi and sashimi. Octopus can be found on the seafloor throughout the world. From 1950 to 2020, octopus production relies completely on wild resources fishery production, because of this, octopus resources suffer overfishing after Year 2000. Based on records, Japan octopus consumption is about 70 thousand tonnes annually, its breakdown is 35 for fishery production and 35 from importation.

The aim of MST on paralarva culture is to improve the knowledge pertaining to ecology and resources and to develop octopus aquaculture and conservation technology. Through this, they have developed a tank design to control water flow under culture condition. First is the air block, which is a curtain like aeration settled near corners of the tank, mild circulating flow is established and is consider as most popular method in Japan hatcheries. Second is the agitator and aeration, it is a propeller like fin rotates slowly on the center near the tank bottom. The aerations are placed around a fin to provide oxygen agitation for upper layer. It established a strong and steady random water flow. Then the pump and oxygen gas, which is settled in a filter produces a mild circulation water flow near the tank bottom. It maintained the gentle water flow environment in middle and upper layer. This method can improve the survival of grouper and tuna larvae.

In general, the tour inside and the knowledge we have gained from the presentation is very timely, same as octopus, other marine resources is also experiencing overfishing. The duplication of what the school have done is so encouraging especially to our colleagues from fisheries. The tour had concluded on or about 11:30 am same date.

Ministry of Land, Infrastructure, Transportation and Tourism

On or about 13:30pm, 8 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Foundation visit the office of Ministry of Land, Infrastructure, Transportation and Tourism (MLIT). We were warmly welcome by the Officer and staff of the MLIT upon arrival. Mr. Shohei Goto from the Office of International Negotiation of Ocean

Development and Environment Policy Division presented to us their effort on the maritime policy on decarbonization of international shipping.

In support to IMO effort towards decarbonization, MLIT is aiming for GHG emissions net zero in international shipping by 2050. They have presented the initiatives of IMO such as the flow of climate change counter measures at IMO from 2018 to 2030. In response to IMO strategy, Japan has submitted a proposal about the amendment of the strategy which is in 2050 it should be GHG emission phase out and Japan is proposing 50% reduction of GHG emission by 2040 as an intermediate target. They also presented the timeline of the proposed targets and its goals in line with pathway.

Japan support the development of the core technologies of zero emission ships through the green innovation fund. The timing of the demonstration of zero-emission ships is planned tobe ammonia fueled ships in 2026 and hydrogen fueled ships in 2027. In addition, it develop a guidelines for bunkering methods from perspective of promoting the deployment of zero-emission ships. Moreover, for the decarbonization of Japan has also effort for decarbonization of coastal shipping and actions to be made towards its realization.

Tokyo Metropolitan Government Waste Landfill

On or about 9:00am, 9 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Tokyo Metropolitan Government Waste Landfill. We were warmly welcome by the employee of the office.

Accordingly, the annual volumes of Tokyo's waste has significantly increased since 1885, primarily due to changes in lifestyle and the social system of mass consumption and mass production. In 1989, the waste volume was at a record high of 4,900,000 tones. Due to its effort, the volume of waste decreased the following years a total of 2,560,000 tonnes by 2020.

The process of waste landfill is all waste is being collected and transported from each district. In order to prolong the landfill sites, waste undergoes immediate processing before being used as landfill. After immediate processing, the waste is carried and dumped at specified locations by trucks, then the waste is being laid down by bulldozers efficiently and safely. When the waste reaches a certain thickness or when road construction is necessary, soil is applied to cover the waste. Also when the landfill is complete, a final cover of soil is applied. They have also presented the waste water treatment and its flow, land fill site transition and the trend of landfill waste disposal volume. The students were able to have a tour in the landfill area and experience firsthand how the process is being done.

Ariake Water Reclamation Center

On or about 13:00pm, 9 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Ariake Water Reclamation

Center. We were warmly welcome by the employee of the office and prepared a brief presentation prior the tour inside the facility.

Ariake Water Reclamation Center is a separate sewage system water treatment facility. It is built in Tokyo maritime sub-city center's Clean Center. Its treatment area is part of the Sunamachi Treatment District（Tokyo maritime sub-city center and surrounding areas, and part of the landfill inside the central breakwater.

The Center adopts advanced wastewater treatment using A2O method（anaerobic-anoxic-oxic process）and biological filtration process, and discharges the treated water into Tokyo Bay（Ariake-nishi Canal. A part of the treated water is further cleaned using ozone before being used inside the Center for cleaning facilities, cooling machines, and is also used as water for flushing toilets in buildings in Tokyo maritime sub-city center. The generated sludge is pumped through pressure pipelines to Tobu sludge plant for treatment.

The sewerage system is principally made up of 3 facilities. The sewers, which collect and carry sewage. Pumping stations, where sewage is pumped up so that the sewers do not get too deep. Water reclamation centers, where sewage is treated to be clean water. Inspections, cleaning, and repairs are done daily in order to make sure each of these facilities works properly. They have also presented the role of the sewage system, ground plan and its features.

Kyokuyo Shipyard

On or about 11:00am, 10 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation paid a courtesy visit at Kyokuyo Shipyard. We were warmly welcome by the officers and staff of the shipyard upon arrival. They have prepared a brief presentation as to what the shipyard is all about.

Kyokuyo Shipyard is a compact shipyard based in Shimonoseki. It was established in 1942 as Hikoshima Shipbuilding Company by the combination of five neighboring shipbuilding companies, it was engaged in shipbuilding and ship repair. In 1961, the name of the company was change to Kyokuyo Shipbuilding and iron works ltd. From thereon, the company was engaged in the building capacity expansion to increase its building and repairing capacity and to be able to handle larger vessels. In 1984, the name of the company was changed to Kyokuyo Shipyard Corporation, from thereon, the company has become one of the leading shipbuilders and ship repair company in Japan.

Just like any other shipyard in Japan, Kyokuyo shipyard is also a member of the Shipbuilders Association of Japan. The SAJ comprise of 17 member companies which is an organization of shipbuilding and Ship-repairing companies in Japan.

Kyokuyo Shipyard was engaged in building a pure car carrier, roll-on/roll-off ship, multi-purpose cargo vessel, LPG carrier, reefer ship, cement carrier and advance coastal ship. The company was known in building the world first SSS-bowed eco-ship “City of St. Petersburg” and was proclaim as the Japan Ship of the year 2011, the most valuable award in the Japan’s shipbuilding industry. Likewise, on 2016,

the SSS-B Container Ship Natori win as logistics environment award and was named ship of the years category winner. Moreover, the Senior Managing Director and the boss of designing team of Kyokuyo Mr. Tetsuo Mitsui was awarded the Prime Minister Prize for CY 2020 at the 8th Monozukuri Nippon Grand Award Ceremony.

Nippon Survival Training Center

On or about 14:00pm, 10 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Nippon Survival Training Center. We were warmly welcome by the instructors of the training center.

Accordingly, Nippon Survival Training Center (hereinafter, NSTC) through employment of offshore survival training in accordance to internationally recognized standards, endeavors to assist any persons, associated with the world's offshore industries, acquire the needed skill sets so that they may react accordingly and survive when accidents may occur. NSTC further contributes to the development of an increasingly sounder and safer offshore industry.

NSTC, Japan's premier offshore survival training center, which complies with internationally recognized OPITO training standards, cultivates the growth of personal safety and resources that are needed for the safe operation of Offshore Oil & Gas and all other maritime associate industries.

Furthermore, NSTC organization's management system, through continual development and auditing ensures a high quality and efficiency for the safety and wellbeing of all persons while ecologically supporting our environment.

Port of Hakata

On or about 10:00am, 11 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Port of Hakata We were warmly welcome by the Officers and employee of the port.

Accordingly, Hakata Port has been developing as a hub for international exchanges with the Korean Peninsula and the mainland China since ancient times. In recent years, the port has been welcoming a number of domestic and international cruise ships as it is located about 200km to Busan, Korea and about 900km to Shanghai, China. Hakata Port has a liner passenger service connecting the port with Busan, Korea in about three hours and handles the largest number of international passengers among sea ports in Japan.

Hakata Port is located in Fukuoka City, a comfortable city where a resort area with rich nature and an attractive urban area coexists and keep a good balance. The city has a good access to the port. Its compactness enables many tourists enjoy sightseeing to historical shrines and temples or shopping. The city is also one of the best Japanese cities for good food. Visitors can enjoy variety of food such as ramen noodles and seafood. We were witness how the port operations inside the terminal is being done and have learned a valuable lesson which we can apply back home.

Kaimon Kaiko Vessel Traffic Service Center

On or about 14:00pm, 11 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Kanmon Kaikyo Vessel Traffic Service Center. We were warmly welcome by the Officers and men of the Vessel Traffic Service Center.

Accordingly, Kanmon Kaikyo Vessel Traffic Service Center, "Kanmon MARTIS", whose mission is to maintain and improve safety and efficiency of vessel traffic in the Kanmon Strait, has been established and operated by Japan Coast Guard. It has published a user manual which aims at contributing to safe navigation of vessels by explaining about services provided by "Kanmon MARTIS" and essential information while navigating in the Kanmon Strait. Vessels navigating in the Kanmon Strait are highly recommended to carry the manual in the bridge and utilize as a reference book. The Kanmon MARTIS is operated in accordance with acts, cabinet orders, ministerial ordinance, public notices and administrative guidance.

After the brief presentation we were divided into three groups for the purpose of visiting the different station of operations of the center. Each of the stations plays a significant role to ensure that all vessels plying at the area will adhere to the rules and regulations in the manual and most especially for maritime safety purposes.

FURUNO

On or about 9:30am, 12 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit Furuno Company. We were warmly welcome by the Officers and employees of Furuno. They have prepared a brief presentation about the company and the product they have being offer.

Accordingly, the history of Furuno can be traced back in 1938, when Kiyotaka Furuno founded Furuno Electric Shokai Ltd., the predecessor of Furuno Electric Co., Ltd. While handling the works of outfitting electronics onboard vessels, he felt a strong urge to modernize fisheries, which led to his venture into developing fish finders. He successfully commercialized the world’s first practical fish finder in 1948.

In 1972, FURUNO was awarded the NMEA (National Marine Electronics Association) Best Product Award in the fish finder category in the US. FURUNO established its first overseas subsidiary in Norway in 1974, which was followed by the establishment of subsidiaries in the US (1978) and the UK (1979), foreshadowing its full-scale entry into the international business arena.

FURUNO became listed on the Osaka Securities Exchange in 1982. Based upon technological proficiency gained through its involvement in the fisheries industry, FURUNO ventured into other maritime market sectors such as merchant marine and recreational marine sectors, truly becoming a total marine electronics manufacturer.

After then presentation, we were able to visit their factory and witness how the different products was being developed. Through the years, the product of Furuno has become one of the vital equipment on board vessels.

HSN-Kikai Kogyo Co., LTD

On or about 13:30pm, 12 May 2023, the Sasakawa Fellows from the World Maritime University accompanied by the Staff of WMU and Sasakawa Peace Foundation visit HSN-Kikai Kogyo Co., LTD. We were warmly welcome by the President and employee of the company. They presented a brief presentation about the company.

HSN Kikai Kogyo Co Ltd established in 1940's is one of leading manufacturers of marine pumps, Oil Water Separators and Oil Discharge Monitoring Systems for tankers. HSN-KIKAI has the world's most compact oily water separator, complying to latest MEPC 107(49) standards with 4-chamber technology that separates the oil in water to specified ppm levels. Its features are, Internal cleaning is easy as the whole surface can be opened, because of which maintenance/inspection can be conducted easily, All entry and exit points are one way, Installation is easy as all the pipes of bilge inlet, processed water outlet, separated oil outlet are in same direction, World's smallest oil-water separator, Easy replacement and installation as it would easily fit into the installation space of existing oil-water separator due to its compact design.

After the presentation, we are separated in three groups for the purpose of tour in its facilities. We were able to see firsthand how their product is being developed according to highest level of standard that a Japanese product being offered.

Alysious Forbie (Sierra Leone)

I am writing to provide a comprehensive report on the series of site visits conducted from 8th to 12th May. The purpose of these visits was to gain insights into various institutions, companies, and facilities related to marine science, maritime infrastructure, and related industries. The visits were conducted as part of an exploration and knowledge-sharing initiative with the aim of expanding our understanding and fostering international collaborations. The tour was as follows:

Tokyo University of Marine Science and Technology (TUMSAT)

Date of Visit: 8th May

The tour of TUMSAT provided a valuable opportunity to interact with faculty members, researchers, and students involved in marine science and technology. We learned about the university's research focus areas, ongoing projects, and academic programs. The discussions emphasized the importance of marine conservation, sustainable fisheries management, and technological innovations in addressing the challenges facing our oceans.

Courtesy Visit on Maritime Bureau, MLIT

Date of Visit: 8th May

During the courtesy visit to Maritime Bureau, a division of the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT), we had productive discussions on maritime policies, coastal management strategies, and efforts to ensure safety and security in the maritime domain. The exchange of ideas and information fostered a deeper understanding of the initiatives undertaken by MLIT and their impact on the maritime sector.

Courtesy Visit on Mr. Yohei Sasakawa

Date of Visit: 8th May

The courtesy visit to Dr. Yohei Sasakawa provided a unique opportunity to engage with an influential and a Magnanimous figure in World Maritime University (WMU). Dr. Sasakawa shared his experiences, insights, and vision for the future to help and build more maritime professionals of the maritime sector and in return to their respective Countries. His perspectives on sustainable development, technological advancements, and international cooperation were enlightening and inspiring.

Tokyo Metropolitan Government Waste Landfill Site

Date of Visit: 9th May

The tour of the Tokyo Metropolitan Government Waste Landfill Site allowed us to witness firsthand the waste management practices and environmental initiatives adopted by the government. The visit emphasized the importance of waste reduction, recycling, and proper disposal techniques to minimize environmental impact and promote a circular economy.

Ariake Water Reclamation Center

Date of Visit: 9th May

The visit to the Ariake Water Reclamation Center provided valuable insights into Tokyo's efforts to ensure efficient wastewater treatment and resource recovery. The center's commitment to environmental sustainability, technological innovation, and resource optimization was commendable. The tour showcased advanced wastewater treatment processes and the center's focus on resource recovery from wastewater, highlighting their commitment to circular economy principles.

Kyokuyo Shipyard Cooperation

Date of Visit: 10th May

Our visit to Kyokuyo Shipyard Cooperation offered a comprehensive understanding of the shipbuilding industry, technological advancements, and the company's contributions to maritime infrastructure. The tour showcased the company's state-of-the-art facilities, skilled workforce, and their commitment to environmental sustainability in shipbuilding practices.

Nippon Survival Training Center (NSTC)

Date of Visit: 10th May

The visit to NSTC provided valuable insights into the comprehensive training programs and facilities available for maritime and offshore industry personnel. The center's emphasis on safety, realistic simulations, and practical training approaches were impressive. We witnessed the importance of preparedness, quick thinking, and teamwork in emergency situations at sea or in offshore environments.

Port of Hakata

Date of Visit: 11th May

The visit to the Port of Hakata allowed us to explore the operations, infrastructure, and significance of this bustling maritime hub. The port's strategic location, efficient facilities, and commitment to sustainability were evident. It served as a gateway for trade and played a crucial role in regional economic development. The discussions with port authorities shed light on their ongoing initiatives to enhance operational efficiency, promote sustainable practices, and strengthen collaboration with stakeholders in the maritime industry.

Kanmon Kaikyo Vessel Traffic Service Center

Date of Visit: 11th May

The tour of the Kanmon Kaikyo Vessel Traffic Service (VTS) Center provided insights into the center's crucial role in ensuring safe and efficient vessel traffic in the Kanmon Straits. The dedicated staff members demonstrated their expertise in monitoring vessel movements, maintaining real-time situational awareness, and providing essential navigational guidance. The center's advanced technologies and effective coordination with various stakeholders were instrumental in preventing accidents and minimizing congestion in this vital waterway.

FURUNO

Date of Visit: 12th May

The visit to FURUNO, a leading manufacturer of marine electronics and navigation systems, was enlightening. The company's commitment to innovation, continuous improvement, and customer satisfaction were evident. We explored their research and development facilities and witnessed firsthand their cutting-edge technologies. FURUNO's collaborations with research institutions and industry partners highlighted their dedication to addressing the evolving needs of the maritime industry and enhancing navigational safety.

HSN-KIKAI KOGYO Co., Ltd. (Heishin Pump Works Co., Ltd.)

Date of Visit: 12th May

Our visit to HSN-KIKAI KOGYO Co., Ltd., specializing in manufacturing pumps and machinery for marine and industrial applications, showcased their precision engineering and commitment to quality. We observed their advanced manufacturing processes and discussed their contributions to environmental sustainability through energy-efficient pump systems. The company's dedication to meeting customer requirements and their reputation as a reliable supplier in the industry were evident.

In conclusion, the series of site visits provided valuable insights into various aspects of marine science, maritime infrastructure, waste management, shipbuilding, maritime safety, and technological innovations. The interactions with experts, professionals, and industry leaders allowed for knowledge-sharing, fostering potential collaborations, and gaining a deeper understanding of global best practices.

I personally express my sincere gratitude to Dr. Max Mejia and Mrs. Lyndell Lundahl, for your astute leadership and by making this a successful one. and to all the institutions, companies, and more especially to Chairman Yohei Sasakawa, and The Nippon Foundation Team. That graciously hosted us during the field studies trip in Japan. Their hospitality, expertise, and willingness to share knowledge contributed significantly to the success of our tour.

Kevin Providence (St. Vincent and the Grenadines)

Introduction

Even a week after returning from Japan, I am still filled with excitement. It was a great privilege being a part of the 2023 Sasakawa Fellowship family which concluded on the 13th may 2023 visit to Japan. The knowledge, experience and friends gained on this 8-day trip will last the span of our life time.

The visit started with two long flights across the Pacific Ocean and across 5 time zones, landing us at the Narita Airport in Japan, with that, our 8-day trip began. We toured numerous institutions, ports, factories, government agencies, tours in the cities and tourists site visits. It was a very packed and exciting experience which I am sure left us all more aware and knowledgeable about maritime field and Japan all together.

Visit to The Nippon Foundation to meet Dr. Yohei Sasakawa

This was one of the major highlights of the trip. We met with Dr. Sasakawa and exchanged pleasantries and photos. Despite his busy schedule, he took a little time grace us with his presence. He listened as each student gave brief comments and had a photo session after. It was so amazing to see how kind, calm and humble his demeanor was for such a very important man.

The food and hospitality

Coming from the Caribbean, the cutlery and food in Japan was nothing I've experienced before. I can proudly say that I learned to use chop sticks literally over night and looked forward to every meal so I could use them over and over. Mr. Kudo and many students were amazed at how well I used them and were surprised when I told them I had just learnt to use them. The food was so nice with flavor and diversity, I enjoyed most the jiaozi, yakisoba, ramen and the Japanese curry. I would enjoy travelling to Japan in the future.

Despite the diversity of diet among the group of students, the Japanese cuisine was not only pleasing to all of our pallets, it was major highlight. Students would travel around each night to different restaurants to try different delicious Japanese dishes. The hotels incredibly comfortable, I spent a lot of time soaking in the bath tub. The Staff were so inviting, helpful and courteous with their service, not to mention how secure we felt at each hotel and through out the entire trip.

The people and culture

Passing strangers old or young on the street, everyone expressed Japanese gestures of respect. It was clear the culture was deeply rooted in respect and tradition. The people were very humble and kind, even simply asking for directions, we were greeted warmly by passersby. It is impossible to not be amazed

by such humility and modesty. The world can learn a thing or two from this seemingly simple act. The temples we visited on the last day was quite the marvel especially the Ryoanji temple with its stone garden of Karesansui. It is a place with 15 stones arranged so that one stone will always be hidden from your vision when standing in one position. 15 is seen as a perfect number. Being unable to see all 15 stones at once, this points to the imperfection of us all and that we should be thankful for who we are. A heartfelt thanks to our wonderful guides Ms. Emi Shimada, Ms. Reiko Naito and Mr. Kudo for making our trip such a wonderful one and for the insightful knowledge about Japan.

Dani Daniel Chunga (Tanzania)

Introduction

The Word Maritime University Sasakawa fellow field study from 7th-12 May 2023 in Japan for S.2023, financed by The Nippon Foundation, was part of the curriculum and was intended to introduce students to actual and practical domains of work, where we toured various industries. They are expected to be particularly watchful and curious here, gathering facts that will aid in the learning process. In our case, as ocean management experts, we visited many regions with diverse ocean-related initiatives, which motivated us to keep working hard to achieve our goals.

The field trip destination of interest might be stated in many parts.

On May 8, 2023. Dr. Toshio Iseki, President of the Tokyo University of Marine Science and Technology (TUMSAT), and Ms. Junko Yasukawa, Chief Academic Support, and International Decision, International Cooperation Section, provided an outline of the institution's functions. The institution is the principal source of assistance to appropriate researchers and professionals for the marine environment, as well as supporting the government in complying with international rules, as the motto "Voice of the Ocean" indicates.

The next stop was the Maritime Bureau, MLIT. From this institution, Mr. Yoshifumi Miyatake, Deputy Director General of the Maritime Bureau, and Mr. Akihiro Tamura, Director of Ocean Development and Environmental Policy Division, gave an overview of the institution's functions, the main lesson here was how Japan is dealing with the Goal of GHG emission net zero in international shipping by 2050 at the COP 26 through formulation strong emission prevention policies as I am from a developing country, we can adapt such policies.

The Nippon Foundation office was our next stop, where we met with Dr. Yohei Sasakawa, Chairman of The Nippon Foundation. It was a joy to meet our donor, and the essential message was Sasakawa fellow as one world and one family, our strong network is a big tool for a healthy ocean.

On May 9, 2023, it was a pleasure to visit the Tokyo Metropolitan Government Waste landfill site and Ariake Water reclamation center under the field the team led us in various sections and the main lesson I learned on how Japan is successful in waste management and development of artificial island from Tokyo city waste but also water recycling surprised me and opened my eyes to see how my country can success in waste management by learning from Japan technology.

On May 10, 2023 the visited Kyokuyo Shipyard cooperation where Mr. Katsuhiko Ochi president and company staff gave us the company overviews and we were able to look at the different sections, my observation was the humbleness and hard work of Japanese but also how Japan is developed in shipbuilding I come to realize that on the way of developing shipping sector the Tanzania government can adapt the development skills from Japan.

Another stop was at the Nippon Survival Training Centre (NSTC), where Mr. Seiichi Hashimoto, the Chief Operating Officer, gave an overview of the training center and the lesson was the importance of such an institution in providing satisfaction to clients and society with graduates of the sea and earth while aiming for offshore workforce development, preventing loss of workforce due to accident, and responding to international standards through courses provided successfully.

On May 11, 2023, we visited the Port of Hakata, where Mr. Tetsushi Hayakawa, Chief Executive, and Mr. Yasufumi Shigetomi, General Manager Container Department, gave us an overview and passed through different sections of the port such as the cargo discharging yard, the fact that due to its advancement, the port is very significant for transportation of truck and other cargo in Asian countries such as Taiwan and South Korea, the modern world needs modern port.

The second station on this day was the Kanmon Kaikyo Vessels traffic service center, where Mr. Kazuaki Muramatsu gave an overview of this institution, as well as an observation of traffic control modern tools, as the key message here is that we need advanced traffic control equipment for a safe ocean because it prevents ships from colliding and other ocean pollution.

On May 12, 2023, we visited Furuno and Mr. Yukio Furuno president and other staff led the team in different company sections the lesson from the motto **"Challenge the Invisible"** where the company helps people to see things that are invisible, as a young student with ambitions I would like to make things happen as Furuno make an invisible product visible and affect the shipping industry globally.

Another station for the day was HSN-KIKAI KOGYO Co.Ltd (Heishin Pump Works Co.Ltd), where Mr. Shohei Tomofuji gave an overview on the section of Marine pump products, equipment for preventing environmental pollution and saving energy, health and welfare, electrical motor and hydroponic system for greenhouses. The main lesson is the development of products for protecting the environment, saving energy, agriculture, and health, and ensuring the sustainability of our ocean.

Finally, I would like to thank Dr. Yohei Sasakawa, Chairman of The Nippon Foundation, for his assistance, the Government of Japan for providing the Visa, Mr. Eisuke Kudo and his team from Sasakwa fellow, all Japanese Directors, Managers, and Staff, workers from all institutions we visited

for their kindness and support they provided, WMU staff representatives Prof. Max Mejia and Lundahl, Lyndell for their guidance and thus accomplishment our field trip.

Francesco Leonardo Castiglione Escontrela (Venezuela)

Summary: The field study provided a once in a lifetime opportunity to engage in an absolutely integral formation experience, we obtained: (i) Practical knowledge of the Japanese maritime and fishing industries; (ii) Insight into the State's role in the maritime sector as a regulator and as a promotor; (iii) Insight into Japanese work ethic and culture, how effort, discipline and respect are held as the bar to meet for all workers and leaders and (iv) a general view of the future of the maritime industry and current trends.

I. Overall Impressions Report, discriminated by each site visit:

1. Tokyo University of Marine Science and Technology ("TUMSAT") (May 8, 2023).

The site visit to TUMSAT was divided into three sections: (i) Presentation on TUMSAT's history and programs, with a punctual description of an ongoing project; (ii) A walking tour through TUMSAT's labs that work on reproductive biotechnology and (iii) walking tour through a testing facility where they conduct experiments testing the reaction of offshore fish farming nets to change in currents.

- **Personal impressions:** Universities often are a window into a country's future, TUMSAT was not the exception. TUMSAT is focused on sustainable fishing, environmental protection and innovation that is compatible with these goals; this is in line with what we saw in the Maritime Bureau next in MLIT.

2. Maritime Bureau, MLIT (May 8, 2023).

At MLIT we were introduced to Japan's maritime administration goals and objectives, their regulatory scope and governing goals. Additionally, we dove into the MLIT's policy in maritime decarbonization. Within this policy, we reviewed Japan's net zero goals and timeliness, target dates and policy initiatives from the private and public sector oriented to achieving these goals.

Furthermore, and of great interest, we were shown the strategy that Japan will follow in the upcoming MEPC80, this -without a doubt- was incredibly enlightening given Japan's role in international shipping and maritime commerce.

- **Personal impressions:** What surprised me personally, was that TUMSAT and MLIT had a commonly held view of SDG's, acknowledging practical limitations, but always holding the community, the maritime sector and the State to a more ambitious goal, this, as a mechanism to keep a competitive edge in the sector, while holding their position as a role model to other sector participants in other developed economies.

3. Visit to The Nippon Foundation (May 8, 2023).

After meeting Chairman Dr. Yohei Sasakawa through reputation and in the video address we receiving during foundation at WMU, we could not wait for the opportunity to meet him personally. This excitement came not only from the fact that SPF made our education possible, but from the fact that he is an incredibly accomplished person, a role model and a trajectory to aspire to.

Hearing his words of encouragement, wisdom and foresight served not only as a welcomed boost to the challenges ahead, but as a clear indication of what is expected of us. We cannot go back to being the same, we have to come back to our countries as agents of change and capacity building, any less would be a disappointment to those who have placed so much hope and resources on our education.

4. Tokyo Metropolitan Government Waste Landfill Site ("Landfill") (May 9, 2023).

At the Landfill, the class learned the fundamental value of the three "Rs": Reduce, Reuse, Recycle. These goals were made abundantly clear during our visit. At the Landfill, we were introduced to the collection mechanism for waste, that integrates 23 city management systems, that all converge in one place, that is located on land regained from the seas; we were introduced to the complex logistics located behind the collection, transportation, sorting and processing of waste.

- **Personal Impressions:** The capacity of the Landfill's administration to coordinate so many simultaneous and heterogeneous processes is nothing short of admiration worthy. The incredible work ethic of the Landfill's staff would only be matched by the dedication of the staff at our next visit.

5. Ariake Water Reclamation Center ("WRC") (May 9, 2023).

At the WRC we were introduced to each step and process behind turning contaminated water from household and industrial use to water that can be used for the same industrial and agricultural processes that initially contaminated it.

- **Personal Impressions:** Talking with WRC staff was very interesting, they have a notion of community and society, rather than a notion of "self"; they understand the importance of their work and take great pride in making WRC work for the benefit of the people of Tokyo.

6. Kyokuyo Shipyard ("KS") (May 10, 2023).

At KS we were introduced to the shipyard's history, annual output capacity, main ships being designed, built and tested at KS and the safety measures taken at the site to prevent accidents and ensure high building standards. We culminated with the once in a lifetime opportunity of sending a vessel in her maiden voyage.

- **Personal Impressions:** This, with WRC and Furuno, was among my favorite environmental and maritime sector visits. Shipyards are incredible facilities where the shipping business truly begins, this gave me insight into my chosen field and to what constitute the bedrock of the shipping business.

7. Nippon Survival Training Center ("NSTC") (May 10, 2023)

Interesting visit, we were informed on training programs, certification standards and other elements that go behind SAR operations and daily life at sea.

- **Personal impressions:** It was interesting seeing the pool where they conduct training, even for helicopter crashes at sea and the life rafts that are used today on the field.

8. Port of Hakata and Kanmon Kaikyo Vessel Traffic Service Center (VTC) (May 11, 2023)

Although short and limited both visits presented different facets of the sector. At Hakata we saw port operations as they were happening, port distribution and logistics was awe-inspiring; at VTS we saw a crucial part of safe navigation and collision avoidance at work, thousands of data points influencing each navigational command given by those that operate at VTS, it was a humbling experience.

- **Personal impressions:** dedication and commitment to safety are the two banners we took from these sites.

9. Furuno and HSN-Kikai Kogyo Co., LTD ("HSN") (May 12, 2023).

At Furuno, we saw "from scratch" how sonars for fishing boats are built, how the painstaking process is followed from a ceramic cylinder to installation on a vessel; at HSN we saw the same, but for pumps used to clean sludge from vessels and separate contaminants from ballast and tank cleaning water.

- **Personal impressions:** Furuno was incredible, the dedication and attention to detail of all employees was mesmerizing. At HSN I was impressed by the onboard hydroponics that are being developed and where the industry is going.

Quan Hieu Nguyen (Viet Nam)

On May 6, 2023 we started our field trip in Japan sponsored and guided by the Sasakawa Peace Foundation. This is a week-long trip with extremely interesting and varied experiences; when we were able to study and visit from administrative offices to private companies that are the link in the maritime field of Japan. In addition, the journey from the center of Japan (Tokyo) to the Eastern provinces of Japan (Fukuoka) with the reasonable use of all kinds of public transport from high-speed trains to airplane and ships.

On the first day of the trip, we visited Tokyo University of Marine Science and Technology (TUMSAT); we were warmly welcomed by the faculty and staff of the university. The lecture about this university helped us better understand the formation of the university and the importance of training the students who are the future of the maritime industry. Moreover, the biology lectures and visits to the university's laboratories are very practical and help us to gain a lot of unique knowledge that has never been learned before. End the morning with a wonderful lunch thoughtfully prepared by representatives of the Sasakawa Peace Foundation. This made a lot of sense after we experienced long flight times with time zone changes.

In the afternoon, we had the opportunity to visit Japan Maritime Bureau and was honored to receive Courtesy Call on Mr. Yoshifumi Miyatake, Deputy Director – General of the Maritime Bureau, MLIT. Through the introduction to MLIT, Maritime Bureau and Japan Coast Guard; We have learned more about Japan's maritime administration organization and realized that Japan's cooperation projects with developing countries are very important, especially in Southeast Asia.

Then we had the Courtesy Visit on The Nippon Foundation and had the honor of meeting Mr. Yohei Sasakawa, Chairman of The Nippon Foundation – who gave us wings to dream. Mr. Yohei Sasakawa gave an inspirational speech for the younger generation like us and it was great for us to also interact with him through the introduction of ourselves. In the evening, we participated in the Welcome Reception, which is a party for WMU students and Sasakawa's friends; I was able to meet WMU alumni and get to know officials from MLIT or even people directly related to our current work in our own country. Sasakawa Peace Foundation created a great evening where everyone can network and have a good time.

On the second day, we visited the Tokyo Metropolitan Government Waste Landfill Site and had the opportunity to learn about how to recycle waste and use it to build artificial islands. Although not related to the maritime field, these are very interesting and practical lessons; able to be used in any country in the world. In the afternoon, we were able to visit Ariake Water Reclamation Center, which is a typical wastewater treatment plant, the instructions and presentations of the plant staff were very detailed and thorough.

On the third day, we moved to Fukuoka and visited Kyokuyo Shipyard in the morning. The factory tour was really helpful for us. It gave us a hands-on learning about how the shipyard company works, how the functional divisions are laid out by visiting both the shipyard and where the design engineers work, as well as a thorough explanation of their questions for us. The luckiest of all, we were able to step on to visit a newly completed ship and prepare to leave the shore for the first time; I still vividly remember the very emotional moment everyone saw off the ship. In the afternoon, the next destination is Nippon Survival Training Center; we were given a presentation about the center and a tour of the training facility and we would really like to see firsthand the rescue exercises performed by the center if possible.

On the fourth day, we got to visit the Port of HAKATA with a cruise around the harbor's waters. It can be said that this is a great opportunity to observe the planning and operation of the port on the seaport waters. In the afternoon, KAMMON KAIYO Vesel Traffic Service Center under the Japan Coast Guard is the next stop; we can attend the lecture and directly observe the operation of the center. This place can be said to be associated with the work of one of our students and it is truly an honor to meet and learn how to work with Japanese colleagues. The public servants were very open and greeted us without any hesitation.

On the fifth day, we moved to Kobe and visited FURUNO factory - one of the factories manufacturing marine communication equipment and HSN-KIKAI KOGYO company - manufacturing hydraulic equipment. While both companies are related to the maritime sector, they have little to do with our work. This is a tour and learn something new from these two companies.

The last day, this is the day we learn and visit famous temples in ancient Kyoto. It was great to visit four temples and learn more about the history and culture of the beautiful country of Japan. The time to travel and visit between temples is extremely reasonable, we did not feel rushed at all.

The trip ended with a summation evening for everyone and the Sasakawa Peace Foundation delegation. The closing ceremony took place in a very cozy and intimate atmosphere; to summarize what has been experienced during the trip.

The preparation of accommodation and meals for the day during the entire trip was superb, every single one of us was taken care of. The meals are really perfect, no one has any complaints about this. However, one of us did feel fatigued in the final days of going through a hectic and constant travel schedule; although always grateful and appreciative of your efforts in arranging your trip with the hope that we can visit as many places as possible.

Once again, we would like to thank the Sasakawa Peace Foundation for sponsoring this wonderful internship. This is an unforgettable experience for each of us and it is certain that we as members of the Sasakawa Peace Foundation family have bonded with each other much more; also understand the core values of Sasakawa Peace Foundation to join hands to contribute to building good things.

Vuong Hai (Viet Nam)

Special appreciations are due to the World Maritime University, The Nippon Foundation, and the Sasakawa Peace Foundation, Dr. Yohei Sasakawa, Professor Max Mejia, Mr. Eisuke Kudo, Ms. Lyndell Lundahl, Ms. Emi Shimada, Ms. Miyoko Wada, the host institutions, and especially to Japan, Tokyo, Kokura, Fukuoka, and Kyoto, the country, the cities and the people, the culture and the cuisine, for the wonderful and unforgettable field study and field trip.

8 May 2023

Tokyo University of Marine Science and Technology (TUMSAT): The visit to the University was begun by a brief introduction regarding education and training at the institution. It was interesting to know about their fleet of training and research vessels, including a sailing training vessel. The following presentation was about artificial propagation technology and resources of octopus. After that, the technical tour around fish tank was conducted. The overall impression is the institution's contribution to the United Nations Sustainable Development Goals (SDGs).

Maritime Bureau | Ministry of Land, Infrastructure, Transport and Tourism (MLIT): There were presentations regarding the International Maritime Organization (IMO) and Japan's maritime policy on decarbonization of international shipping, as well as the operation, regional and international cooperation of the Japan Coast Guard.

The Nippon Foundation: The WMU Delegation had an opportunity to express our sincere gratitude to Dr. Yohei Sasakawa through individual and collective speeches; besides, it is our privilege to listen to the valuable advices and sharing from the Chairman. The warm courtesy of The Nippon Foundation still remains in us after the visit.

09 May 2023

Tokyo Metropolitan Government Waste Landfill Site: We visited the facility and were very interested in the techniques and procedures that were utilized in waste treatment. It is important to note that in Japan, waste management is highly developed. For instance, waste is sorted and separated adequately at their very sources; then, waste is transferred, processed, recycled or disposed. In the personal opinion, the most interested sites at the facility were the landfill area where the sandwich method is used to cover soils above waste with one layer above another.

Ariake Water Reclamation Center: The visit began with a presentation regarding the sewerage system. The system was explained in detail, from the sources of factories and houses to the last stage of discharge into the open water. After that, a site tour was conducted with a close observation of reaction tank and sedimentation tank, where we can see the cleanliness of water after treatment process. It is our privilege

to experience the work of “the water guardians” through the tour into the tunnel underneath the wastewater treatment plant, where the operation of the sewerage system is presented utilizing both technology and creativity.

10 May 2023

Kyokuyo Shipyard: The facility welcomed the Delegation and introduced us with briefings regarding operations at the shipyard. After the presentation, we were introduced on-scene about each stage of ship building. In the personal experience as a former seafarer, besides observing and working when one of the previous vessels was docked for maintenance and repair in Dunkirk (France), this is the first time visiting a shipyard and witnessing the whole process of building ships from their keels to their topmasts. It is unforgettable to mention those patriotic and romantic songs that the shipyard specially broadcasted through their PA system during the technical tour.

Ultimately, we had an opportunity to board a newly built ship, and also to attend her departure ceremony. Our hearts beat and vibrated as the melody of the song Auld Lang Syne echoing the pier, where we wished “seven feet under the keel” to her maiden voyage and beyond.

Nippon Survival Training Center (NSTC): The institution introduced us with an overview about the training center, their expertise, and the courses which they are delivering in compliance with the IMO’s STCW Convention. We also had a chance to visit the embarkation and launching station of the life boats.

11 May 2023

Port of Hakata: The port’s representative introduced us with an overview of the premise, Japan’s port policy, features and current status of the port. It was interesting to experience their live presentation, in which, the history, development, and the implementation plan on decarbonization were delivered to the Delegation at the same time with touring around special wharves. After that, the Delegation boarded a cruising boat for a trip sailing around the port, where cargo terminals and container cranes were appeared in front of our eyes.

Kanmon Kaikyo Vessel Traffic Service Center: The VTS Center introduced us in detail how a daily operation and a watch of an operator are carried out. Besides, we also had opportunities to interact and ask questions with the operators and the supervisors at the Center. From the weather deck of the VTS Center building, under the digital information signal board, we had a special chance to observe the Kanmon Passage, with inbound and outbound vessels navigating safely in the fairway. It is important to mention that Japan is one of the countries in the world, e.g., besides the USA and Canada, with interesting difference in using the IALA Maritime Buoyage System Region B, in which the starboard lateral marks are red and the port – green.

12 May 2023

FURUNO: We visited the factory of FURUNO. The representatives introduced us in detail the production stages of, for example, doppler sonar, navigation radar antenna and monitor, etc. It was an interesting and one-of-a-kind experience to witness the process of producing and assembling from the tiny details to the final and complete equipment. The visit showed the state of the art in technology and production of navigational equipment in Japan. In personal seafaring career and the current shore-based career, this is the second but unique opportunity to have a close insight of those equipment, besides when we studied navigational technical equipment at the maritime academy.

HSN-KIKAI KOGYO Co., Ltd.: The Company provided us with an interesting tour around their factory, including introductions regarding the productions of various marine-related equipment, and technologies for vegetable growers on-board vessels, as well as the hydroponic systems utilized in the green houses. One of the most interesting parts of the technical tour was the introduction and presentation about 15-ppm bilge separators in compliance with the IMO's MARPOL Convention and relevant MEPC Resolutions.

13 May 2023

Kinkaku-ji Temple: The complex is located within a large Japanese garden. The architecture of the main temple is highlighted by the golden color and the typical Japanese curled roofs.

Ryoanji Temple: In personal opinion, the visit to this magnificent temple was a great lesson. The Zen concept was introduced and explained by Ms. Miyo-san. Thanks to her knowledge and demonstration about Japan, Japanese culture and philosophy, understandings regarding the dynamics between different perspectives, perfection versus imperfection, and general lessons from fifteen rocks in the Zen Garden, blossom.

Heian Jingu Shrine: The shrine, which is a mega complex with a typical mixture of orange and red colors, together with a large yard in front of the main temple, will never be erased in our memories.

Kiyomizu-dera Temple: This magnificent temple is located on the top of a hill. There are many Buddhist statues in various places around the complex. Fortunately, the visit was refreshed by a rain. There are many shops on the way downhill, where visitors can buy Japanese traditional products.

"Those were unforgettable memories, days in Japan."

Acknowledgments

The Japan Field Study Trip 2023 was completed safely and successfully thanks to the cooperation of every student.

We are grateful to Mr. Akihiro Tamura, Director of Ocean Development and Environment Policy Division, Maritime Bureau of MLIT, and his team for their great effort in managing the Japan Field Study Trip.

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We express our sincere thanks to Ms. Miyoko Wada for her exceptional hospitality and interpretation.

Lastly, we always thank Mr. Yohei Sasakawa and The Nippon Foundation for their continued support of our program.

Friends of WMU, Japan Secretariat

WMU Sasakawa Fellowship Students
The Japan Field Study Trip 2023

Ocean Policy Research Institute, The Sasakawa Peace Foundation
The Sasakawa Peace Foundation Building 1-15-16 Toranomon, Minato-ku, Tokyo 105-8524 JAPAN

Tel: 81-3-5157-5210
Fax: 81-3-5157-5230
Email: wmujapan@spf.or.jp
URL: https://www.wmujapan.net/

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WMU Sasakawa Felloship Students
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May 7-14, 2023

Hyogo

FURUNO – Miki Factory

HSN-KIKAI KOGYO Co., Ltd.

Yamaguchi

Kyokuyo Shipyard

Fukuoka

Nippon Survival Training Center (NSTC)

Port of HAKATA

KANMON KAIKUO Vessel Traffic Service Center

Tokyo

Tokyo University of Marine Science and Technology (TUMSAT)

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Tokyo Metropolitan Government Waste Landfill Site

Ariake Water Reclamation Center

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Friends of WMU, Japan Secretariat, The Sasakawa Peace Foundation

The Sasakawa Peace Foundation Bldg., 1-15-16 Toranomon, Minato-ku, Tokyo 105-8524, Japan

Tel: +81-(0)3-5157-5263 Fax: +81-(0)3-5157-5230 URL: https://www.spf.org/e/