

주요 업무내용 (계획(√), 결과())

업무유형	☒ 현지조사(현장, 전문가 회의) ☐ 국제행사 주최 ☒ 국제행사 참가 ☐ 국제회의(정부대표단) 참석 ☐ 세미나, 교육, 훈련 ☐ 기타 ()
업무	KMI-UNESCAP 공동연구 협력사업 관련 전문가 공동워크숍(Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific Region) 참석 및 주제 발표
수행계획	○(배경) 아시아 및 태평양 지역의 지속가능한 해양교통 발전을 도모하고자 KMI-UNESCAP은 주제발굴 및 공동 연구사업 수행, 국제 워크숍을 개최하여 지역에 필요한 해상교통 정책 및 사업 기회를 발굴하여 지속가능한 지역 발전에 기여하고자 함 ○(목적) 선진국을 중심으로 선박에 대한 기술적, 상업적 환경규제가 강화되고 있는 시점에서 ESCAP 역내 국가들이 국제선박 환경규제 관련하여 직면하고 있는 부정적 영향(선박 폐선 등과 같은 위험 및 오염 사업 전가, 환경규제 탈피 지역화, 교통 및 환경 산업 낙후 등)을 분석하고 이에 대한 대응 방안 모색 필요 ○(계획) 동아시아.태평양 지역 국가 및 다자 간 협력체계 구축을 통한 ESCAP 역내 국가 동향 파악 및 IMO, UNESCAP 등 국제기구 간 네트워크 강화
수행결과	Session 2 Regional Strategies for decarbonized shipping and ports in the Pacific 중 National strategies and Good Practices to enhance decarbonized shipping and port development 발표

* 업무별 수행 결과는 각 700자 이내로 작성(관련 사진, 도표 필요시 추가)

* 보고서 총 분량은 10페이지 내외로 작성(필요시 조정)

주요 업무 내용 (계획(), 결과(√))

국외출장 결과 보고

2022. 12

한국해양수산개발원

I . 회의 개요

□ 목적

○ (UNESCAP 워크숍 참석 및 발표)

- KMI-UNESCAP 공동연구 협력사업 관련 전문가 공동 워크숍 (Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific Region) 참석
- National strategies and Good Practices to enhance decarbonized shipping and port development 주제 발표

□ 일시·장소 및 참석자

- (일시) '22년 12월 04일~09일, 수바(피지)
- (참석자) 류희영 연구원

□ 출장 일정

날짜	시간	내용	비고
12.04(일)	• 부산-김포(13:15-14:20)	• 공항 이동	
12.05(월)	• 인천-시드니(전일18:50-06:55) • 오클랜드-난디(14:00-18:45) • 난다-수바(20:30-21:00)	• 출국 • 시드니(호주)-난디(피지) 국제선 이동 • 난다-수바 국내선 이동	
12.06(화)	• Pasifika Conference Room, Level 1 Lotus Building, SPC Suva, Fiji	• Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific Region 참석(Day 1) - Session 1: Sustainable Port infrastructure Development in the Pacific - Session 2: Regional Strategies for decarbonized shipping and ports in the Pacific : National strategies and Good Practices to enhance decarbonized shipping and port development	• KE411 • FJ410 • FJ021
12.07(수)	• Pasifika Conference Room, Level 1 Lotus Building, SPC Suva, Fiji	• Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific Region 참석(Day 2) - Session 4: Improving Sustainable Maritime Connectivity in the Pacific - Session 5: National Strategy and Action Plan for Sustainable Maritime Transport	
12.08(목)	• 수바-난디(10:00-10:30) • 난다-오클랜드(12:55-17:00)	• 공항 이동 • 수바-난디 국내선 이동 • 난다-오클랜드 국제선 이동	환승지 1박 (오클랜드)
12.09(금)	• 오클랜드-인천(11:00-19:20) • 인천-부산	• 입국	• KE411

II. 주요 활동 및 회의 결과

- “Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific Region” 이 2022년 12월 6~7일 수바(피지)에서 개최됨
 - ESCAP 회원국 정부, 국제기구, 지역기관, 소지역기구, 항만당국, 대학, 연구소, 전문협회 등 총 60여 명이 참석함
 - 참석자들은 지속 가능한 해양 연결과 항만개발이 경제발전과 지역 통합을 강화했을 뿐만 아니라 직간접적으로 세계, 지역, 국가 차원에서 지속 가능한 개발 목표(SDGs)를 달성하는 데 기여한 것으로 파악함
 - 또한 다차원적 요인과 각 회원국 및 하위 지역, 특히 태평양 지역의 다양성과 특성을 고려한 포괄적이고 장기적이며 맞춤형 해상 운송 개발 전략의 필요성을 인식함

- 회원국, 국제 및 지역기구, 하위 지역기관, 다자개발은행, 연구 기관, 민간 부문을 포함한 모든 이해 관계자들과의 협력과 파트너십 구축은 지속 가능한 해상 운송 개발을 촉진하기 위한 지역 및 국가 전략의 실질적인 구현과 Pacific Ports 2030-2050 Recognition Framework에서 필수적임
 - 아시아개발은행, 일본국제협력단, 세계은행 등 태평양지역 항만 인프라와 환경변화에 따른 연구분석 및 지식제품에 대한 지속적인 투자가 태평양지역 해상운송 발전의 핵심 자산임을 재확인함
 - 또한 적합한 항만 인프라 개발, 이해관계자 간의 조화로운 거버넌스, 기후변화 대응, 방재 항만 운영체계, 디지털 전환 등이 지속가능한 개발목표 달성에 기여하는 필수요소임을 확인함

- 워크숍에서는 재난 및 기후 복원력 향상에 있어 아태리스크 및 복원력 포털의 잠재력을 확인하고 관련 기관과 이해관계자 간 상호 협력을 촉진하여 깨끗하고 복원력 있는 항만개발 및 운영에 기여할 것을 촉구함
 - 참석자들은 기후변화 대응이 시급한 상황에서 태평양 해양환경보호와

청정항만이 태평양 지역의 최우선 과제로 도출함

- 또한 태평양 지역의 글로벌 표준과 규정을 충족하면서 녹색 해운 회랑을 발전시키기 위한 전략적 지역 접근법의 중요성을 인식하고 이 분야에서 국가 및 지역 행동 계획을 이행하기 위한 지역 협력과 파트너십의 중요성이 강조됨

□ 관계국가는 지속가능한 해양연계와 항만개발 강화를 위해 SPREP(Secretariat of the Pacific Regional Environment Programme), 태평양공동체(Pacific Community, SPC) 등 국제·태평양 주도 지역기관과 협력해 태평양 지역 국가들이 직면하고 있는 난제 및 기화 등과 관련하여 연구·역량강화 및 훈련사업을 확대해 줄 것을 요청함

- 관련 정부 대표단은 지속가능하고 탄력적인 항만발전을 위해 각국이 가장 중요하게 생각하는 최우선 과제에 대해 의견을 교환하고, 이해관계자 간 상호 협력을 기반으로 관련 기관과 협력하여 실질적으로 추진될 수 있도록 요청함
- 또한 태평양 지역의 지속 가능한 해양 연결 및 항만 개발과 지속 가능한 해양 운송의 미래 정책에 대한 국가 및 하위 지역문제에 대한 다차원적인 협력이 지속될 것을 요청함
- 이에 관련 기관들은 태평양 지역의 지속 가능한 해양 개발을 지원하기 위해 데이터 구축 및 분석 작업, 기술 지원 등을 통해 지속적으로 협력체계를 강화할 것이라고 언급함
- 향후 2023년 5월 바누아투 포트빌라에서 개최될 예정인 제5차 태평양 지역 에너지교통장관회의(PRETMM)에서 지속가능하고 탄력적인 항만개발을 위한 다지역 간 협의는 지속될 계획임

III. 향후 계획

□ 아시아 및 태평양 지역의 지속가능한 해양교통 발전을 도모하고자 KMI-UNESCAP은 주제발굴 및 공동연구사업, 국제 워크숍을 개최하여 지역에 필요한 해상교통 정책 및 사업 기회를 발굴하여 지속가능한

지역 발전에 기여하고자 함

- 2023년도에는 ‘ESCAP 역내 국가들의 해운·물류 분야에서의 양성평등 활성화와 여성 전문인력 활용방안 마련’을 위한 공동연구 실시 예정임
 - 아시아 및 태평양 지역의 양성평등 활성화와 여성 전문인력 역량 발전을 위해 해운물류 분야에 필요한 인적 자원개발, 인력 수급, 교육, 훈련 기회 등의 발굴을 목표로 함
 - (기대효과) ESCAP 역내 국가들의 해운물류 부분 인적 자원 개발 전략 수립을 통한 태평양 도서 국가 간 전문인력 양성체계 구축 및 역량 강화 방안 마련



Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific

National strategies and Good Practices to enhance decarbonized shipping and port development

Heonyoung, RYU(Korea Maritime Institute)
3 Dec 2022

KMI KOREA MARITIME INSTITUTE

Table of Contents

- I Background
- II National strategies and Good Practices
 - Korea's decarbonized shipping & port policy
- III Future Plan

CHAPTER I

Background



- 1 Global environmental regulation in the shipping & port industry
- 2 Korea's response to environmental regulation

1. Global environmental regulation in the shipping & port industry

- Adoption of Initial RSD-GHG Strategy
 - Initial strategy envisages a reduction in carbon intensity for full decarbonisation
 - To reduce GHG emissions by at least 40% by 2030, pursuing efforts towards 70% by 2050 compared to 2008
 - Current discussion further pushing towards higher emission reduction target set for 2050 to 100%
 - To achieve reduction target, the initial strategy includes short-term(2019-2023), mid-term(2023-2030), long-term(2030+) measures
 - Short-term measure: new EEDI/SEEMP, existing fleet improvement program, speed reduction, measures to address methane and VOC emissions
 - Mid-term measure: alternative low carbon and zero carbon fuels implementation program, further operational efficiency measures, market based measures
 - Long-term measure: development and provision of zero carbon and fossil free fuels, new innovative mechanism to cut the carbon intensity

2. Korea's response to environmental regulation

- Korea's shipping & port policy to comply with the international environmental regulation
 - Act on the Promotion of the Development and Distribution of Environment-friendly Ships (enacted in 2018, revised into force in 2020)
 - Purpose: To comply with the international regulation to protect the air and marine environment, and to nurture a new business
 - Diverse policy measures can be introduced by expanding the policy target beyond oil cargo ships to coastal ships, passenger ships, fishing vessels, etc.
 - Establishment of "The First National Plan for the Development and popularization of green ship (2021-2026)"
 - Purpose: To pursue sustainable development of the shipbuilding and shipping industry and other marine environment by establishing and implementing a comprehensive plan on developing and distributing green ships
 - Main contents: Development of leading technologies for future green ships (to reduce GHG emissions by 70%), establishment of facilities to distribute new technologies, development of regional projects, promotion of green ships, introduction of infrastructure for green fuel supply, new measures for green ships, etc.

CHAPTER II

Korea's decarbonized shipping & port policy



- Introduction of Korea's shipping industry
- Promotion of green ships
- Certification system of green ships
- Introduction of Korea's port industry
- Special Act on Air Quality Improvement in Port & Other Areas
- Establishment of an eco-friendly port

1. Introduction of Korea's shipping industry

■ 98.1% of Korea's cargo volume for import and export is by sea

■ As of 2019, Korea's import/export cargo volume amounted to 2,422,166 thousand tons(V/T), which consists of 1,429,150 thousand tons(V/T) by sea and 4,016 thousand tons(V/T) by air respectively



Source: Ministry of Land, Infrastructure, and Transport

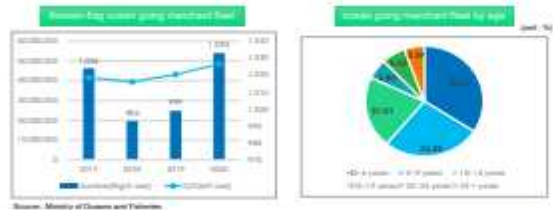
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1. Introduction of Korea's shipping industry

■ Korean-flag overseas merchant fleet

■ As the end of 2020, Korean-flag merchant fleet numbered 1,012 ships of about 48.7million gross tons

■ Ships less than 30 years of age accounted for 61% of the total



Source: Ministry of Oceans and Fisheries

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2. Promotion of green ships

1) Priority conversion to green ships in the public sector

■ Public sector leads green shipping initiatives by constructing green government or municipal ships and remodeling of existing ships

- As of 2022, constructing new 41 green ships and remodeling of 30 existing ships in progress
 - New green ships: 28 government ships from Ministry of Oceans and Fisheries, 5 government ships from other ministries, 14 government ships from local governments and public institutions
 - Remodeling of existing ships: installed DPF(Diesel Particulate Filter) for 30 government ships
- Various types of government ships: fishing guard ships, training ships, patrol ships, icebreaker and research ships etc.
- Green shipping technologies: LNG, hybrid, scrubber, SCR(Selective Catalyst Reduction), DPF(Diesel Particulate Filter), electrical power etc.
 - Hybrid: Diesel engine + Battery
 - Scrubber: De-NOx scrubber system
 - SCR(Selective Catalyst Reduction): NOx reduction system
 - DPF(Diesel Particulate Filter): Diesel particulate matter or soot filtration system

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2. Promotion of green ships

2) Project for supporting green and highly energy efficient ships

- 1 Background
 - In order to comply with international environmental regulations and improve the performance of national vessels, government support is provided to scrap old ships(20 years or more) and newly upgrade to green and highly energy efficient ships
- 2 Summary
 - Who is eligible? Provider of overseas cargo transportation services
 - Policy target: newly constructing 50 ships by 2022
 - Selection criteria: age of ships, the eco-friendliness of the new ships, financial health of the company, growth potential, contribution to the related industries etc.
 - Benefits: 130,000 Korean won per GT (within 10% of the new shipbuilding price)
 - Project period: 5-year project, 2018-2022 (Similar project can be introduced after 2022)
 - Conditions of eligibility: support provided after confirmation of the decommissioning (including sales) of existing ships and contracting the construction of green ships

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2. Promotion of green ships

2) Project for supporting green and highly energy efficient ships

- 3 Overview
 - 7 ships(from 5 companies) in 2018, 8 ships(from 6 companies) in 2019, 6 ships(from 6 companies) in 2020, 13 ships(from 10 companies) in 2021, a total of 34 ships were supported, and 16 more ships are expected in 2022
 - On average, 3.7% of the shipbuilding cost are covered
- | | 2018 | 2019 | 2020 | 2021 | 2022 | Total |
|--------------------------|------|------|------|------|---------------|-------|
| Target (Number of ships) | 7 | 8 | 6 | 13 | 16 | 50 |
| Result (Number of ships) | 7 | 8 | 6 | 13 | 16 (expected) | 50 |
- Expected benefits: Estimated annual GHG reduction effects of 218,000 tons
 - Approximately 25 tons (daily fuel consumption of 2,500 TEU) X 280 days (annual operating days) X 0.2 (fuel saving ratio for new ships) X 3,114 (GHG emissions per ton) X 30 ships = 218,000 tons (subject to change depending on the type of vessels, operating days etc.)

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2. Promotion of green ships

3) Project for supporting green certified coastal ships

- 1 Background
 - Inducing voluntary participation through government support for private coastal shipping companies who are positive in switching to green ship
 - Providing government support for new construction of green ships or replacement by applying nationally certified new technologies
- 2 Summary
 - Who is eligible? Coastal shipping companies (passenger and cargo etc.)
 - Selection criteria: the eco-friendliness of the new ships, financial health of the company, growth potential etc.
 - Conditions of eligibility: ships with an (preliminary) issuance of green ship certification
 - Policy target in 2022: 5 coastal ships (including passenger ship, cargo ship, excursion ship and ferries etc.)

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3. Certification system of green ships

■ Granting certification to green ships and equipments to which new technologies are applied (introduced in 2021)

- Certification grades vary from grade 1 to 5 comprehensively considering the degree of difficulty in green shipbuilding technology(fuel consumption ratio, reduction ratio of air pollutants, energy efficiency index etc.)
 - According to Article 13 of the Act on the Promotion of the Development and Distribution of Environment-friendly Ships, state government, local government, public institutions and local public entities are obliged to buy certified green ships when procuring ships
 - (Locally new emission ships are not yet feasible, so shipping certification like grade 4 and 5 is a good plan)

Grade	Score	Note
Grade 1	≥ 80	Zero emission ship
Grade 2	≥ 50	Zero emission ship
Grade 3	≥ 30	Low emission ship (LNG, hybrid etc.)
Grade 4	≥ 15	High-efficiency ship (high energy efficient design)
Grade 5	≥ 7	Installation of emission reduction system (SCR, scrubber etc.)

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4. Introduction of Korea's port industry

■ Establishment of global container hub port and specialized development of base port

■ Busan Port, the 7th largest container port in the world, established the status of container hub port - Securing global container base port competitiveness through development of new ports, supply of port hinterland, and expansion/extension of sea routes in preparation for larger ships

Port	2021	2020	YoY Growth
Shanghai	47,025	43,501	8.1%
Singapore	37,467	36,871	1.6%
Ningbo-Zhoushan	31,060	30,734	0.2%
Shenzhen	28,750	28,553	0.3%
Guangzhou	24,100	23,160	4.3%
Qingdao	23,700	23,000	7.7%
Busan	22,890	21,824	4.9%
Tianjin	20,260	18,356	10.4%
LA-Los Angeles	20,062	17,327	15.8%
Hong Kong	17,788	17,327	2.7%
Rotterdam	15,300	14,348	6.6%

Source: Apollon

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4. Introduction of Korea's port industry

- Drive economic growth by specializing in regional base ports such as Gwangyang Port and Incheon Port
 - [Gwangyang port] Continuing to modernize the container pier, such as converting the function of the existing container pier into an automobile pier and operating it in an integrated manner, and starting the operation of a large container crane with 24 rows (3 units) (2018)
 - [Incheon Port] Establish a foundation for development into a base port in the Pan Yellow Sea
 - Area, such as a full-scale opening of the new port (17.11), a stable increase in container volume (0.8% per year since 2015), and expansion of routes (18m, 17.5)
- Enhancing the Port Competitiveness of a Country by Superdrying Port infrastructure
 - Continuous expansion of port infrastructure drives national economic growth through ports ("300 billion dollars in exports in 2018, 7th in the world")
 - As of the end of 2020, 972 total ships were developed, and the port facility security rate continued to increase (100%)
 - * Changes in the number of seos (795 in 10 years → 828 in 15 years → 879 in 19 years)
 - ** Changes in facility acquisition rate (93.3% in '10 years → 107.8% in '15 years → 101.5% in '19 years)

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KPSI 2023/2024

5. Special Act on Air Quality Improvement in Port & Other Areas

- Purpose**
 - This special act was enacted to systematically manage air pollution sources within the port area to protect the health of residents in the port area and nearby areas and to create a pleasant living environment. [Enforcement Date 01. Jan. 2020 | Act No. 10328, 02. Apr. 2019, New Enactment]
 - Accordingly, the MOF establishes a "comprehensive plan for improving air quality, such as port areas", in accordance with Article 7 of the same Act (establishment of a comprehensive plan, etc.)
- Summary**
 - Designation of sulfur oxide Emission Control Area (ECA)
 - Designation of low speed area
 - Promote the purchase of eco-friendly ships
 - establish emission standard for unloading equipment
 - Facilitating the transition to eco-friendly unloading equipment
 - Expansion of supply of Alternative Maritime Power(AMP) in domestic ports

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6. Establishment of an eco-friendly port

1) Priority conversion to green ships in the public sector

- 20% of domestic container port unloading equipment has been converted to eco-friendly equipment
 - The project to convert eco-friendly unloading equipment, which is funded by government, has been promoted since 2017 and 69% of domestic container port unloading equipment has been converted to eco-friendly equipment (Government 25%, Port Authority 25%, Operator 50%)

Port	Total number of equipment	Number of eco-friendly equipment	%
Total	743	409	55
Busan Port	442	241	55
Incheon Port	86	45	52
Gwangyang Port	75	41	55
Ulsan Port	26	13	50
Pyeongtaek-Gangjin Port	18	10	56
Makran Port	12	3	25
Mokpo Port	11	11	100
Pohang Port	7	3	43
Gwangju Port	4	3	75
Danwon Port	3	3	100
Gunsan Port	2	2	100

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6. Establishment of an eco-friendly port

2) Establishment of LNG bunkering infrastructure by strengthening environmental regulations

- Background**
 - Demand for LNG propulsion ships, which are eco-friendly ships, is expected to increase due to stricter environmental regulations of IMO
- Summary**
 - To proactively enter the LNG bunkering market, build LNG bunkering infrastructure facilities in major domestic trade ports
 - (Short-term) Expansion of dedicated facilities by utilizing existing LNG production bases, etc.
 - * 3 receiving bases (Incheon, Pyeongsik, Tongyeong), 1 private terminal (Gwangyang)
 - (Mid-to-long term) Establishment of LNG bunkering terminals at Busan Port and Ulsan Port (-'20)

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CHAPTER III

Future Plan



Support for global low carbon shipping

- Background**
 - In response to the IMO initial strategy revision discussion (Nov. 2021), government supports green shipbuilding cost (less than 10% of the total budget) for overseas cargo shipping companies to introduce more green ships
 - Requirements for green ships are strengthened to reduce emission or zero emission ships
 - * Previously, requirements were limited to energy-efficient ships that can operate a long-distance with less fuel
- Summary**
 - Who is eligible? Provider of overseas cargo transportation services
 - Selection criteria: less than 10% of the total shipbuilding budget, low emission ships, high efficiency ships etc. (granted support depending on the emission reduction rates)
 - Project period: 2023-2027

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Building a sustainable energy port that harmonizes eco-friendly and new industries

- Improving port quality by improving port environment such as air quality, water quality, marine ecosystem, etc. (K)**
 - Improving the atmospheric environment of ports and improving the quality of life of local residents by reducing the spread of scattering dust in ports and expanding the air quality monitoring system
 - Improvement of environment-friendly ship entry conditions by expanding AMP installation and establishing LNG bunkering infrastructure
 - Minimize water pollution and strengthen conservation of marine ecosystem due to the development and operation of new ports through environmental effects evaluation, periodic inspections, etc.
- Establishment of Distributed Energy Conversion Systems Expanding New and Renewable Energy and Sustainable Growth (K)**
 - Development of offshore wind power generation complexes and establishment of dedicated support facilities using wind resources in ports and nearby seas
 - Expansion of the introduction of solar power generation facilities in a port using the roof of a port and port background complex, idle land, etc. and utilization of electricity required by the port facilities themselves
 - Expanding support facilities for new and renewable energy production, such as importing eco-friendly hydrogen from abroad and establishing hydrogen storage infrastructure for water electrolysis

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Thank you

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Workshop on Sustainable and Resilient port development to support Sustainable Maritime Connectivity in the Pacific

Tentative Programme
 Venue: Pasifika Conference Room, Level 1 Lotus Building, SPC
 Suva, Fiji
 6 – 7 December 2022 (GMT+12)

Day 1: Tuesday, 6 December 2022		
Start	Finish	Activity (Speaker/Responsible party)
08:00	09:00	Registration Secretariat by the Pacific Community (SPC)
09:00	09:30	Welcome
		Moderator
		Opening remarks
		Ms. Azhar Jaimurzina, Chief, Transport Connectivity and Logistics Section Transport Division, UNESCAP
		Mr. Jens Kruger, Deputy Director Oceans and Maritime Programme, Geoscience, Energy and Maritime Division, The Pacific Community
09:30	09:45	Mr. Kuk-il, Choi, Director, Port Investment Cooperation Division, Ports and Harbours Bureau, Ministry of Oceans and Fisheries, Republic of Korea (Virtual)
		Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022-2026) Mr. Sooyeob Kim, Economic Affairs Officer, Transport Division, UNESCAP
09:45	10:15	Official photograph Tea/Coffee break All
Session 1: Sustainable Port infrastructure Development in the Pacific		
10:15	12:00	Sustainable and resilient port development strategy and plan in the Pacific
		Ms. Fei Deng, Infrastructure Program Leader, Lead Transport Specialist Papua New Guinea & Pacific Islands, World Bank (Virtual)
		Ms. Bo-Kyung Kim, Senior Researcher, Port Policy & Operation Research Division / Port Research Department, Korea Maritime Institute (Virtual)
		Mr. Adrian Maurice Sammons, Managing Director, AMSTEC Pty Limited
		Mr. R. Duncan McIntosh, Senior Regional Maritime Specialist, Transport Sector Group, Sustainable Development and Climate Change Department, Asian Development Bank (Virtual)
10:15	12:00	Mr. Hirotsugu Mori, Executive Technical Advisor to the Director General Infrastructure Management Department, Japan International Cooperation Agency (Virtual)

		Q & A session	
12:00	13:00	Lunch break	
Session 2: Regional Strategies for decarbonized shipping and ports in the Pacific			
13:00	15:00	The Pacific Ports 2030-2050 Recognition Framework	
		Mr. Sitalingi Payne, Maritime Port and Shipping Adviser, Ocean and Maritime Programme, GEM, The Pacific Community (SPC)	
		Report on Facilitating Sustainable and Resilient Port Development in the Pacific	
		Mr. Bruce Rowse, Principal Consultant, 8020 Green Pty Limited	
		Regional strategies to enhance sustainable port development	
		Professor Paul Tae-Woo Lee, Director, Maritime Logistics and Free Trade Islands Research Center, Ocean College, Zhejiang University	
		Technical strategy for port digitalization in the Pacific Islands Countries	
		Ms. Kyeongrim Ahn, CEO, the K Consulting (Virtual)	
		National strategies and Good Practices to enhance decarbonized shipping and port development	
		Ms. Ryu Heeyoung, Researcher / Maritime Research Division, Korea Maritime Institute (KMI)	
		Q & A session	
15:00	15:30	Tea/Coffee break	
Session 3: Clean and resilient ports in the Pacific			
15:30	17:30	Marine environment protection and clean ports in the Pacific	
		Mr. Anthony Talouli, Director, Waste Management and Pollution Control Programme, Secretariat of the Pacific Regional Environment Programme (SPREP)	
		IMO's initiatives to protect the marine environment	
		Marine Environment Division, IMO (Virtual/TBC)	
		Improving disaster and climate resilience (Focusing on Asia Pacific Risk and Resilience Portal)	
		Ms. Madhurima Sarkar-Swaigood, Economic Affairs Officer, ICT and Disaster Risk Reduction Division, UNESCAP (Virtual)	
		Q & A session	
Day 2: Wednesday, 7 December 2022			
Start	Finish	Activity	Speaker
Session 4: Improving Sustainable Maritime Connectivity in the Pacific			
09:00	10:30	Report on the annual Maritime Transport Review (2022): highlights for the Pacific	
		Ms. Luisa Antonia Rodriguez Ortega, Economic Affairs Officer Division on Technology and Logistics, UNCTAD (Virtual)	
		IMO's strategies to promote green shipping in the Asia-Pacific region- Asia and Pacific Section, IMO (Virtual/TBC)	

		Green Shipping Corridor Strategy in Asia Pacific Region	
		Professor Paul Tae-Woo Lee, Director, Maritime Logistics and Free Trade Islands Research Center, Ocean College, Zhejiang University	
		Q & A session	
10:30	11:00	Tea/Coffee break	
Session 5: National Strategy and Action Plan for Sustainable Maritime Transport			
11:00	12:00	Country priority needs – Maritime infrastructure and Port operations and strategies (Cont.)	
		PICTS: Each speaker presents within 15 minutes on the following topics: - Challenges of the Maritime and Ports Sector - Vision as an Ideal, Sustainable and Resilient Port of the Future - Top priorities for becoming more resilient, green, or clean, and what are the top 2-3 priority projects you would like donor support for?	
12:00	13:00	Lunch	
13.00	15.00	Country priority needs – Maritime infrastructure and Port operations and strategies	
		PICTS	
15:00	15:30	Tea/Coffee break	
15:30	17:00	Regional and national priority projects for sustainable and resilient port development to support sustainable maritime transport	
		Mr. Bruce Rowse, Principal Consultant, 8020 Green Pty Limited	
		Open Discussion	
17:00-17:20		Conclusion and Recommendations	
		ESCAP/SPC/SPREP	

참고 3

회의 사진

