MEMORANDUM OF UNDERSTANDING

between

THE KOREA MARITIME INSTITUTE

and

THE PACIFIC ENVIRONMENT

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WHEREAS, the Korea Maritime Institute (hereinafter referred to as "KMI") is a national research institute for the government of the Republic of Korea, whose mission is to conduct research for recommending optimal policy on the maritime sector including logistics and maritime industry, maritime mobility industry, maritime transport, port development, marine and coastal management and fisheries through specialized research and technical innovations, while positioning itself as one of the world's leading maritime research institutions.

WHEREAS, the Pacific Environment (hereinafter referred to as "PE") seeks to protect communities and wildlife of the Pacific Rim. Headquartered in San Francisco with international staff in Asia and the Arctic, we support communities and partners to fight climate change, protect the oceans, build just societies, and move away from fossil fuels toward a green economy. Pacific Environment holds consultative status at the International Maritime Organization, which sets global shipping policy, and is accredited to the Environment Assembly of the United Nations Environment Programme,

CONSIDERING THAT, KMI and PE (hereinafter referred to as "the Parties", and individually, each a "Party") wish to formalize a basis on which the Parties may explore opportunities for cooperation and collaboration on matters of common interest, and to render their respective activities mutually beneficial;

NOW, THEREFORE, the Parties have agreed to enter into this Memorandum of Understanding (hereinafter referred to as the "MOU"), as follows:

ARTICLE 1 Objective

The objective of this MOU is to create a mechanism and framework for cooperation between KMI and PE accelerate zero-emission shipping and ports in Republic of Korea, across Asia, and globally, by clearly defining the strategic opportunities for exchange between the parties. And it is to identify the roles and responsibilities in the cooperation activities of the parties in order to ensure mutual understanding and mutual benefits.

ARTICLE 2 Areas of Cooperation

The Parties may, in particular, explore the possibility of cooperating in the following areas of activity:

- 1) Support policy analysis, design, and development for the Republic of Korea to decarbonize both its domestic shipping industry and all ships that call RoK ports in alignment with the UN IPCC's 1.5degree C decarbonization trajectory
- 2) Support Republic of Korea to successfully design, implement, and achieve world-leading, 1.5degree C aligned green shipping corridors, including within Asia, across the transpacific, and globally
 - a. In support of this goal, the parties will collaborate to develop an alliance and collaboration platform(s) between PE and KMI, that eventually may add additional North Asia, East Asia, Europe and/or North American or other partners.
- 3) Support policy analysis, design, and development for Korean ports to transition to 100% renewable energy and provide electric power and zero-emission fuels for zero emission shipping progressively between now and 2050
- 4) Support policy analysis, design, and development for the Republic of Korea to eliminate greenhouse gas and air pollutant emissions, including emissions of black carbon from ships at berth and of the arctic ocean route by 2030 to protect the public health and welfare of those working at ports and/or living in port-adjacent communities
- 5) Support policy analysis, design, and development for the Republic of Korea to reduce reliance on liquefied natural gas, and stop financing any new fossil ships, which includes both heavy fuel oil and LNG fueled ships before 2030
- 6) Support policy analysis, design, and development for the Republic of Korea to set zero emission marine standard for harbor craft by 2035 and international vessels by 2050
- 7) Support the Republic of Korea with its' National Action Plan to achieve the IMO's GHG Strategy (planned for ambition revision in July 2023), and otherwise engage ambitiously in IMO processes
- 8) Support policy analysis, design, and development for the Republic of Korea to address additional marine and climate policy issues as the parties may agree, such as: to end ocean plastic pollution and end fossil fuel pollution in the petrochemical sector, to successfully implement the High Seas Treaty, to achieve off-shore wind and clean energy targets, and possibly other areas that the parties deem aligned and of interest

The methods to advance parties' cooperation include:

- a) Regular exchanges and sharing of professional information that both parties are interested in, with the exception of anything related to state secrets;
- b) The development of joint and/or individual party policy memorandums and documents

intended to advance cooperation goals;

c) The joint organization of workshops and events to share and implement evidence and best practices on international experiences on shipping and ports decarbonization

ARTICLE 3 Partnership Management

The Parties agree to hold bilateral meetings as necessary. Details of any bilateral meeting will be decided by mutual agreement.

Exchange of study tours and senior-level visits will be paid by the sending Party and facilitated by the receiving Party. Both Parties will finance joint research, seminars, workshops or forums. If both Parties are agreed, they will also aid each other's fund-raising efforts for such collaborative activities or cooperate to increase external funding sources.

ARTICLE 4 Nature of the MOU

This MOU is not intended to create legal relations or obligations between the two Parties or to impose formal obligations on them. Any specific activities identified under this MOU as opportunities for collaboration between the Parties will be the subject of additional written agreements between the Parties. In particular, this MOU does not represent any specific commitment with regard to funding on the part of the Parties. In keeping with the administrative nature of these arrangements, no provision of this MOU will be construed to interfere in any way with the independent decision-making autonomy of the Parties with regard to their respective affairs and operations. Furthermore, this MOU shall not represent any commitment on the part of either Party to give preferred treatment to the other in any matter contemplated under this MOU or otherwise.

ARTICLE 5 Channel of Communication and Notice

For the purpose of facilitating the implementation of the working arrangements to be established by the Parties of this MOU, the channel of communication for the Parties shall be:

(a) For KMI:

Korea Maritime Institute Attention: Kim, Bo-Ram Senior Researcher

26, Haeyang-ro 301 beon-gil Yeongdo-gu, Busan 4911, Korea

(b) For the PE:

Pacific Environment Attention: Kang, Hyun-Ju

Climate Specialist of Republic of Korea

Parties hereto may, by notice in writing to the other Party, designate additional representatives or substitute other representatives for those designated in this Article.

ARTICLE 6 Effectivity, Amendment, Termination, and Other Matters

This MOU shall enter into force on the date it is signed by both Parties and will remain effective for five (5) years after coming into force. Termination shall not affect contractual obligations already entered into by either Party under this MOU.

This MOU may be terminated by either Party giving three (3) months notice in writing to the other Party.

ARTICLE 7 Resolution of Conflict

During the course of this MOU, the Parties will be promptly notified of any problem that may impact adversely on the potential of the Parties to collaborate effectively. The Parties will take appropriate action to seek an amicable resolution.

- a) The Parties agree that, as the date of the signing of this MOU, to the best of their knowledge, no conflict of interest exists or is likely to arise in relation to the intention of the two Parties to co-operate under the MOU.
- b) If, during the term of this MOU, either Party becomes aware of any actual or potential conflict of interest, then that institution will immediately notify the other institution in writing of that conflict or potential conflict of interest.
- c) Any difficulties arising in connection with this MOU are to be resolved by the Parties through consultation and negotiation.

IN WITNESS WHEREOF, the Parties hereto, each acting through its duly authorized representative, have signed this Memorandum of Understanding in two (2) original counterparts in the English language in Jeju, Republic of Korea. on the dates indicated below.

May 2023 The Korea Maritime Institute May 2023 The Pacific Environment

Jong Deog Kim President

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