

Outlook 2035: Green Arctic Shipping in the Digital-Intelligent Era

Datum: 2025.7.14-16

Venue: Shanghai Institutes for International Studies (SIIS), Shanghai, China

Jul. 14th Welcoming Dinner	
18:00-20:00	ROSE Restaurant 玫瑰厅上海菜 ADR: No.1 Lane372 Xingguo Road 兴国路, Changning District
Jul. 15th Opening Session	
09:00-10:00	Chair: YANG Jian 杨剑, Professor, Shanghai Institutes for International Studies Welcome Remarks by Shanghai Institutes for International Studies - LI Kaisheng 李开盛, Vice President of SIIS Congratulatory speech (10 mins): - HAN Deukhoon 韩德勳, Deputy President of Global Strategy Research Department, Korea Maritime Institute Keynote Speech (12-15mins each): - “Arctic Shipping Today and Future” OTSUKA Natsuhiko 大塚夏彦, Senior Fellow, Sasakawa Peace Foundation - “ICARP IV: the Arctic Research Planning for the Next Decade and its implications for Arctic Governance and Sustainability” YANG Huigen 杨惠根, Professor, Polar Research Institute of China
Session 1: Monitoring Technology Networks, Digitalization, and Intelligent support for Arctic Shipping (2035 Outlook)	
10:00-11:20	Topics: Evolution of satellite/remote sensing infrastructure, Data-sharing frameworks for multinational cooperation

	<p>Chair: OTSUKA Natsuhiko 大塚夏彦</p> <p>Speeches (12-15 minutes each):</p> <ul style="list-style-type: none"> - “Perspective of the Earth Intelligence for the Arctic Sustainable Development” QIU Yubao 邱玉宝, Professor, International Research Center of Big Data for Sustainable Development Goals /Aerospace Information Research Institute Chinese Academy of Sciences - “Intelligent SAR Satellites: Next-Generation Monitoring Technology and Infrastructure Prospects for the Arctic” KIM Seung Hee 金承熙, Senior Research Scientist of Korea Polar Research Institute (KOPRI) - “Potential for Arctic data sharing in the Asian region” YABUKI Hironori 矢吹裕伯, Professor, National Institute of Polar Research - “Satellite-based vessel monitoring on the Northern Sea Route” TAKAYA Shigeki 高屋繫樹, Director, Ocean Policy Research Institute of the Sasakawa Peace Foundation - “Operational sea ice information services for the Arctic navigation in the NMEFC of China.” LIANG Xi 梁曦, Research Professor, National Marine Environmental Forecasting Center, Ministry of Natural Resources. <p>Discussion:</p> <ul style="list-style-type: none"> - JIN Kyung Emilia, Director of Korea Polar Research Institute (KOPRI)
11:20-11:35	Coffee Break and Group Photo
Session 2: Green Technologies and Environmental Protections in Arctic Shipping (2035 Outlook)	
11:35-12:40	<p>Topics:</p> <ol style="list-style-type: none"> 1. Zero-emission vessels and alternative energy adoption (e.g., hydrogen, ammonia) 2. Mitigating black carbon, oil spills, and ecological disruptions 3. Synergies between the Polar Code and regional policies <p>Chair: KIM Um-ji, Polar Strategy Research Division, Korea Maritime Institute</p> <p>Speeches (12-15 minutes each):</p> <ul style="list-style-type: none"> - “Distributions and characteristics of refractory black carbon distributions over the North Pacific and the Southern Ocean” LEE Mee-Hye 李美慧, Professor of Korea University

	<ul style="list-style-type: none"> - “Environmental challenges and countermeasures of Arctic Shipping” LU Zhibo 陆志波, Professor, College of Environmental Science and Engineering, Tongji University - Theme: Low-Carbon and Intelligentization Trends for Arctic Vessels and Marine Equipment by 2035 ZHOU Li 周利, Professor, School of Naval Architecture, Ocean & Civil Engineering, Shanghai Jiaotong University <p>Discussion:</p> <ul style="list-style-type: none"> - UM Danbi 嚴天雨, Senior Researcher, Korea Maritime Institute
12:40-14:00	Lunch
Session 3: Global Economic Trends, Industrial Revolutions, and Their Impact on Arctic Shipping Models (2035 Outlook)	
14:00-15:40	<p>Topics:</p> <ol style="list-style-type: none"> 1. Trade route diversification and cargo projections (e.g., LNG, minerals, transit traffic) 2. Geopolitical and infrastructural challenges for commercial scalability <p>Chair: TAKAYA Shigeki 高屋繫樹</p> <p>Speeches (12-15 minutes each):</p> <ul style="list-style-type: none"> - “The Arctic Northeast Passage towards 2035: Normalized commercial operation and economic feasibility assessment” HU Maixiu 胡麦秀, Professor, College of Economics & Management, Shanghai Ocean University Jiang Miaomiao 姜苗苗, East China Normal University, PH.D. Candidate - “Power to X Technology and Industry Prospects for Realizing Arctic Green Shipping” (Online) LEE Young-Ho 李英浩, Professor, Korea Maritime & Ocean University (KMOU) - “Global Trade under Global Warming: The case of Arctic Shipping” Trang Tran, Researcher, The University of Tokyo - “Outlook on the application of Digital Twin Technology in Arctic YANG Jian 杨剑 - “System of International and Korean Law on Arctic Route” Kim Bong-chul 金俸徹, Professor, Hankuk University of Foreign Studies <p>Discussion:</p> <ul style="list-style-type: none"> - Kim Umji - KIM TAE-IL 金泰一, Head of China Research Center, Korea Maritime

	Institute
15:40-16:00	Coffee Break
Session 4: Roles of China, Japan, and South Korea in Future Arctic Shipping	
16:00-17:05	<p>Topics: Collaborative R&D in ice-class vessels and smart shipbuilding, Roles of China, Japan, and South Korea in AC working groups</p> <p>Chair: YANG Huigen 杨惠根</p> <p>Speeches (12-15 minutes each):</p> <ul style="list-style-type: none"> - “Pathway of Japan’s Arctic Policy in the context of Arctic shipping” HATAYA Sakiko 幡谷咲子, Researcher, Ocean Policy Research Institute of the Sasakawa Peace Foundation - “Trilateral Policy Comparison and Cooperation Measures in Arctic Shipping” KIM Umji - Outlook 2035: The Intersection and Prospects of Arctic Climate Government and Geopolitics XIA Liping 夏立平, Professor, Political Science and International Relations, Tongji University <p>Discussion:</p> <ul style="list-style-type: none"> - YANG Jian 杨剑 - KIM Bong Chul 金俸徹, Professor of Hankuk University of Foreign Studies
OUTLOOK 2026	
17:05-17:10	<p>Speaker: OTSUKA Natsuhiko 大塚夏彦</p>
17:10-18:10	Dinner
Shanghai Inner City Trip	
19:30-20:15	Huangpu River Cruise Trip
Jul.16th Informal Close-Door Discussion and Field Trip	

9:30-10:00	Discussion on 2026 NPARC
10:00-11:30	Visit the Municipal Design and Construction in Xuhui District
11:30-13:00	Lunch

Participant List

Foreign Side:

South Korea:

LEE Meehye 李美慧, Professor of Korea University

LEE Young-Ho 李英浩, Professor of Korea Maritime & Ocean University (KMOU)

Lim Saehae, Professor of Chungnam National University

JIN Kyung Emilia 陳敬, Director of Korea Polar Research Institute (KOPRI)

KIM Seung Hee 金承熙, Senior Research Scientist of Korea Polar Research Institute (KOPRI)

KIM Bong Chul 金俸徹, Professor of Hankuk University of Foreign Studies

KIM Umji, Director (실장) of Polar Strategy Research Division, Korea Maritime Institute

KIM TAE-IL 金泰一, Head of China Research Center, Korea Maritime Institute

JIN MingHua, Assistant Administrative Manager (행정원) of China Research Center, Korea Maritime Institute

Intern, China Research Center, Korea Maritime Institute

HAN Deukhoon 韓德勳, Deputy President of Global Strategy Research Department, Korea Maritime Institute

UM Danbi 嚴天雨, Senior Researcher of Korea Maritime Institute

Japan:

OTSUKA Natsuhiko 大塚夏彦, Professor, Vice Director of Arctic Research Center, Hokkaido University

YABUKI Hironori 矢吹裕伯, Professor of National Institute of Polar Research, Organization of Information and Systems

HATAYA Sakiko 幡谷咲子, Research Fellow at the Ocean Policy Research Institute of the Sasakawa Peace Foundation

TAKAYA Shigeki 高屋繫樹, Research Fellow at the Ocean Policy Research Institute of the Sasakawa Peace Foundation

Chinese Side:

HU Maixiu 胡麦秀, Professor, College of Economics & Management, Shanghai Ocean University

JIANG Miaomiao 姜苗苗, PH.D Candidate, East China Normal University

LU Zhibo 陆志波, Professor, College of Environmental Science and Engineering, Tongji University

LIANG Xi 梁曦, Research Professor, National Marine Environmental Forecasting Center, Ministry of Natural Resources.

QIU Yubao 邱玉宝, Professor, International Research Center of Big Data for Sustainable Development Goals /Aerospace Information Research Institute Chinese Academy of Sciences

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YANG Huigen 杨惠根, Professor, Polar Research Institute of China

YANG Jian 杨剑, Professor, Shanghai Institutes for International Studies

ZHOU Li 周利, Professor, School of Naval Architecture, Ocean & Civil Engineering, Shanghai Jiaotong University