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The 5th International Aids to Navigation Forum in the Republic of Korea

# Summary

## Purpose of the document

This document is to share the results of the 5th International Aids to Navigation Forum, as part of the 5th World Marine Aids to Navigation Day celebration, hosted by the Ministry of Oceans and Fisheries and organized by Korea Institute of Aids to Navigation.

# Background

The Republic of Korea annually celebrates the World Aids to Navigation Day(W-AtoN Day) on 1st of July to promote the implementation of the 'Incheon Declaration' and to shed new light on the value of the lighthouse as heritage.

International Aids to Navigation Forum marks its 5th anniversary this year and has become a place for sharing knowledge related to Aids to Navigation as well as lighthouses through various presentations and discussions.

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| **Year** | **SUBJECT** | **City** |
| **2019** | · Policy cases on lighthouse heritage conservation and sustainable use around the world  · Interpretation on the value of Gadeokdo Lighthouse and the role in the local community | Busan |
| **2020** | · Historical Lighthouse Preservation and Sustainable Use  · Re-discovery of Historical Lighthouse Values  · Future Smart Aids to Navigation in the Maritime Digital Environment | Incheon |
| **2021** | · The Role of Lighthouse as a Cultural &Tourism Resource  · Revitalization of International Cooperation for the AtoN development | Sejong |
| **2022** | · Preservation, Management, Safeguarding and Utilization of Tangible and Intangible Values of Lighthouse Cultural Heritage  · Aids to Navigation in Joseon Dynasty  · Expansion and Reopening of National Lighthouse Museum  · Experience of Metaverse and Museum | Pohang |

The International Aids to Navigation Forum (2019-2022)

# main contents

## Overview of Forum

Under ‘120 Years of Modern Lighthouse in Korea, Lighthouse with the People’ subject, the Forum consisted of three sessions: a special session, the first session The History of Aids to Navigation, and the second session The Future of Aids to Navigation and was held on 28th June 2023 in Yeosu-si, Jeollanam-do. The number of participants was around 200, including civilian and people related to AtoN.

Korean and foreign experts from Japan, China, and France, gathered to present seven different topics and hold comprehensive discussions. In particular, celebrating a monumental year, 2023, in the history of lighthouse, French curator Vincent Guigueno and Professor Kim Ki-soo of Dong-A University introduced the history of the Fresnel Lens in celebration of its 200th anniversary, and the history of the 120 years of Korean modern lighthouses, respectively.

Also various additional events were prepared, including a special exhibition of the winning works of the lighthouse photo contest and a hands-on experience program for children.

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| The image of the 5th International Aids to Navigation Forum logo | The Memorial Coin for 2023 Korean Lighthouse of the Year |

## Presentations

### **[Special Session]**

The special session introduced the history of lighthouses in France and Republic of Korea, which celebrated a special year.

**(Augustine Fresnel and the invention of modern Lighthouses)** Vincent Guigueno (Académie de marine) introduced Augustine-Jean Fresnel and Fresnel lens, important figures in the history of lighthouse development,

**(120 years of Lighthouses at Korea)** Prof. Ki-soo Kim(Korea Lighthouse Culture Heritage Committee) stressed the need for extensive research on working people, related laws and systems along with research on the history of lighthouse architecture.

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| Vincent Guigueno (Académie de marine) | Prof. Ki-soo Kim(Korea Lighthouse Culture Heritage Committee) |

### **[Session 1] History of AtoN**

**(The origin of the modern AtoN, Joseon Customs)** Director Sung-soo Kim(Incheon Airport Customs) introduced the modern history of Korean AtoN had begun at customs based on documents.

**(Preservation and sustainable use of Japanese navigational beacons)** Ryozo Shigematsu(JANA) introduced the background of modern AtoN constructions in Japan and the systematic classifications research to establish guidelines for historical lighthouse preservation.

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| Director Sung-soo Kim(Incheon Airport Customs) | Ryozo Shigematsu(JANA, Japan Aids to Navigation Association) |

### **[Session 2] Future of AtoN**

**(China's Future AtoN)** Prof. Ranxuan Ke(Jimei University) introduced that China's Future AtoN, which uses digital technology to build more safe and efficient maritime transportation environment and innovate with the development of low-carbon equipment.

**(Smart AtoN and Digital Information Service Technology)** Dr. Se-woong Oh(KRISO) introduced the concept of Smart Aids to Navigation that enhances navigation safety of and management efficiency of AtoN through mutual sharing of digital information.

**(Korean Positioning System and AtoN)** Dr. Jung-min Joo (KARI) presented the future of safe maritime traffic environment by providing precise and safe PNT information through the Korean Positioning System.

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| Dr. Se-woong Oh(KRISO, Korea Research Institute of Ships & Ocean Engineering) | Dr. Jung-min Joo(KARI, Korea Aerospace Research Institute) |

## Questions and Answers (Q&A)

After each session presentation, there were some interesting questions and wise answers. For example, (Question) "As Aids to Navigation equipment will be digitalized and minimalized in the near future, does the traditional AtoN need now and after 30-40 years?" (Answer) “In the case of UK publishing paper nautical chart, the traditional concept, infrastructure and equipment of AtoN will coexist with us by performing additional functions along with existing roles."

# Future plan

The Republic of Korea reviews the past Forum (2019~2023) to arrange the 6th in 2024. Although the venue and detail plans are not decided yet, the Forum will be expanded to invite more experts and participants including additional events. Also, we try to adapt the online broadcasting system for people who are not present at the Forum.

# Action requested of the committee

The Committee is requested to:

1. Share this information to the entire IALA members
2. Encourage IALA members to participate in the Forum
3. Provide comments for the Forum contents