

# IALA Strategy

## 1. Role and image of IALA

***Strengthen the role and image of IALA as an International Centre of Excellence in Marine Aids to Navigation and related matters.***

An essential aspect is to facilitate the health and efficiency of IALA membership to deliver optimum services.

*Strategy:*

- a) Define the core business of IALA as the one and only competent international Marine Aids to Navigation Association.
- b) Liaise with world leading experts from universities and research institutions.
- c) Be at the forefront of new aids to navigation (AtoN) developments, be it traditional AtoN, or e-navigation, and lead the harmonization and standardization thereof.
- d) Guide its membership to incorporate new developments and services in a responsible and standardized manner.
- e) Adjust the internal organizational structure to best meet the needs and work programme.

## 2. International cooperation and relationship with other international and regional organizations.

***Strengthen IALA's relationship with IMO, and form strategic alliances with other international and regional bodies.***

IALA is the only international non-governmental association representing, world-wide, administrations and authorities responsible for the provision and operation of marine AtoN. To optimize safety of navigation for the benefit of the IALA members, strategic alliances with other international and regional bodies needs further development.

*Strategy:*

- a) Be the leader in the AtoN field by coordinating IALA's work with a long and growing list of other international bodies, including: IMO, PIANC, IHO, IMPA, IAPH, IHMA, ITU, IEC, CIRM,<sup>1</sup> etc. In doing so IALA will:
  - i) Strengthen interfaces with other international organizations by stating and proving that IALA is the single competent international association for design, implementation and operation of all kind of marine AtoN.
  - ii) Increase its cooperation with and participation in IMO and ITU.
  - iii) Further develop the effective compatibility between IALA, IMO and ITU, so that the recommendations and guidelines of IALA are adhered to by national authorities.
- b) Improve relationships with other regional organisations such as the European Union.

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<sup>1</sup> IMO – International Maritime Organization; PIANC – International Navigation Association; IHO – International Hydrographic Organization; IMPA – International Maritime Pilot Association; IAPH – International Association of Ports and Harbours; IHMA – International Harbour Master's Association; IEC – International Electrotechnical Commission; CIRM – Comité International Radio-Maritime

### **3. Aids to Navigation System Mix**

*Develop a set of standardized, traditional and enhanced AtoN services to ensure a balanced mix.*

One of the greatest challenges facing IALA and its members in the coming decade will be how to provide an appropriate and balanced mix of enhanced and traditional aids to navigation, to maximize safety of navigation through careful selection of what services to provide and at what level. This task includes designing a system of aids that will benefit the entire spectrum of users, from recreational boaters to commercial vessels, as well as organizations that exploit the sea and the sea bed.

#### *Strategy:*

- a) IALA will develop a “WorldWide Marine Aids to Navigation System”, comprising a set of standardised traditional and enhanced AtoN as a reference Master Plan. This will enable IALA members to design a well-balanced national waterway standard to meet the user requirements. In doing so IALA will:
  - i. Develop methods and criteria to gather and analyze user requirements, and thus understand the very essence of safety of navigation and the marine risk.
  - ii. Determine the relevance of traditional AtoN alongside future digital electronic navigation systems.
  - iii. Consider improvements and technical developments in traditional and enhanced navigation tools.
  - iv. Develop recommendations and guidelines for AtoN adapting present knowledge and technology and review the maritime buoyage system accordingly.
  - v. Influence future developments of GNSS, DGNSS, global vessel tracking and other electronic navigation systems.
  - vi. Take account of implications of new legal requirements on environmental matters that affect AtoN.
  - vii. Consider the implications of the presence of larger, faster, more sophisticated vessels.
- b) IALA will develop a minimum comprehensive mix of AtoN which a lighthouse authority is recommended to implement.

### **4. e- Navigation, Aids to Navigation Information systems, Marine Electronic Highway**

*Take a leading role in the development of e-navigation and the Marine Electronic Highway*

With the introduction of Marine Electronic Highways, recent research results and developments regarding e-navigation and AtoN Information Systems are considered as important elements to support and increase safety of navigation.

#### *Strategy:*

- a) To ensure its leading role regarding all present and future digital AtoN for maritime safety, IALA will:

- i. Define e-navigation and develop a vision for integration of current and future technology and information display to maximize benefit to all users in the maritime domain.
- ii. Develop Guidelines and Recommendations on AtoN Information Systems.
- iii. Promote wider acceptance of Marine Electronic Highways, especially in congested coastal waters.
- iv. Fully participate in the development of the e-navigation environment, and in future electronic systems that will alter the mix of AtoN and maritime information systems.
- v. Develop and maintain a system for collecting maritime traffic information from a variety of sources to improve service provision.

## **5. Risk-analysis and risk-management**

*IMO (SOLAS, Chapter V, Regulation 13): “Each Contracting Government undertakes to provide, as it deems practical and necessary, either individually or in cooperation with other Contracting Governments, such aids to navigation as the volume of traffic justifies and the degree of risk requires”.*

*Develop methods and tools for a worldwide, harmonized risk analysis and risk management system for AtoN services*

Appropriate methods and tools for a worldwide harmonized risk analysis and risk management are required, especially considering recently adopted IMO Assembly Resolutions on the voluntary IMO member state audit scheme.

**Strategy:**

- a) In leading the world wide coordination of risk analysis and risk management IALA will:
  - i. Introduce a widely accepted method for identifying risk by coordinating and developing performance measures.
  - ii. Integrate available nautical information in risk models.
  - iii. Coordinate further development of risk based approaches.
  - iv. Standardise risk management methods.
- b) IALA will develop Recommendations and Guidelines on risk analysis as part of the planning for and provision of AtoN.

## **6. Support to Members: IALA publications (Recommendations, Guidelines and Manuals)**

*Publish and circulate IALA Recommendations, Guidelines and Manuals to its membership and the international community.*

IALA should always be at the cutting edge of new developments, and members should be able to look towards IALA for guidance on new developments that will meet their own needs and opportunities. IALA publications are a main support for the membership. They have to be produced in time and give a proper response to the members' needs. IALA documentation is seen as one tool to support the improvement of navigation safety infrastructure in developing countries.

## IALA Strategy 2006-2010

The ability to continue to provide the required Recommendations and Guidelines is a major challenge for the future, bearing in mind the necessary quality and substance contributed by the various experts amidst the members' budget constraints, additional workload, and declining number of AtoN specialists.

### *Strategy:*

- a) Refine the definitions/concept of AtoN and enhance IALA competencies to match new systems, especially in the e-navigation field.
- b) Enhance knowledge sharing through the publication and circulation of IALA Recommendations and Guidelines to its membership as well as the international community.
- c) Coordinate actions on research, developments and innovation.
- d) Continuously review and update the existing IALA documentation in light of new technical developments.
- e) Develop guidelines and recommendations including, but not limited to:
  - i. *Management of AIS as an AtoN, especially on how to employ shore based AIS networks to broadcast AtoN information*
  - ii. *Management of sensor fusion in the VTS environment and how to integrate information from different sensors and systems in general*
  - iii. *Use of modern light sources in traditional lenses*
  - iv. *Use of new models of effective luminous intensity of pulsed lights*
  - v. *Calculation and measurement of AtoN performance to define product quality as important information for outsourcing projects*
  - vi. *Presentation of AIS AtoN information in coordination with IHO*
  - vii. *Guidelines on AIS as a VTS tool*
  - viii. *Develop documentation on the future development of DGNSS*
  - ix. *Guidelines on the provision of AIS as an AtoN and how to capitalise on the added values it can provide, e.g. meteorological services, quality assurance of data provided*
  - x. *Relationships between AtoN, VTS and monitoring, pilotage, routing, channel features and its application to the ships using these services*
  - xi. *Implementation of systems such as e-ANSI, e-NAV, and AIS as an AtoN, so that the existing AtoN in the area and their operational state will be known by the mariner in the quickest and most efficient way, integrating traditional aids and new technologies as elements of the same system.*
  - xii. *Recommendations on the future use of racons*
- f) Ensure that the IALA budget has the capacity to respond to the demands placed on it to support these developments

## **7. Improvement of the provision of services for users**

*Develop methods to identify user requirements on an objective basis for providing the best possible service to the customers.*

It is a permanent aim of each IALA Member to benefit customers and stakeholders through service excellence.

*Strategy:*

- a) To support its membership IALA will:
- i. Make the link between services provided and their effect on safety of navigation, and provide guidance on how to visualize and communicate this relationship to ensure sustainable financing.
  - ii. Advise on how to balance marine AtoN with pilotage services, new navigational aids on board ships and more efficient VTS.
  - iii. Advise on how to develop the ability to react more rapidly in coastal waters to incidents that create navigation hazards.
  - iv. Advise on how to meet the challenge of providing an efficient level of service at less cost.
  - v. Give guidance on how to expand service delivery for marine traffic beyond traditional limits.

**8. Improvement of the Cooperation of IALA Members with third parties**

*Support coordinated waterways management, AtoN and VTS, with other private sector organisations, and other governments.*

The marine traffic density, proximity and the associated risks will increase. The importance of regional coordination and cooperation between the many organisations, both public and private, in the region is imperative for ensuring highest possible safety of navigation.

*Strategy:*

- a) To support its membership IALA will:
- i. Facilitate national administrations' cooperation with research institutes and universities to improve the performance of AtoN.
  - ii. Provide guidance for improving operational procedures through coordination and sharing of services among National Members and private interests.
  - iii. Support the collaboration of neighbouring countries to harmonize the service on their borders.
  - iv. Support coordinated waterways management, AtoN and VTS with other private and public sector organizations, and other governments.
  - v. Support the free movement of maritime information and data across national borders to increase international cooperation. This calls for standards for data format and exchange.
  - vi. Support the coordination between National Members and other national AtoN and marine safety regulators, including a need to develop and exercise the legislative oversight responsibilities of the National IALA member.
  - vii. Advise on the improvement of the alternative, complementary uses for lighthouses.
  - viii. Support administrations in charge of ship safety and design matters to harmonize the objectives of the AtoN services with the training of mariners in the use of new technologies.
  - ix. Support administrations in the protection of the marine environment.

## **9. Improvement of quality assurance/management**

### *Develop a quality management system for AtoN services and equipment*

The introduction of a quality management system covering all services provided or contracted out is a key element for the IALA members, particularly as many administrations are outsourcing AtoN maintenance.

#### *Strategy:*

- a) To support its membership in the introduction of a quality assurance management system, IALA will:
  - i. Provide guidance on how to establish and maintain a quality assurance management system for AtoN services and equipment, including guidance on responding to relevant elements of the IMO Voluntary Audit Scheme.
  - ii. Develop a standard quality management system for AtoN services and equipment that allows identification of improvements to maintain the highest level of services as possible, keeping in mind the technology, human and financial resources and capturing best practice.

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