



ANNUAL REPORT 2017



SUCCESSFUL VOYAGES, SUSTAINABLE PLANET

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ABOUT IALA

Established in 1957, IALA is a not-for-profit, international technical association. It brings together marine aids to navigation authorities, manufacturers, consultants, and scientific and training institutes from across the globe to exchange and compare experiences and knowledge for the improvement and harmonization of maritime navigation services worldwide.

The work of IALA in creating technical guidance documentation, and in training and capacity building, is focused towards achieving the goals of a Strategic Vision by 2026.



A MESSAGE FROM THE PRESIDENT AND THE SECRETARY-GENERAL

We are pleased to present the Annual Report of IALA for 2017.

The year marked the 60th anniversary year of the Association. The significance of this milestone is further underlined by the steadily growing membership of IALA and the rapidly growing demand for the World-Wide Academy's capacity-building and training activities.

The success of the Academy is reflected in the significant reduction in the number of States in need since the Academy became operational in 2012, aided by the establishment of Accredited Training Organizations in different regions of the world. The Academy's distance learning initiative, which took off in 2017, is designed to meet growing demand for training and will accelerate the pace of training worldwide, transforming the maritime domain of developing countries in particular and contributing to harmonised Marine Aids to Navigation worldwide.

During the year under review, the output of the four Committees was huge and the commitment of the Chairs and Vice Chairs in guiding the work to successful completion is commendable. In addition to the large number of IALA Recommendations and Guidelines that were developed or revised, major publications were updated, in particular the Marine Radio Communications Plan and the new NAVGUIDE. The latter will be officially launched in Incheon in May 2018, as will the new edition of the Conservation Manual, renamed the Complementary Lighthouse Use Manual.

The Council's approval, at its 65th session in December 2017, of an amended Strategic Vision for the period 2018-2026 reaffirms and enhances IALA's future direction. The Council also approved a more detailed document, which complements the Strategic Vision and sets out IALA's position on the development of Marine Aids to Navigation services for the shorter term, while providing a direct link with the work programmes of the Committees.

Throughout 2017, the IALA Secretariat kept its eyes firmly on Incheon, liaising with our Korean colleagues, who have been preparing intensely for the 19th IALA Conference on the theme of "A New Era for Marine Aids to Navigation in a Connected World", the associated Industrial members' exhibition and the first-ever World Lighthouse Heritage Exhibition.

The XIIIth General Assembly will also take place in Incheon, on 29 May 2018, and will elect the new Council for the next four-year period. A major highlight of the General Assembly will be the formal approval of the first set of seven IALA Standards. These provide a high-level reference framework for IALA's Recommendations and Guidelines and are suitable for citation in national legislation, international instruments and regulations of competent Marine Aids to Navigation authorities. They are a vital component of the Strategic Vision towards achieving Goal 1 aimed at harmonising Marine Aids to Navigation - for the benefit of mariners, safety at sea and protection of the environment. IALA will encourage and assist coastal States and concerned authorities responsible for the regulation, establishment, management, operation and/or maintenance of Marine Aids to Navigation to be guided by the Standards and to implement them.

IALA's worldwide exposure continues to increase. This also bodes well for its planned transition to the status of an intergovernmental organization. We are very pleased that the Foreign Office of France, our host nation, is now leading the IGO project. The first Preparatory Diplomatic Conference, held in Paris in April 2017, agreed a Roadmap towards a Diplomatic Conference to adopt the IALA Convention. The discussions also informed important drafting work on the text of the Convention which had a first detailed reading at the second Preparatory Diplomatic Conference, hosted successfully by Morocco in Marrakesh in February 2018.

We continue to be indebted to all IALA members for their support and enthusiasm, to the Academy's sponsors, both direct and in-kind, for their indispensable support, and to the spirited staff of the IALA Secretariat for managing the relentless workload and serving the demanding Committee and other meetings with great efficiency.

We commend this Annual Report, which also documents the healthy financial position of IALA. We look forward with confidence to the challenges ahead as IALA continues to strive to make "Successful voyages, sustainable planet" a reality, relying on its core values as a credible, dynamic, result-oriented and connecting international technical organization.



Juan Francisco REBOLLO
PRESIDENT



Francis ZACHARIAE
SECRETARY-GENERAL

THE STRATEGIC VISION

The Strategic Vision was approved by the Council in December 2013. It covers the period 2014 to 2026 and establishes two Goals, which IALA should aim to achieve by the end of 2026. It also contains a set of Strategies to facilitate their achievement.

A review of the Strategic Vision was conducted in 2017 and in December of that year the Council approved a revised text covering the period 2018-2026, with slightly amended Goals and Strategies. The two Goals for 2026 are:

Goal 1 - - Marine Aids to Navigation are developed and harmonised through international cooperation and the provision of standards.

Goal 2 - All coastal states have contributed to a sustainable and efficient global network of Marine Aids to Navigation through capacity building and the sharing of expertise.

Also in December 2017, to complement the Strategic Vision, the Council approved a more detailed document setting out IALA's *"Position on the Development of Marine Aids to Navigation Services"* for the shorter term. This document supplements the Strategic Vision for 2018-2026. It analyses current trends and drivers of strategy, and sets out a series of technical position statements. Each position statement is concerned with a specific aspect of IALA's technical work. This set of position statements provides a clear link from the Strategic Vision to the work programmes of the Committees. The document is reviewed regularly by the Policy Advisory Panel and amended as necessary.

The technical strategy of IALA, longer term and shorter term, is therefore defined by two documents.

- The **Strategic Vision 2018-2026**, which may be accessed here : <http://www.iala-aism.org/about-iala/vision/>
- The **Position on the Development of Marine Aids to Navigation Services**, which may be accessed here: <http://www.iala-aism.org/content/uploads/2018/04/Position-on-the-development-of-AtoN-services-2017-12-15.pdf>

In addition to these two strategy documents, the Committees maintain other documents that support the Strategic Vision, including the Marine Radio Communications Plan, which was updated in 2017.



GOVERNANCE ARRANGEMENTS

IALA continues to place considerable emphasis on strong governance arrangements. This is increasingly important as the organization moves towards intergovernmental status.

Governance arrangements, including those pertaining to the General Assembly and the Council, ensure that IALA is accountable for its actions and able to respond to the developing needs of its members and to global changes. Two consultative bodies, the Policy Advisory Panel (PAP) and the Legal Advisory Panel (LAP), provide advice to the Council on technical and legal policy, respectively.



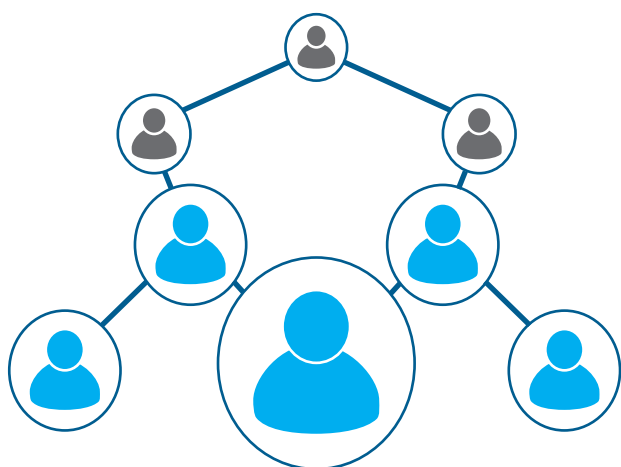
GENERAL ASSEMBLY

The General Assembly brings together members from all the IALA membership categories every four years and usually convenes in conjunction with the four-yearly IALA Conference.

National members attending the General Assembly are entitled to:

- determine the broad policy direction of IALA;
- elect members to the Council;
- decide upon changes to the IALA Constitution; and
- decide on IALA Standards (from 2018 onwards).

Associate and Industrial members are entitled to attend the General Assembly and take part in the discussions, but they do not have the right to vote.





COUNCIL

IALA is headed by a President who is elected by the Council.

The Council comprises 21 elected and three non-elected members. It approves the strategic direction, the annual budget, and the rates for members' annual contributions. It also authorizes any major financial purchases or bank loans required for the operations of IALA.

The three non-elected members are a National member of the Host Nation (France), the National member which hosted the previous Conference and the National member which will host the next Conference.

- IALA President: Mr Juan Francisco Rebollo, Puertos del Estado, **Spain**
- IALA Vice-President: Mr Kim Youngso, Ministry of Oceans and Fisheries, **Republic of Korea** during the year succeeded by Ms Kim Youngshin
- Treasurer and Chairman of the Finance and Audit Committee: Captain Ian McNaught, Trinity House, **United Kingdom**
- Australian Maritime Safety Authority, **Australia**, represented by Mr Brad Groves
- Centro de Sinalizaçao Nautica Almirante Moraes Rego, **Brazil**, represented by Captain Marcelo REIS da Silva
- Armada de Chile - Directemar, **Chile**, represented by Rear Admiral Osvaldo Schwarzenberg
- Maritime Safety Administration, **China**, represented by Captain Xu Ruqing
- Danish Maritime Authority, **Denmark**, represented by Mr Jan Thorn, during the year succeeded by Mr Jakob Ejlers
- Finnish Transport Agency, **Finland**, represented by Ms Sinikka Hartonen
- Direction des Affaires Maritimes, **France**, represented by Captain Vincent Denamur
- Federal Waterways and Shipping Administration, **Germany**, represented by Mr Christian Forst
- Directorate-General of Lighthouses and Lightships, **India**, represented by Shri J.S. Chauhan during the year succeeded by Shri Deepak Kumar Sinha
- Commissioners of Irish Lights, **Ireland**, represented by Ms Yvonne Shields
- Italian Coast Guard - Headquarters, **Italy**, represented by Rear Admiral Piero Pellizzari
- Japan Coast Guard, **Japan**, represented by Vice Admiral Kazuo Yagi
- Light Dues Board Peninsular Malaysia, **Malaysia**, represented by Haji Baharin bin Dato Abdul Hamid
- Ministry of Infrastructure and the Environment, **The Netherlands**, represented by Ms Brigit Gijsbers
- Norwegian Coastal Administration, **Norway**, represented by Ms Kirsti Slotsvik
- Portuguese Navy Lighthouse Authority, **Portugal**, represented by Captain José Guerreiro Cardoso, during the year succeeded by Captain Fernando Freitas Artileiro
- Port Autonome de Dakar, **Senegal**, represented by Mr Ousseynou Ndiaye
- Transnet National Port Authority, **South Africa**, represented by Mr David Gordon
- Swedish Maritime Administration, **Sweden**, represented by Mr Ove Eriksson
- Directorate-General of Coastal Safety, **Turkey**, represented by Mr Levent Kalfa
- United States Coast Guard, **USA**, represented by Captain Scott Smith, during the year succeeded by Captain Mary Ellen Durley.

COUNCIL STRATEGY DRAFTING GROUP

The Council, at its 63rd session, held in December 2016, recognized that there was a need for a high-level strategic framework to provide IALA with the appropriate focus and to direct the Strategic Vision. It decided that the Council Strategy Group should be replaced by a Strategy Drafting Group, which would have the task of collecting views from members and drafting a high-level strategy that would support IALA into the future.

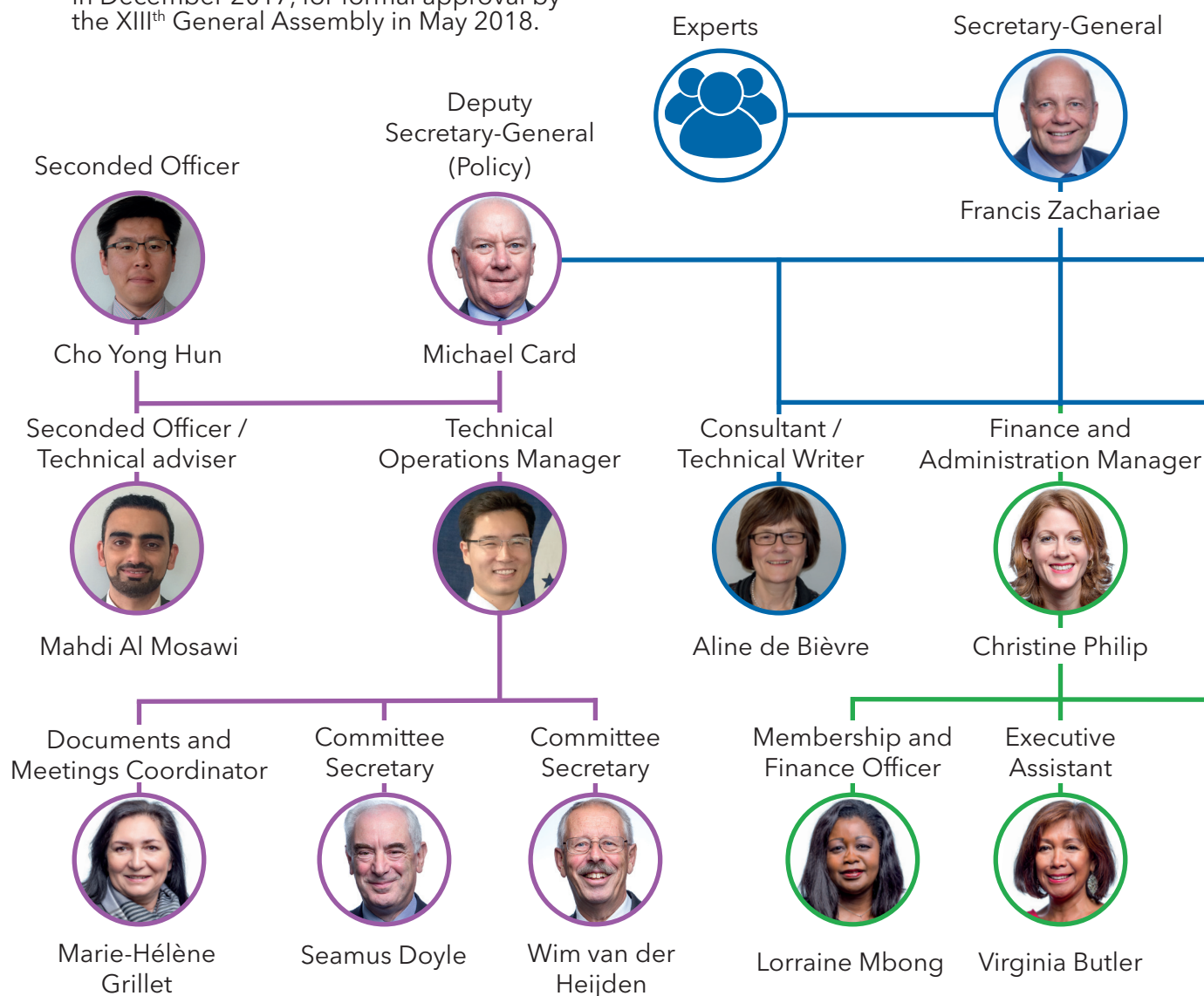
The Council Strategy Drafting Group, under the chairmanship of Mr Christian Forst, the Councillor for Germany, held its first meeting in June 2017. As a result of its work, the revised Strategic Vision, covering the period 2018-2026, was approved by the Council at its 65th session in December 2017, for formal approval by the XIIIth General Assembly in May 2018.

FINANCE AND AUDIT COMMITTEE

The Finance and Audit Committee (FAC) consists of five members elected from among the Council members for a renewable four-year period.

France, Germany, Ireland, Malaysia and the United Kingdom are the current FAC members. The Councillor for the United Kingdom, Captain Ian Mc Naught, acts as both FAC Chair and Treasurer.

The FAC meets twice a year and advises the Council on financial matters such as contribution adjustments and the execution of budget and investment policies.





AUDITOR AND CHARTERED ACCOUNTANT

Finance records are maintained by the Secretariat with the advice of a chartered accountant to ensure that they are transparent and in accordance with the accounting practice of the Host Nation (France). The chartered accountant prepares the annual financial statements that are submitted to the Council after they have been assessed by the auditor.

The auditor is in charge of reviewing the annual financial statements, providing comments on the accounts and giving specific advice as appropriate.

SECRETARIAT

The Secretariat is based in Saint-Germain-en-Laye, near Paris, France. During the year under review, it had 17 (permanent and other) staff members.

The Secretary-General acts as the Chief Executive Officer of IALA and is in charge of managing the operations of the Association.

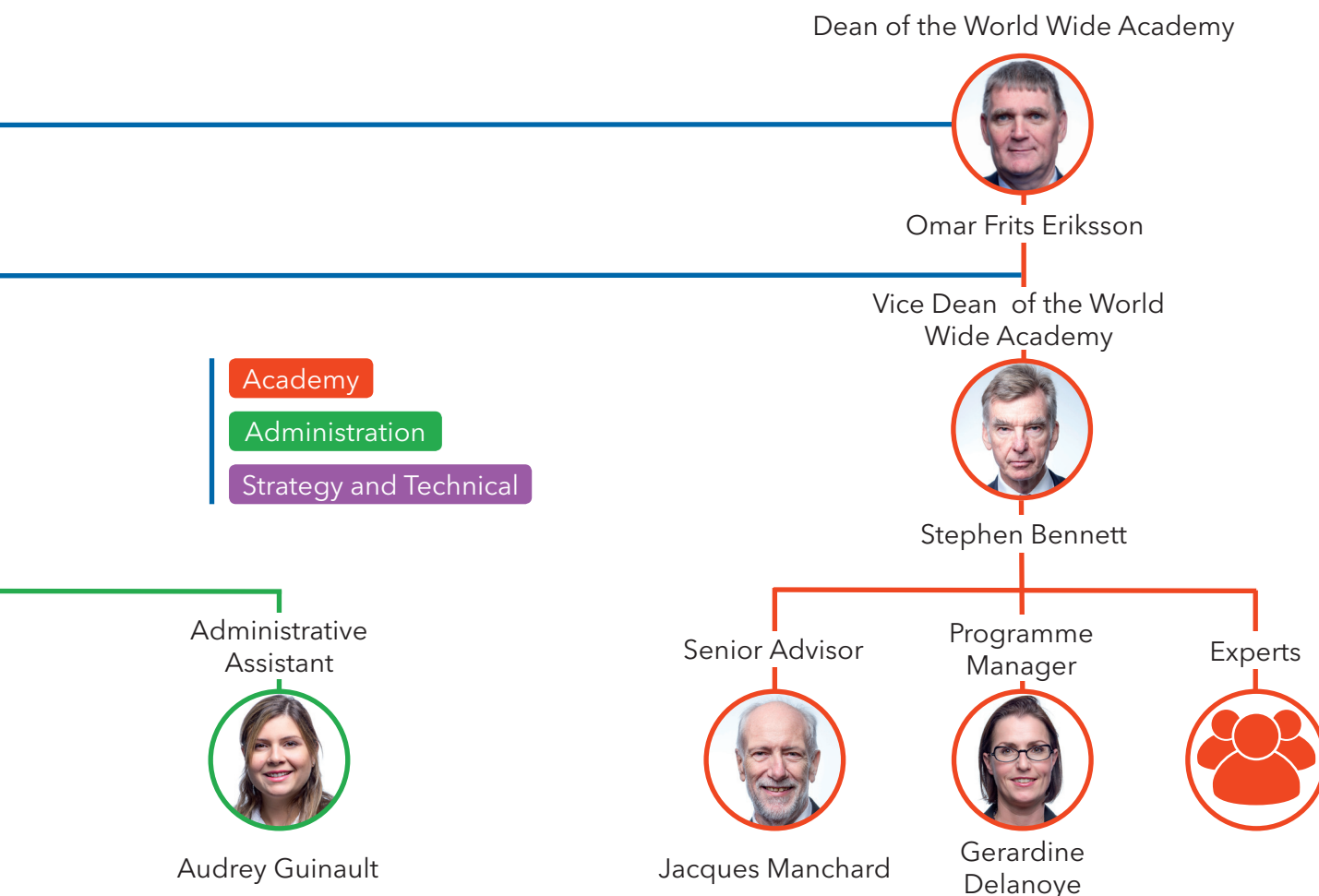
The members of the permanent staff are distributed over three sections: Technical Operations, Administration and Finance, and the World-Wide Academy.

During the year under review, the permanent staff was supported by two Technical Officers seconded by the Republic of Korea and the International Foundation for Aids to Navigation.

In addition, a number of experts assist the Secretariat in various areas as and when the need arises.

During the year under review, Mr Minsu Jeon was recruited for the position of Technical Operations Manager, which he took up on 15 November 2017.

On 31 December 2017, the structure of the IALA Secretariat was as follows:



MANAGEMENT OF TECHNICAL ACTIVITIES



Michael CARD

The overall management of IALA's technical activities is the responsibility of the Deputy Secretary-General. He is assisted by the Technical Operations Manager, who, in turn, is supported by the Events and Documentation Co-ordinator and the Committee Secretaries.

A primary output of the Association is the creation of technical documents for guidance concerning the provision of Marine Aids to Navigation and related services. This documentation is vital for achieving the harmonisation goal. Development of the technical documents is the responsibility of the four Committees (see also Page 19). Organizations representing National members appoint the Committee Chairs and Vice Chairs. The Committee Chairs are responsible for structuring and managing the work, including establishing working groups.

POLICY ADVISORY PANEL

The Deputy Secretary-General chairs meetings of the Policy Advisory Panel (PAP), which advises the Council on strategy and policy matters related to the technical activities. The PAP convenes twice a year and its members include the four Committee Chairs and Vice Chairs, the Chair of the Legal Advisory Panel and the Dean of the World-Wide Academy.

During the year under review, the PAP, with support of all four Committees, completed the work on the development of the first set of high-level IALA Standards and the related review of Recommendations relevant to those Standards. The Standards are designed to provide an overarching reference framework for the technical guidance documentation.

STRUCTURE OF TECHNICAL GUIDANCE DOCUMENTS

Technical guidance documents sit within a five-level hierarchy. All guidance documents may be downloaded from the IALA website free of charge. A few are available in printed form and incur a charge.

Standards are new to IALA's documentation and a more detailed introduction explaining their purpose is given below.

Recommendations are aimed at Marine Aids to Navigation managers and set out "what



should be done". During the year under review, a great deal of work was completed by all four Committees to rationalise Recommendations into distinct, management level documents stating what practices should be followed, but leaving all detail of *"how it should be done"* to the related Guidelines. Recommendations are now generally short documents with limited technical content.

Guidelines are aimed at engineers and technicians who design, install, or maintain Marine Aids to Navigation. The painstaking work of mapping Guidelines to Recommendations is almost complete but some work remains to be done during the next four-year work period (2018-2022).

Manuals provide broad overviews of specialist topics.

Model Courses are for use by training establishments.

IALA's technical documentation is accepted and used worldwide as authoritative guidance representing the consolidated result of science, technology, experience and best practice.

INTRODUCTION OF IALA STANDARDS

Recommendations, Guidelines, Manuals, and Model Courses have been provided by IALA for many years.

To complete and enhance the logical hierarchy of IALA's technical guidance documentation, a set of seven draft Standards has been developed and will be submitted to the XIIIth General Assembly in May 2018 for its approval. They will be the first set of Standards to establish an overarching structure for IALA's technical work, thus providing a useful reference framework.

In December 2017, at its 65th session, the Council approved the set of seven draft Standards, which encompass all IALA's activities and which should thus be sufficient for the foreseeable future. The seven draft Standards cover the following:

- ✓ Marine Aids to Navigation Planning and Service Requirements
- ✓ Marine Aids to Navigation Design and Delivery
- ✓ Radionavigation Services
- ✓ Vessel Traffic Services
- ✓ Training and Certification
- ✓ Digital Communications Technologies
- ✓ Information Services

IALA Standards are a vital component of the Strategic Vision on global harmonisation of Marine Aids to Navigation services, for the benefit of mariners, safety at sea and protection of the environment. Their formal approval by the General Assembly will be a vital step towards achieving Goal 1 of the Strategic Vision aimed at developing and harmonising Marine Aids to Navigation *"through international cooperation and the provision of standards"*.

IALA Standards will not be binding in the legal sense. However, when choosing to adopt an IALA standard, it will be a requirement to achieve full conformity with it.

More specifically, the purpose of each Standard is to carry a list of selected existing and approved Recommendations, split into normative Recommendations and informative Recommendations. Normative Recommendations are those that Marine Aids to Navigation authorities must follow in order to claim full adherence to the Standard. Implementation of Informative Recommendations is optional. All normative Recommendations are short documents aimed at management level and indicating what practices should be followed. Information on, and examples of how to carry out, those practices are provided in the related Guidelines.

IALA will encourage and assist coastal States and concerned authorities responsible for the regulation, establishment, management, operation and/or maintenance of Marine Aids to Navigation to be guided by the Standards and to implement them. This will improve the quality and harmonisation of Marine Aids to Navigation worldwide.

Standards are suitable for citation in national legislation, international instruments and regulations of competent authorities.

THE IALA YEAR

IALA ACTIVITIES

The year 2017 was another busy and productive year for IALA. A 'snapshot' of key activities and events conducted by IALA and the World-Wide Academy is provided in the table below. Further details of many of the listed activities and events are contained elsewhere in this report.



Month	IALA	World-Wide Academy
January	<ul style="list-style-type: none"> ✓ e-Navigation Underway International Conference, Denmark 	<ul style="list-style-type: none"> ✓ Distance Learning Development ✓ Workshop Next Generation VTS, Japan
February	<ul style="list-style-type: none"> ✓ Workshop on Common Phraseology and Procedures for VTS Communications, Indonesia 	<ul style="list-style-type: none"> ✓ Needs assessment mission, Trinidad & Tobago ✓ Participation in 3rd ASEAN VTS Meeting, Japan ✓ Participation in 7th ROPME Sea Area Hydrographic Commission, Oman
March	<ul style="list-style-type: none"> ✓ ENAV 20, HQ ✓ VTS 43, HQ ✓ Workshop on Sustainable Light & Power for the Next Generation, Germany ✓ ENG 6, HQ 	<ul style="list-style-type: none"> ✓ VTS training, Indonesia ✓ Needs assessment mission, Jordan ✓ Needs assessment mission, Togo ✓ Meeting with Asia-Pacific Heads of Maritime Safety Agencies, Malaysia
April	<ul style="list-style-type: none"> ✓ LAP 18, HQ ✓ PAP 33, HQ ✓ 1st Preparatory Diplomatic Conference, Paris ✓ ARM 6, USA 	<ul style="list-style-type: none"> ✓ Regional Risk Management Workshop, Saint Kitts and Nevis ✓ Level 1 AtoN Manager Course, Mod. 3, HQ ✓ Participation in ASEAN VTS Expert Group, Malaysia ✓ Needs assessment mission, St Vincent & Grenadine
May		<ul style="list-style-type: none"> ✓ Safety of Navigation Seminar, India ✓ AtoN Course and Alumni meeting, India ✓ Development of VTS Model Course, Panama ✓ Needs assessment mission, Georgia ✓ e-Nav GNSS Course, IALA Headquarters ✓ e-Navigation and GNSS Seminar, France
June	<ul style="list-style-type: none"> ✓ Council 64, Republic of Korea ✓ e-Navigation Underway Asia-Pacific Conference, Republic of Korea ✓ ENAV Working Group 3, Intersessional WG3, HQ 	<ul style="list-style-type: none"> ✓ L1 AtoN Manager Course, Mod. 3, Canada ✓ L1 AtoN Manager Course, Suriname ✓ Needs assessment mission, Tonga ✓ Vanuatu AtoN feasibility study, Fiji
July		<ul style="list-style-type: none"> ✓ L1 AtoN Manager Course, Mod. 1-2-4-5, Morocco ✓ Participation in Mediterranean and Black Seas Hydrographic Commission, Montenegro ✓ Participation in North Indian Ocean Hydrographic Commission, Egypt ✓ Needs assessment mission, Sudan ✓ L1 AtoN Manager Course, Republic of Korea
August		<ul style="list-style-type: none"> ✓ Needs assessment mission, Belize
September	<ul style="list-style-type: none"> ✓ ENAV 21, HQ ✓ VTS 44, HQ 	<ul style="list-style-type: none"> ✓ Participation in Southern African and Islands Hydrographic Commission, Reunion ✓ Needs assessment mission review, Comoros ✓ L1 AtoN Manager Course, China ✓ Risk Management Training Seminar, China ✓ WWA Alumni meeting, China
October	<ul style="list-style-type: none"> ✓ PAP 34, HQ ✓ e-Navigation Underway North America Conference, Canada ✓ ENG 7, HQ ✓ ARM 7, HQ ✓ 3rd extraordinary LAP meeting, HQ 	<ul style="list-style-type: none"> ✓ L1 AtoN Manager Course, France ✓ Particular Sensitive Sea Area: Risk Assessment, Fiji ✓ L1 AtoN Manager Course, Mod. 3, HQ ✓ ASEAN VTS training, Malaysia ✓ Needs assessment mission, Guatemala
November	<ul style="list-style-type: none"> ✓ Seminar on Arctic Navigation, HQ ✓ Workshop on How to Run the Maritime Connectivity Platform (Efficiensea2 project) HQ 	<ul style="list-style-type: none"> ✓ Fact finding mission, Mauritania ✓ Joint Capacity Building meeting, HQ ✓ Safety of Navigation Seminar, Cuba
December	<ul style="list-style-type: none"> ✓ Council 65, HQ 	<ul style="list-style-type: none"> ✓ Participation in Mesoamerican-Caribbean Sea Hydrographic Commission, Cuba ✓ QMS/TMS Audit WWA, HQ ✓ L1 AtoN Manager Course, Mod. 3, U.K.

COUNCIL MEETINGS

The Council convened twice in 2017, in Incheon, Republic of Korea for its 64th session, and at IALA Headquarters in St Germain-en-Laye for its 65th session.

Council 64 elected a new Vice President as Mr Kim Yongso was transferred to a new position. The Ministry of Oceans and Fisheries of the Republic of Korea had submitted a nomination for Ms Kim Youngshin, Director of Marine Aids to Navigation, who was unanimously elected IALA Vice President for the period ending with the next General Assembly in May 2018.

In accordance with the Basic Documents approved in December 2016, the Council started planning for the XIIIth General Assembly, scheduled for May 2018 and to be hosted by the Republic of Korea in Incheon, with preparation work commencing in November 2017.

The first draft texts of seven planned IALA Standards, developed in accordance with the Strategic Vision, were presented with a view to forward them, when completed, to the next General Assembly in May 2018 for its formal approval. A 'position' document on the development of Marine Aids to Navigation services was also presented and provides a clear link between the Strategic Vision and the work programmes of the Committees.

The Secretary-General gave a report on the 1st Preparatory Diplomatic Conference held in Paris in April 2017 (see Page 33 for more details on this conference).

The Council noted the financial statements for the year 2016, revised the budget for 2017 and decided on the membership contribution rates for 2017.

As part of the reports on the Committees' work, the Council approved 12 new or revised Recommendations, 11 new or revised Guidelines and five revised model courses. The Council also withdrew one Recommendation and three Guidelines, all of which were superseded by newer documents.

Council 65 was a busy session with 146 input papers, most of which concerned the last achievements of the Committees for the four-year work period 2014-2018. The Council approved 11 new or revised Recommendations, 23 new or revised Guidelines and six revised model courses. In addition, it was presented with the updated NAVGUIDE (2018), which will be launched at the 19th IALA Conference in Incheon in May 2018, and the new edition of the Conservation Manual, which was renamed the Complementary Lighthouse Use Manual.

The Council also approved the seven draft IALA Standards and the amended text of the Strategic Vision, for submission to the next General Assembly in May 2018.

To mark IALA's 60th Anniversary, a special session was held during the morning of 17th December, during which the Councillors enjoyed a presentation about the history of the Association from its very beginnings in the closing years of the 19th century, followed by a technical visit.

Both 2017 Council sessions welcomed a significant number of new members of IALA, and noted the discontinuation of some memberships (see Page 30 for the list of new members and discontinued memberships).

LEGAL ADVISORY PANEL

CHAIR JON PRICE, TRINITY HOUSE, UK



Jon PRICE

The Legal Advisory Panel continued its work as an advisory body to the Council.

During the year under review the Panel held one regular session (LAP18) as most of its work focused on the change of status project with the organization of a third Extraordinary LAP meeting (LAPEX3) at IALA Headquarters in October 2017.

LAP18 was held on 3 and 4 April 2017 at IALA Headquarters. It focused on the preparation of the Preparatory Diplomatic Conference scheduled to take place in Paris on 18 and 19 April 2017, reviewing feedback from Governments on the planned change of status from international non-governmental to intergovernmental organization (IGO).

Amendments were proposed to the draft Strategic Vision for the period 2018-2026, for consideration by the Policy Advisory Panel and consideration was given to the draft Standards. The Panel also considered an information paper on patents which was forwarded to the Committee Chairs for the information of their respective Committees. The Panel updated the IALA and WWA Risk Registers for consideration by the Council.

LAPEX3 was held at IALA Headquarters on 30 and 31 October 2017, with participation of National members to work on the draft Convention and the draft General Regulations that will govern IALA as an IGO. The draft texts had been revised by the LAP Chair, Vice Chair and the IALA Secretariat prior to the meeting to reflect comments received from National members and Governments after the first Preparatory Diplomatic Conference held in Paris in April 2017.

The meeting reviewed the revised texts and further amended them. The amended texts were input papers to the second Preparatory Conference held on 7 and 8 February 2018 in Marrakech, Kingdom of Morocco.

The main focus of LAP's work in the year ahead will be continuing its support to the change of status project, with a fourth Extraordinary LAP meeting (LAPEX4) arranged for 21-23 November 2018 in order to develop further the draft texts of the new IALA Convention and General Regulations in the light of feedback received from National members and Governments in the wake of the Marrakech conference.

EVENTS

Seminars

The sixth annual **Risk Management Toolbox Seminar**, delivered by the World-Wide Academy in conjunction with the China Maritime Safety Administration (MSA), was held at Jimei University in Xiamen, China from 11 to 15 September 2017. It was attended by 40 participants from 14 countries.

The seminar started off with familiarizing participants with the qualitative tool component PAWSA (Ports and Waterways Safety Assessment) and the simulation components of the IALA Risk Management Toolbox. This was followed with competency training in the use of the quantitative tool component IWRAP Mk2 (IALA Waterway Risk Assessment Programme). The seminar also aimed to provide understanding and practical applications of how the different components of the toolbox complement each other.

A **Seminar on Arctic Navigation** was hosted by IALA at its Headquarters from 9 to 10 November 2017. Its purpose was to build on a number of actions agreed at a meeting held at IALA Headquarters and attended by Arctic nations in February 2010. Nations and organizations providing maritime services in the Arctic region wished to exchange information and develop views on:

- ✓ traffic awareness, ship reporting and data sharing;
- ✓ maritime digital information services;
- ✓ positioning services; and
- ✓ Marine Aids to Navigation.

The seminar was attended by 38 delegates representing eight countries and six sister organizations.

It addressed the needs identified by the Arctic Council with regard to hydrography, Marine Aids to Navigation and maritime services. The current status and plans were considered with regard to weather and climate; commercial shipping; resilient Positioning, Navigation and Timing (PNT); communications and data exchange; risk assessment, traffic awareness and monitoring; and other relevant topics.

The seminar was structured in various sessions, with presentations on relevant topics. Six conclusions were agreed on the second day.

The output documents were forwarded to the Council for its information and to all four Committees for future development.

Workshops

An international **Workshop on Next Generation VTS** was hosted by the Japan Coast Guard in Tokyo from 16 to 20 January 2017. VTS experts from Japan met with VTS experts from Australia, Sweden, Turkey and the United Kingdom. The World-Wide Academy also participated in the workshop.

Vessel Traffic Services have developed into a mature maritime service and become widely recognized as an important tool for ensuring the safety and efficiency of navigation. The workshop aimed to highlight that operational and technological developments in recent years and changes in vessel traffic circumstances have an impact on VTS and therefore



demand careful study to ensure that future VTS respond appropriately to such new developments and changes.

Based on the VTS situation in each country, participants sought to identify priorities for development in order to provide a better service in the future, taking account of operational, technological and training developments.

The report of the workshop was forwarded to the IALA Council for its information and to the VTS Committee for action.

A Workshop on Common Phraseology and Procedures for VTS Communication was hosted by the Ministry of Transportation of Indonesia in Denpasar, Bali from 20 to 24 February 2017. It was attended by 60 delegates, representing 13 countries and two sister organizations.

The workshop was structured in various sessions, with presentations on the first day followed by working group sessions on the subsequent four days. The three working groups focused on language and phraseology; effective communication; and human factors and technology. Output papers were reviewed and nine conclusions were agreed on the fifth and final day.

The output documents were forwarded to the Council for its information and to the VTS Committee (VTS43) for further development and completion.

A Workshop on Sustainable Light and Power for the Next Generation in the IALABATT / IALALITE series was hosted by the Federal Waterways and Shipping Administration of Germany in Koblenz from 20 to 24 March 2017.

It was attended by 78 delegates representing 23 countries (including 57 delegates from National members, three Associate members, 10 Industrial members and five delegates from other organizations).

The workshop theme was supported by a comprehensive programme of presentations by manufacturers, Marine Aids to Navigation providers and users informing participants of current experiences and emerging technologies. Presentations on relevant topics covered the first two days. A technical study tour was followed by working group sessions on the third and fourth days. Topics covered included lights and signalling; communications; PV solar, wave, wind and fuel cell power generators; hybrid power systems; battery storage; theft and vandalism, mercury replacement; solar calculation design; the mariners' perspective and climate change.

Among the many highlights was a presentation on anthropogenic climate change that set the scene for delegates to gain better understanding of the need for environmentally responsible provision of Marine Aids to Navigation.

It was noted that developments in battery storage technology combined with improving solar PV cell performance offer improved energy capacity which, when adopted alongside sound design and maintenance practices, promote the most environmentally responsible provision of Marine Aids to Navigation, while lower energy requirements for lights and communications systems provide opportunities for enhanced monitoring and lower operating costs. The workshop also explored practical applications to deter theft and vandalism and thus to support the improved availability of Marine Aids to Navigation. Participants attended a most informative technical tour of the Koblenz-based laboratories of the German Federal Waterways and Shipping Administration which included a range of demonstrations covering light measurement, sector lights, radar assessment, and colour and environmental ageing. All were enthusiastic about the impressive facility and the technical expertise of the hosts, as well as the generous hospitality.

The output documents were forwarded to the Council for its information and to the ENG Committee (ENG6) for further development and completion.

A Workshop on How to Run the Maritime Connectivity Platform was hosted by IALA as part of the EfficienSea2 project from 21 to 22 November 2017. It was attended by 52 delegates representing 19 countries.

In anticipation of the European Commission-funded EfficienSea2 project ending in April 2018, the purpose of the workshop was to address the implementation of the Maritime Connectivity Platform (MCP), previously the Maritime Cloud. The MCP is designed as the logical communications infrastructure for e-Navigation that enables efficient, secure, reliable and seamless electronic information exchange among all authorized maritime stakeholders across available communication systems.

The workshop focused on identifying preferred governance and business models and preparing an implementation plan for the globalisation of the MCP. Legal and liability issues were also explored. The workshop started with a series of presentations, after which participants worked in four groups to consider the governance model, the business model, the implementation plan, and the legal and liability aspects of the MCP.

The output from the working groups served to update the draft MCP Business Case, as part of an EfficienSea2 Recommendation on the Governance and Business Model for the MCP, and to provide input into other related EfficienSea2 work.

Other Events

The seventh ***e-Navigation Underway International Conference***, jointly organised by the Danish Maritime Authority and IALA, was held from 31 January to 2 February 2017 on board the DFDS ferry M/S PEARL SEAWAYS, during her passage from Copenhagen to Oslo and back to Copenhagen. The theme of the conference was e-Navigation: A Showcase of Progress and Trends. The conference was attended by 154 delegates, representing 28 countries and eight international organizations. The associated exhibition attracted 11 exhibitors, displaying the latest developments in e-Navigation. A series of 28 presentations were given under the broad headings of general perspectives, a cluster of e-navigation projects, a selection of test beds, user perspectives, and specific technical solutions.

The first ***e-Navigation Underway Asia-Pacific conference*** conference was held from 18 to 20 June 2017 at Lotte Hotel, Jeju Island, Republic of Korea. It was jointly organised by the Korean Ministry of Oceans and Fisheries, IALA and the Danish Maritime Authority. The conference was attended by 245 delegates, representing 25 countries and 11 members of the Asia-Pacific Heads of Maritime Safety Agencies (APHoMSA). The associated exhibition attracted six exhibitors, displaying the latest developments in e-Navigation. The conference focused on the technical aspects of providing e-Navigation services with particular reference to non-SOLAS ships, on further developing global test bed cooperation for field testing of newly developed e-Navigation technologies, and on seeking capacity-building and regional cooperation for the implementation of e-Navigation in the Asia-Pacific region.

The fourth ***e-Navigation Underway North America*** was held from 16 to 19 October 2017 at the Sheraton Hotel, St. John's, Newfoundland, Canada. The conference was hosted by the Fisheries and Marine Institute of the Memorial University of Newfoundland. It was conducted as a joint undertaking with **Ocean Innovation 2017**, an annual conference regularly presented by the Marine Institute. The conference was attended by 130 delegates representing eight countries. Sponsorship was provided by eight companies and four organizations supported the conference. The associated exhibition attracted 10 organizations, displaying e-Navigation related systems and services. A wide variety of e-Navigation topics was covered by 33 presenters and panellists in five sessions addressing Recent User e-Navigation Experience: The Canadian Perspective; International Perspective for e- Navigation ; e-Navigation – Industry Perspective ; e-Navigation – What's Under Development?; and The Way Forward for e-Navigation. Each session concluded with a discussion of the topics presented.



THE COMMITTEES AND TECHNICAL ACTIVITIES

The four Committees and their allocated technical domains are the following:

Committee Title	Technical Domains
AtoN Requirements and Management Committee (ARM)	<ul style="list-style-type: none">1- Risk management2- Requirements for AtoN systems3- Management of AtoN Services4- Marine spatial planning
e-Navigation (ENAV)	<ul style="list-style-type: none">1- Data modelling and message systems2- e-Navigation communications3- Shore-based technical infrastructure4- e-Navigation test beds5- Maritime service portfolios
AtoN Engineering and Sustainability (ENG)	<ul style="list-style-type: none">1- Light and vision physics2- AtoN design and maintenance3- Global capacity building and training4- Civil engineering and environment5- Maintenance of heritage structures
Vessel Traffic Services (VTS)	<ul style="list-style-type: none">1- Operations2- Technology3- VTS Training

Aids to Navigation Requirements and Management (ARM) Chair Phil Day, Northern Lighthouse Board, UK



Phil DAY

The ARM Committee deals with high-level aspects of requirements and management of Marine Aids to Navigation services, marine spatial planning and risk management.

The Committee met twice during the year under review. ARM6 took place in Seattle, USA from 24 to 28 April and ARM7 took place at IALA Headquarters from 23 to 27 October, with participation growing to 51 participants from 25 countries.

Significant outputs and achievements of the ARM Committee during 2017 included:

- Completion and preparation of the NAVGUIDE 2018 edition;
- Completion of the development or revision of the following Recommendations:
 - R0130 (O-130) – Categorisation and Availability Objectives for Short Range Aids to Navigation;
 - R1001 – The IALA Maritime Buoyage System;
 - R1002 – Risk Management for Marine Aids to Navigation;
 - R1009 – Disaster Recovery;
 - R1010 – The Involvement of Maritime Authorities in Marine Spatial Planning (MSP);
 - R1015 – Marking of Hazardous Wrecks;
 - R1016 – Mobile Marine Aids to Navigation (MAtoN);
- Completion of the development or revision of the following Guidelines:
 - G1004 – Level of Service;
 - G1120 – Disaster Recovery;
 - G1121 – Navigational Safety within Marine Spatial Planning;
 - G1122 – The Use of Pictograms on Aids to Navigation;
 - G1123 – The Use of IALA Waterway Risk Assessment Programme (IWRAP MkII);
 - G1124 – The Use of Ports and Waterways Safety Assessment (PAWSA) MkII Tool;
 - G1137 – The use of AtoN Management in protected areas;
 - G1138 – The use of the Simplified IALA Risk Assessment Method (SIRA);
- Progress in the development of the following Guidelines:
 - Marking of wrecks as defined by the Nairobi Wreck Convention;
 - The use of Mobile Marine Aids to Navigation (MAtoN);
- All other tasks of the 2014 – 2018 Work Programme were completed;
- Completion of the draft new ARM Work Programme 2018 – 2022.

Aids to Navigation Engineering & Sustainability Committee (ENG) Chair Simon Millyard, Trinity House, UK



Simon MILLYARD

The ENG Committee deals with Marine Aids to Navigation design and maintenance, civil engineering and protection of the marine environment, and light and vision physics. It also oversees the Heritage Forum.

The Committee met twice during the year under review. ENG6 took place in March 2017 and ENG7 in October 2017; both meetings were held at IALA Headquarters. Participation was enthusiastic, with 51 participants from 22 countries attending ENG7.

The main thrust of the ENG Committee's work was to review, update and align the various Recommendations and Guidelines to support the proposed Standards. This was a successful effort and 2017 saw the completion of many new documents to support this very demanding task. There is still further work to be done to complete the tasks and, along with other topics, the Committee developed a draft work plan for the next four years (2018-2022).

Significant outputs and achievements of the ENG Committee during 2017 included:

- Completion of the development or revision of the Development of the following Recommendations:
 - R1004 - Environmental Management in the Provision of Marine Aids to Navigation;
 - R1005 - Conserving the Built Heritage of Lighthouses and other Aids to Navigation;
 - R0106(E-106) - Retroreflecting Material on Aids to Navigation Marks within the IALA Maritime Buoyage System;
 - R0201(E-200-1) - Marine Signal Lights - Colour, edition 2;
 - R0202(E-200-2) - Marine Signal Lights - Calculation, Definition and notation of Luminous Range;
 - R0204(E-200-4) - Marine Signal Lights - Determination and Calculation of Effective Intensity;
 - R0108(E-108) - Surface Colours used as Visual Signals on Aids to Navigation; and
 - R0141(E-141) - Training and Certification of AtoN Personnel, edition 4;
- Completion of the development or revision of the Development of the following Guidelines:
 - G1065 - AtoN Signal Light Beam Vertical Divergence, edition 3;
 - G1073 - Conspicuity of AtoN Lights at Night, edition 2;
 - G1140 - Commissioning of AtoN Equipment and Systems;
 - G1136 - Providing Aton Services In Extremely Hot and Humid Climates;
 - G1092 - Safety Management for AtoN Activities, edition 2;
 - G1067-0 - Selection of Power Systems for AtoN and Associated Equipment - edition 3;
 - G1067-1 - Total Electrical Loads of Aids to Navigation;
 - G1067-2 - Power Sources;

- G1067-3 - Electrical Energy Storage for AtoN;
 - G1100 - The Accreditation and Approval Process for AtoN Personnel Training - edition 2;
 - G1134 - Surface Colours used as Visual Signals on Aids to Navigation;
 - G1135 - Marine Signal Lights - Determination and Calculation of Effective Intensity; and
 - G1039 - Designing Solar Power Systems for Aids to Navigation and its associated IALA Solar Power System Calculation Tool (edition 2) and addition of a new Handbook for Meteorological Data for IALA Solar Power System Calculation Tool;
- Support for the Academy continued with revision of 11 model courses;
 - Withdrawal of Model Course E-141/2 (Senior Manager Awareness Training), Guideline 1044 on Renewable Energy Sources for Aids to Navigation and Guideline 1042 on Power Sources for Aids to Navigation which were superseded;
 - Delivery of a workshop on “*Sustainable Light and Power for the Next Generation*” in the IALABATT / IALALITE series, hosted by the German Federal Waterways & Shipping Administration in Koblenz, Germany in March 2017 which was well attended with representation from all continents;
 - The Heritage Forum made good progress in preparing for the heritage exhibition at the 19th IALA Conference in 2018 and revised the “*IALA Complimentary Lighthouse Use Manual*” (formerly “*Lighthouse Conservation Manual*”) which will be a centerpiece of the Lighthouse Heritage Exhibition; and
 - Completion of the draft 2018 – 2022 ENG work programme.

During the four-year work programme 2014-2018, the Committee met on seven occasions, arranged two workshops and produced 139 output papers.

Vessel Traffic Service (VTS) Chair Tuncay Çehreli, Directorate General of Coastal Safety, Turkey



Tuncay ÇEHRELI

The VTS Committee deals with all aspects of VTS including implementation, operations, equipment requirements, technology, training and certification.

The Committee met twice during the year under review. VTS43 took place from 20 to 24 March 2017 and VTS44 from 25 to 29 September 2017; both meetings were held at IALA Headquarters, with participation growing to 87 participants from up to 28 countries.

Significant outputs and achievements of the VTS Committee during 2017 included:

- Delivery of a workshop on “*Common Phraseology and Procedures for VTS Communication*” in Denpasar, Bali, Indonesia in February 2017;
- Draft submission to the IMO concerning a new output for a revision of IMO Resolution A.857(20) on Guidelines for Vessel Traffic Services;
- Draft submission to the IMO concerning an update of IMO MSC/Circ.1065 on IALA Standards for Training and Certification of VTS Personnel;
- Completion of the development or revision of the following Recommendations:
 - R0103(V-103) - Standards for Training and Certification of VTS Personnel;
 - R1012 - VTS Communications;
 - R1013 - Auditing and Assessing Vessel Traffic Services; and
 - R1014 - Portrayal of VTS Information and Data.
- Completion of the development or revision of the following Guidelines:
 - G1130 - Technical Aspects of Information Exchange between VTS and Allied or other Services;
 - G1131 - Setting and Measuring VTS Objectives; and
 - G1132 - VHF Voice Communication.
- Progress in the development of the following:
 - Maritime Service Portfolios for VTS;
 - Technical Acceptance of a VTS System;
 - VTS Training Manual;
 - Human Factors and Ergonomics in VTS; and
 - VTS Awareness for Navigating Officers.
- Completion of all other tasks of the 2014 - 2018 VTS work programme; and
- Completion of the draft 2018 - 2022 VTS work programme.

e-Navigation Committee (ENAV) Chair Commander Hideki Noguchi, Japan Coast Guard



Hideki NOGUCHI

The ENAV Committee deals with all aspects of the development and implementation of e-Navigation including data modelling and message systems, e-Navigation communications, shore-based technical infrastructure, resilient Positioning, Navigation and Timing (PNT), testbeds and Maritime Service Portfolios (MSPs).

The Committee met twice during the year under review. ENAV20 took place in March 2017 and ENAV21 in September 2017; both meetings were held at IALA Headquarters. Participation was enthusiastic, with 137 participants from 27 countries and seven sister organizations attending ENAV21, which considered 277 input papers and produced 63 output papers.

Significant outputs and achievements of the ENAV Committee during 2017 included:

- Completion of the development or revision of the following Recommendations:
 - R1011 - The Performance and Monitoring of eLoran Services in the Frequency Band 90 - 110 KHz and new Guideline G1125 on The Technical Approach to Establishing a Maritime eLoran Service on eLoran;
 - R1007 - The VHF Data Exchange System (VDES) for Shore Infrastructure;
 - E-NAV-147 - Product Specification Development and Management, edition 2; and
 - 1087 - Procedures for the Management of the IALA domain under the IHO GI registry;
- Completion of the development or revision of the following Guidelines:
 - 1106 - Producing an IALA S-200 Series Product Specification;
 - G1126 - Calculation of DGNSS Antenna Efficiency
 - G1127 - Systems and Services for High-accuracy Positioning and Ranging;
 - G1128 - Specification of e-Navigation Technical Services;
 - G1139 - Technical Specification of VDES;
 - G1129 - the Retransmission of SBAS Corrections using MF Radiobeacons and AIS; and
 - G1117 - VHF Data Exchange System (VDES) Overview, edition 2
- Update of the IALA Maritime Radio Communications Plan (MRCP) to edition 3;
- Preparation of a plan for promotion of testbeds through the IALA website;
- Development of a proposal for Management of Maritime Resource Names (MRN) as a means of facilitating global harmonisation of information flow in e-navigation;
- Update of the Frequently Asked Questions (FAQ) regarding VDES for posting on the IALA website;
- Development of IALA documentation on VDES and liaison with ITU regarding preparation for the ITU World Radiocommunication Conference (WRC-19) in relation to VDES and updating of ITU-R M.1371-5 (02/2014);



- Contribution to future IEC test specification that may be used for VDES certification;
- Contribution to work associated with S-100 and S-200 for harmonisation with IMO and IHO;
- On-going liaison with the IEC, IMO, ITU and WMO to progress international standards on e-navigation
- Joint ENAV/VTS Group to coordinate the work of the ENAV and VTS Committees in relation to the development of e-navigation services;
- Withdrawal of Guideline 1028 - AIS Volume 1, Part 1, Operational Issues (2004), which was superseded by the publication of Guideline 1082 - AIS Overview, and Guideline 1029 - AIS Volume 1, Part 2, Technical Issues (2002), which was subsumed into the work on revisions to Recommendation A-124 - AIS Service;
- Completion of all other tasks of the 2014 - 2018 ENAV work programme; and
- Completion of the draft 2018 - 2022 ENAV work programme.

During the four-year work programme 2014-2018, the Committee met on seven occasions, arranged four workshops, participated in a further two workshops and produced 161 output papers.

Joint ENAV/VTS Group

The second joint meeting of the ENAV and VTS Committees was held at IALA Headquarters on 24 September 2017. Attended by the Chairs and Vice Chairs of the two Committees and their respective Working Groups, it considered the need and method for improved cooperation to enhance cross-fertilisation of the work.

EfficienSea2

As a participant in the EfficienSea2 project, which is funded by the European Commission under the Horizon 2020 programme and led by the Danish Maritime Authority, IALA has focused on leading two work packages and supporting others. The purpose of EfficienSea2 is to enhance the safety and efficiency of navigation by improving digital connectivity with innovative solutions and harmonised standards. Its core activities centre on developing e-Navigation services, the Maritime Connectivity Platform as the logical maritime communications infrastructure for e-Navigation, and new communications technology, in particular the VHF Data Exchange System (VDES).

IALA leads Task 1.2 (Project/Test Bed Liaison) and Task 1.3 (Standardization) in EfficienSea2 Work Package 1 (WP 1). It also contributes to Work Package 2 (Communications - VDES) and Work Package 3 (Maritime Cloud).

By taking on an active role in this innovative project, IALA is in a good position to maintain an overview of testbeds and evolving standards, provide support to the work of the ENAV Committee with regard to the development of e-Navigation services and the technology and documentation for VDES, and promote and develop the Maritime Connectivity Platform (MCP). The MCP is designed to enable efficient, secure, reliable and seamless electronic information exchange among all authorized maritime stakeholders across available communication systems.

IALA is indebted to Dr Nick Ward, Director of Research, Trinity House (General Lighthouse Authorities of the United Kingdom and Ireland), for acting as IALA Project Manager for EfficienSea2.

EfficienSea2 is due for completion in April 2018.

WORLD-WIDE ACADEMY



By the Dean, Mr Omar Frits Eriksson

The activities of the World-Wide Academy (WWA) continued to increase, resulting in a successful execution of all principal tasks of its 2017 Action Plan. This is impressive, given that it is a not-for-profit enterprise, depending entirely on external funding, sponsorships and in-kind contributions.

The focus of the Academy on capacity building and training is of particular benefit to coastal States, which are required to deliver Marine Aids to Navigation services in accordance with international obligations and standards, but which in many cases lack the capacity to do so. Capacity building is about developing and strengthening human and institutional resources, and the Academy facilitates this through technical missions and training events.

The scheme for Accredited Training Organisations and delivery of IALA model courses has multiplied the worldwide Aids to Navigation Manager training capacity and allowed several countries to establish their own training arrangements and open it to neighbouring countries. This is reinforced by the WWA Distance Learning initiative, which is now fully established and widely used.



ACHIEVEMENTS

Measuring objectively the effect of capacity-building and training activities is a challenge, and the Academy continues to work on developing suitable metrics. The Academy's achievements since its inauguration in 2012 can be summed up as follows:

- 17 Accredited AtoN Manager Training Organizations established;
- More than 150 fully trained and certified AtoN Managers worldwide;
- More than 250 individuals trained in the use of IALA Risk Management Toolbox; and
- 11 new Accredited VTS Training Organizations established.

Through its more than 25 awareness seminars and high-level visits, the Academy has reached out to more than 1,000 maritime decision-makers from over 100 countries, in an effort to raise awareness of their obligations to provide globally harmonised Marine Aids to Navigation services. Since its inauguration, the Academy has conducted over 30 technical needs assessment missions, which is one of the cornerstones of its strategy on capacity building. This has resulted in over 1,200 recommendations to authorities and governments on how to improve their Marine Aids to Navigation service provision.

OUTLOOK FOR 2018

Demand for the services of the Academy is expected to increase further in 2018 as many lesser-developed countries seek to build a maritime economy, for which they need sufficient cadres of competent people. This will lead to many technical needs assessment missions. The accumulated number of needs assessment missions could possibly lead to a backlog of review (follow-up) missions.

The number of Accredited Training Organizations worldwide will increase, as well as the number of certified Marine Aids to Navigation managers, requiring greater attention to WWA Alumni activities. The Accredited Training Organizations are expected to deliver a total of seven full-fledged Level 1 Marine Aids to Navigation Manager courses in 2018, representing a 40% increase, compared to 2017.

Demand for distance learning is expected to grow, and the Academy should consider developing further appropriate e-learning tools, automating the distance learning process as much as possible.

Arrangements have been made for the Academy to tutor at Jimei University in China and the World Maritime University in Sweden.

The Academy continues to be very grateful to its sponsors, both direct and in-kind, and hopes to be able to continue its work at the same level for the foreseeable future.

FINANCIAL RESULTS



The consolidated balance sheets for the period show a surplus of €199,612 derived from IALA's activities (+€283,842) and the World-Wide Academy's activities (-€84,230).

• **IALA** has a strong financial situation with a reduced level of bad debt; an increasing number of members and a sufficient cash reserve at the end of December 2017. The funds committed in the annual budget for the year 2017 have allowed IALA to:

- ▶ appoint a new Technical Operations Manager in order to strengthen IALA's technical expertise
- ▶ invest in renovation works of the Headquarters in order to adopt the new corporate style



The main source of income of the Association comes from annual membership contributions, the collection of which increased by 5% compared to 2016.

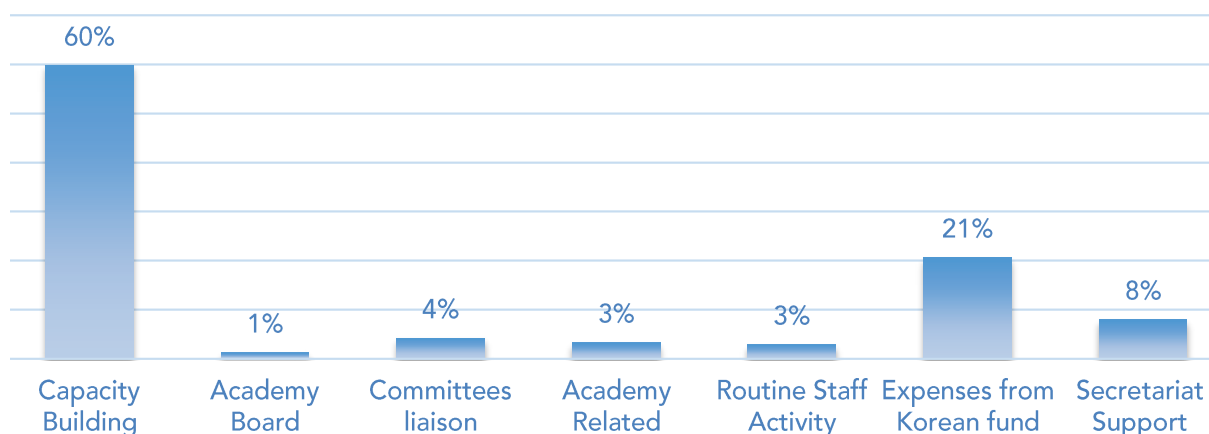
• **The World-Wide Academy** has a separate budget from IALA. This is based on an annual work programme endorsed by the Academy Board, which meets twice a year. During the year under review, the Academy intensified its capacity-building activities. This resulted in a reduction of its Reserve Fund, which stood at €8,785.43 on 31st December 2017. These unexpended funds are kept in a dedicated fund for use in 2018.



The Academy is largely funded from direct and in-kind sponsorship by external donors. The International Foundation for Aids to Navigation (IFAN) is a major donor. Other important donors include the Ministry of Oceans and Fisheries (MOF) of the Republic of Korea, the International Maritime Organization (IMO), the Ministry of Ecology of the Republic of France and other National members.



WWA Expenses for the year 2017





The financial statements are presented in a consolidated manner which include IALA and WWA components. The detailed financial statements together with the statutory auditor's report are available on the IALA website.

CONSOLIDATED INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2017

In Euros	2017	2016
Total operating income	3 858 832	3 400 460
Total operating expenses	3 647 835	3 448 429
OPERATING RESULT	210 997	(47 969)
Total interest and other financial income	18 590	29 038
Total interest and other financial expenses	4 652	12 943
FINANCIAL RESULT	13 938	16 095
Total extraordinary income	37 423	32 229
Total extraordinary expenses	59 697	60 000
EXTRAORDINARY RESULT	(22 274)	(27 771)
Income tax	3 048	3 136
Total income	3 914 844	3 461 727
Total expenses	3 715 232	3 524 508
NET RESULT FOR THE PERIOD	199 612	(62 781)

CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2017

In Euros, net values	2017	2016
ASSETS		
Fixed assets	2 358 719	2 338 528
Current assets	3 723 393	4 114 161
TOTAL ASSETS	6 082 112	6 452 689
LIABILITIES	2017	2016
Association funds and reserves	2 752 041	2 814 822
Result of the year	199 612	(62 781)
Subsidies of long-term investments	783 897	815 486
Contingencies and loss provisions	535 920	639 788
Dedicated funds	8 785	60 778
Debts and liabilities	1 801 857	2 184 596
TOTAL LIABILITIES	6 082 112	6 452 689

MEMBERS

MEMBERSHIP CATEGORIES

IALA membership comprises a large number of national authorities responsible for Marine Aids to Navigation, agencies, private companies and individuals involved in aids to navigation provision and management around the world.

IALA maintains four different membership categories. Details of these, and the global reach of IALA, are displayed in the tables and charts below.

Membership Category	Description
National	National Marine Aids to Navigation authorities or organizations of any country or part of a country that are legally responsible for the provision, maintenance or operation of Marine Aids to Navigation within that country or any part of that country (hereinafter referred to as National authorities) can join IALA as National members. National members are eligible for election to the IALA Council.
Industrial	Manufacturers, distributors of Marine Aids to Navigation equipment for sale and organizations providing Marine Aids to Navigation services or technical advice under contract can join IALA as Industrial members. Industrial members are entitled to participate in the IALA Committees and to exhibit their technologies during IALA conferences, symposia, workshops and seminars around the world.
Associate	Other Marine Aids to Navigation services, scientific or research organizations and other organizations, including ports, with an interest in aids to navigation or related matters can join IALA as Associate members. Associate members have the opportunity to contribute to the technical work programme of the IALA Committees.
Honorary	Honorary membership may be conferred for life on an individual who is considered by the IALA Council to have made an important contribution to the work of IALA.

During the year under review, 25 new members joined IALA. The total membership was 279 on 31 December 2017, equivalent to a 5% increase, compared to 2016.

National members: Ministère de l'Équipement, des Transports et de la Logistique of the Kingdom of Morocco; Saudi Ports Authority of the Kingdom of Saudi Arabia; and the Ministry of Communications of Qatar

Industrial members: Chaohu Qunli Anchor Chain Co., Ltd in China; China Head Aerospace Technology Co in China; IHM/PS in Denmark; Safran Electronics & Defence in France; in-Innovative Navigation GmbH in Germany; IRM Offshore and Marine Engineers PVT in India; M/S Navaid Energy Private Ltd in India; Raad Bushehr Engineering Co in Iran; Sice Srl in Italy; Keumha Naval Technology Co., in the Republic of Korea; United Trading and Contracting Co in Qatar; Kronshtadt Technologies JSC in Russia; PMS Polietilen Mam San Tic A.S in Turkey; Ecobarrier Manufacturing LLC in the United Arab Emirates; Briggs Marine Contractors in the United Kingdom; and CML Microcircuits Ltd in the United Kingdom.

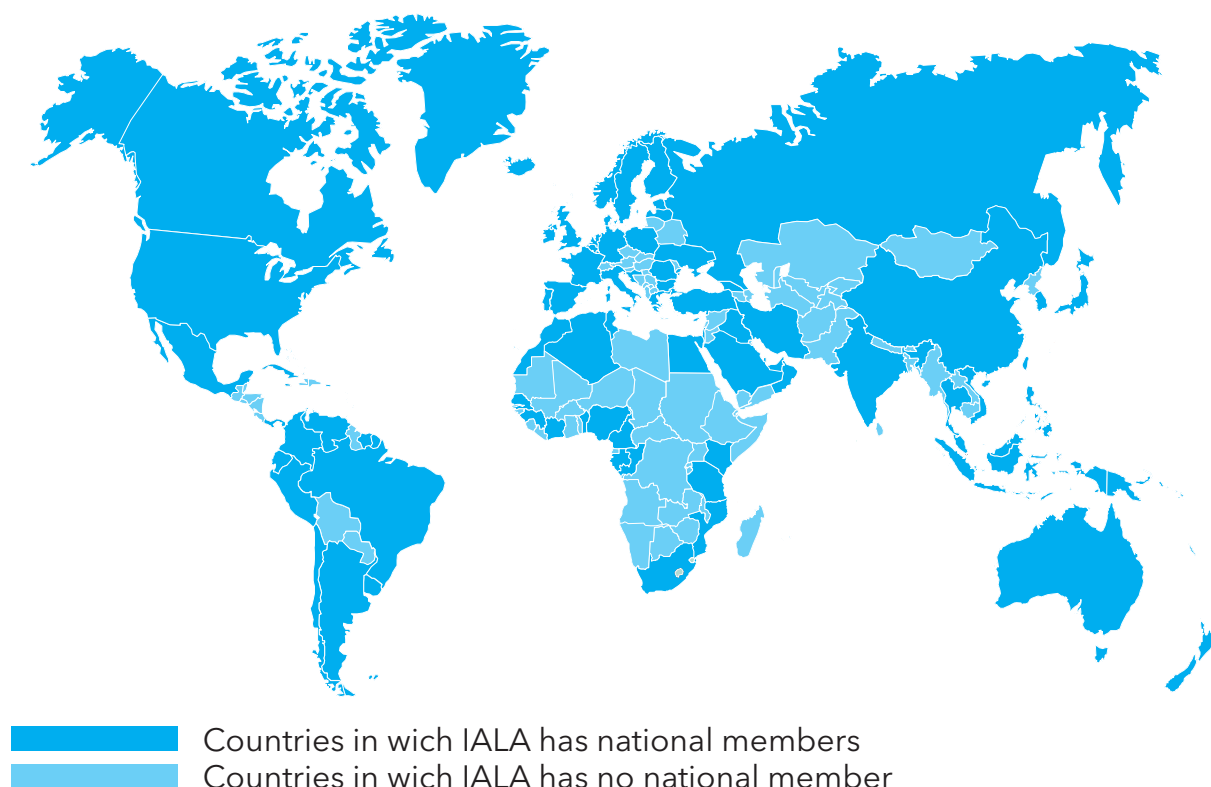
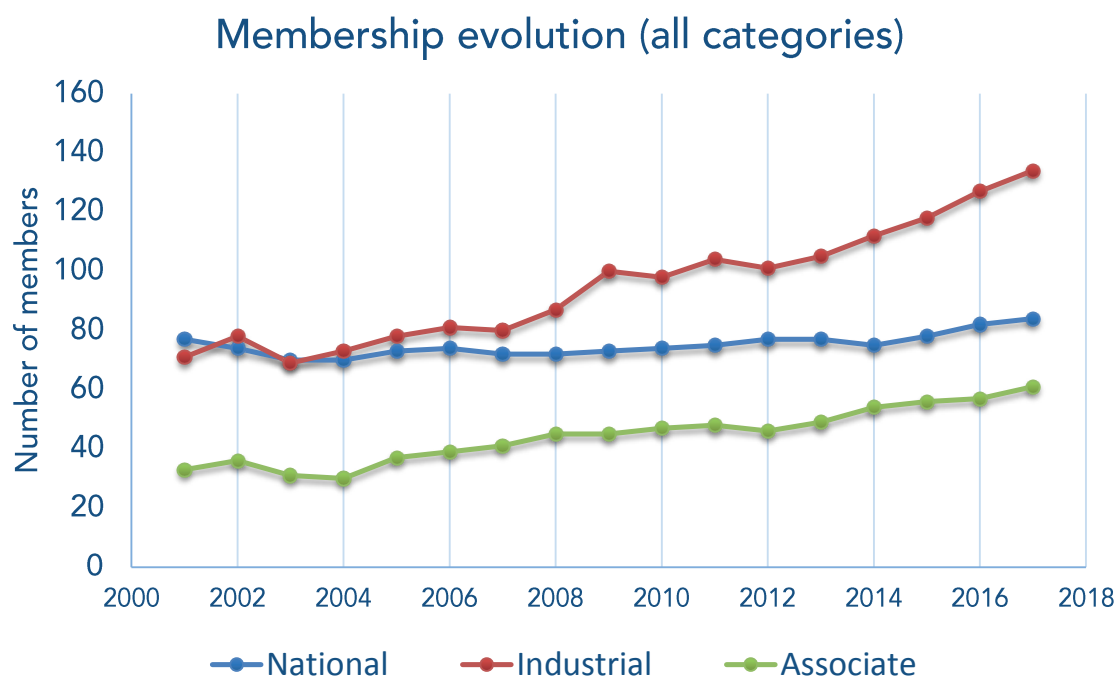
Associate members: Comoros Port Authority; Fédération des Pilotes Maritimes of France; Korean Register of Shipping of the Republic of Korea; Matlev Consulting in Morocco; SSPA Sweden AB; and DP World -Jebel Ali Port of the United Arab Emirates.



During the year under review 10 Industrial members and 3 Associate members discontinued their memberships.

As illustrated in the table and chart below, overall membership has continued to grow steadily during the year under review, and over the past 17 years.

On 31 December 2017, IALA had 84 National members, 134 Industrial members and 61 Associate members.



CHANGE OF STATUS PROJECT

ACHIEVING STATUS AS AN INTERGOVERNMENTAL ORGANIZATION THROUGH A NEW IALA CONVENTION

By Secretary-General Francis ZACHARIAE

At its XIIth session held in A Coruña, Spain in May 2014, the IALA General Assembly adopted a resolution stating its firm belief that status as an Intergovernmental Organization (IGO) will best facilitate IALA's aims in the 21st century and determining that the new status should be achieved, as soon as possible, through the development of an international treaty instrument (GA Resolution A.01 of 27 May 2014).

The envisaged new "*Convention on the International Organization for Marine Aids to Navigation*" ("*IALA Convention*") will meet the requirements of the Vienna Convention for International Treaties and supersede, upon fulfilment of agreed entry-into-force requirements, the present IALA Constitution. It will be presented for adoption at a future diplomatic conference to be convened under the auspices of IALA. Upon adoption, it will be open for signature to all member States of the United Nations (UN).

SMOOTH TRANSITION

The draft IALA Convention foresees robust arrangements for a smooth transition. These will ensure that the activities of IALA's organs and its technical work in the area of Marine Aids to Navigation will continue uninterrupted and that its responsibilities towards the maritime community will be undiminished and maintained with the customary high level of commitment and expertise.

The change of status will mark a major milestone in the life of IALA. However, it will not change IALA's principal aim, which is, as stated in its present Constitution, "*to foster the safe, economic and efficient movement of vessels*". Under the new Convention, IALA will also remain a consultative, recommendatory technical organization.

STRENGTHENING INTERNATIONAL COOPERATION

IALA has worked in close partnership with other international organizations for decades and wishes this collaboration to continue and grow. Elevating IALA's status to that of an IGO will make it a peer to organizations like the International Maritime Organization (IMO), the International Telecommunication Union (ITU), the World Meteorological Organization (WMO) and the International Hydrographic Organization, thereby strengthening existing cooperation.

Furthermore, it will allow for a broader participation in IALA by States, at government level. This will assist IALA's aim to promote the greatest possible



uniformity in aids to navigation, in the spirit of the International Convention for the Safety Of Life At Sea (SOLAS Convention).

Further in this regard, IALA is mindful of the UN Convention on the Law of the Sea (UNCLOS), which, under Article 266, requires States that are Parties to UNCLOS to cooperate “*through competent international organizations*” to promote the development and transfer of marine technology. IALA is already fully engaged with, and will continue to be dedicated to promoting technical cooperation on all matters related to the development and transfer of expertise and technology in relation to Marine Aids to Navigation. In this context, it is committed to keeping pace with emerging technologies, as appropriate, and working closely together with its Industrial members around the world, as well as with national government agencies and Marine Aids to Navigation authorities and other international and intergovernmental organizations.

IALA’s objectives and activities as an IGO will continue to be complementary to those of its peer IGOs. By working together as partner IGOs – with the respective mandate, role and responsibilities of each transparent, mutually supportive, and commonly accepted – they will work more effectively through better coordination and greater integration of standards. Any overlap or duplication would also be easier to avoid and the resulting creation of synergies would optimize available resources in the interests of the efficient movement of vessels, expeditious shipping traffic, maritime safety and protection of the environment.

THE DRAFT IALA CONVENTION

The draft Convention has been developed drawing on the principles and provisions of the present Constitution and those of the conventions of sister organizations such as the ITU, WMO and IHO.

On the initiative of the Ministry for Europe and Foreign Affairs of the Republic of France, IALA’s host country, a Preparatory Diplomatic Conference took place in Paris from 18 to 19 April 2017 to consider the concrete steps needed to achieve IALA’s planned change of status to that of an IGO.

Chaired by His Excellency, Mr Serge Ségura, French Ambassador for the Oceans, the Conference agreed a Roadmap towards a Diplomatic Conference to adopt a new treaty instrument.

The large attendance at the Paris conference set the scene for two days of active participation by 172 delegates representing 56 countries from around the world where IALA has National members. The programme was designed to widen understanding and allow for an open exchange of views and comments on various aspects pertaining to the transition of IALA as an Association under French law to effective IGO status.

The main outcome of the conference was a clear indication of a genuine willingness to move forward towards multilateral negotiations at a follow-up conference with the widest possible participation.

At the kind invitation of the Minister of Equipment, Transport, Logistics and Water of the Kingdom of Morocco, a second Preparatory Diplomatic Conference took place in Marrakesh from 7 to 8 February 2018 to further progress the process needed to achieve IALA’s planned change of status. The attendance was similar to the Paris conference with 147 delegates representing 50 countries from around the world and three international organizations. Six of the countries represented were not yet IALA National members.

The conference agreed that a revised text of the draft IALA Convention – taking into account the comments from the delegations – will be discussed at a third Preparatory Diplomatic Conference, scheduled to take place in Istanbul, Turkey in March 2019.

INDUSTRIAL MEMBERS COMMITTEE (IMC)

The Industrial members form an integral part of the IALA family and the ARM, ENG, VTS and ENAV Committees are where they jointly provide valuable technical knowledge and first-hand experience to IALA.

On 31 December 2017, the total of Industrial members reached 134 and many actively support the Committees' different working groups, providing detailed input and expert knowledge at a high technical level for the continuous development and updating of the Recommendations and Guidelines published by IALA.

In addition, many Industrial members take part in many other technical activities including symposia, seminars, workshops on specific topics and the Conference.

It is a hallmark of the Industrial members that they closely cooperate amongst themselves and within IALA and this helps to ensure that their products are reliable and robust and conform to the latest IALA publications.

The Industrial members fulfil the critical role of forming an important link between manufacturers and users of Marine Aids to Navigation. This is of great value to help ensure safe, efficient and economic movement of vessels through continuous improvement of Marine Aids to Navigation worldwide for the benefit of the marine community and protection of the environment.

The Industrial Members Committee (IMC) represents the interests of the Industrial members to IALA and the IALA Council. In addition the IMC is involved in arranging or assisting in a number of exhibitions including the IALA Conference and the famous *"Industrial Members Evening"*.

The IMC is elected for a period of four years. The election takes place at the Industrial Members' General Meeting, held during the four-yearly IALA Conference. The current IMC was elected in 2014 and has the following six members:

Mr Young K Bang, Daekee Marine Corporation, President

Mr Steve J Nell, Marine Data Solutions, Vice President and Member at Large

Mr Clive W Quickenden, Tideland Signal Corporation, Secretary, Treasurer, America representative and IALA Council Observer

Mr Lars Mansner, Sabik, Europe, Africa and IMC representative at IALA Policy Advisory Panel

Mr Noboru Maruoka, Zeni Lite Buoy Co., Ltd., Asia and Oceania representative

Mr John Sugarman, Australian Maritime Systems, Member at Large and IALA Council Observer.

The IMC meets regularly and also sends two representatives to the twice-yearly Council meetings.

Unfortunately, during 2017 Steve Nell passed away after a long illness and is greatly missed by all on the IMC and his IALA colleagues.

During 2017 a great deal of preparatory work was carried out to make all the necessary arrangements for the 19th IALA Conference in Incheon in May 2018 which included two visits to the Incheon venue. Visits were conducted to the conference venue and the Industrial Members Evening venue. It promises to be a great week.



COOPERATION WITH OTHER INTERNATIONAL BODIES



To achieve its objectives, IALA cooperates with a number of international bodies, both inter-governmental organizations (IGO) and non-governmental organizations (NGOs), and has established a Memorandum of Understanding (MoU) with a number of them:

- International Hydrographic Organization (IHO)*
- International Navigation Association (PIANC)*
- Comité International Radio Maritime (CIRM)*
- International Harbour Masters' Association (IHMA)*
- The Nautical Institute (NI)*
- International Mobile Satellite Organization (IMSO)*
- International Maritime Pilots' Association (IMPA)*
- The Maritime Organisation for West and Central Africa (MOWCA)*
- Secretariat of the Pacific Community (SPC)*

In addition, IALA works in close cooperation with the following IGOs and NGOs:

- International Maritime Organization (IMO)*
- International Telecommunication Union (ITU)*
- Arctic Council*
- Far East Radionavigation Service (FERNS)*
- Commission Electrotechnique Internationale (CEI)*
- Commission Internationale de l'éclairage (CIE)*
- International Chamber of Shipping (ICS)*
- International Federation of Shipmasters' Association (IFSMA)*
- International Association of Dry Cargo Shipowners (INTERCARGO)*
- International Association of Independent Tanker Owners (INTERTANKO)*
- Inter-governmental Oceanographic Commission (IOC)*
- Radio Technical Commission for Maritime Service (RTCM)*
- World Meteorological Organization (WMO)*



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Association Internationale de Signalisation Maritime