

## IALA COUNCIL 65<sup>th</sup> session



12-15 December 2017  
IALA Headquarters

### 11 – IALA TECHNICAL ACTIVITIES

#### 11.2 – ENG

##### 11.2.1 Summary report of the 7<sup>th</sup> session of the ENG Committee

Note by the Secretariat

#### 1. REPORT OF THE 7<sup>TH</sup> SESSION OF THE IALA ATON ENGINEERING AND SUSTAINABILITY COMMITTEE (ENG7)

The seventh meeting of the ENG Committee (ENG7) was held from 9<sup>th</sup> to 13<sup>th</sup> October 2017 in IALA Headquarters.

The session was attended by 51 participants from 22 countries, of which 31 were National Members, 12 were Industrial Members, 7 were Associate Members, 1 was an observer. Seven participants attended for the first time.

#### 2. WORK CARRIED OUT

Working in three working groups, the Committee considered 88 input papers including presentations and produced 36 output documents. All Recommendations and Guidelines considered were aligned with the proposed seven Standards.

#### 3. KEY OUTCOMES FROM THE SESSION INCLUDE:

The Committee produced the following Recommendations, Guidelines and Manuals for approval of Council:

- Draft Recommendation R0200-1 (E-200-1) Ed.2 on Marine Signal Lights Colour;
- Draft Recommendation R0200-2 (E-200-2) on Marine Signal Lights Calculation, Definition and notation of Luminous Range;
- Draft IALA Guideline G1065 Ed.3 on Marine AtoN Signal Light Beam Vertical Divergence;
- Draft Recommendation R0200-4 (E-200-4) Marine Signal Lights Determination and Calculation of Effective Intensity;
- Draft Recommendation R0108 (E-108) Surface Colours used as Visual Signals on Aids to Navigation;
- Draft Guideline G1073 Ed.2 on Conspicuity of Marine AtoN Lights at Night;
- Draft IALA Guideline on Commissioning Ed.1 December 2017;
- Draft Guideline G1136 Ed.1 on Providing Marine Aton Services In Extremely Hot and Humid Climates;
- Draft Guideline 1092 Ed2 Safety Management for AtoN Activities;
- Draft Guideline 1067-3 Ed.1 Electrical Energy Storage for AtoN;
- Draft IALA Guideline 1067-2 Ed.1 Power Sources;
- Draft IALA Guideline 1067-0 Ed1.1 on Selection of Power Systems for AtoN and Associated Equipment;
- Guideline 1067-1 Ed.1 Total Electrical Loads of Aids to Navigation;
- Draft Guideline G1100 on The Accreditation and Approval Process for AtoN Personnel Training;



- IALA Recommendation R0141 (E-141) Ed.4 Standards for Training and Certification of AtoN Personnel;
- Draft Guideline G1134 Ed.1 Surface Colours used as Visual Signals on Aids to Navigation;
- Draft Guideline G1135 Ed.1 on Marine Signal Lights Determination and Calculation of Effective Intensity;
- Draft IALA Complimentary Lighthouse Use Manual Ed.2.

The following liaison notes were prepared:

- Liaison Note to Secretariat for Solar Size Tool website content;
- Liaison Note to Secretariat re Revision of book Lighthouses of the World (1998);
- Liaison Note to ARM on Mobile AtoN;
- Liaison Note to ARM on Disparity between Editions of G1041;
- Liaison Note to ARM re Navguide Updates.

An update of the Solar Power System Calculation Tool was completed with the following papers:

- Draft IALA Solar Power System Calculation Tool Ed.2 December 2017;
- Draft IALA Guideline Ed.2 1039 Designing Solar Power Systems for Aids to Navigation December 2017;
- Draft Manual for Meteorological Data for IALA Solar Power System Calculation Tool.

Review of relevant sections of the NAVGUIDE was completed.

A demonstration of potential mobile AtoN light characters was given to the Committee to assist with the proposal of a character for Mobile AtoN for the ARM Committee.

Under the Academy distance learning programme, two participants passed modules of the level 1 AtoN managers' course during ENG7. A further three participants studying will attend the module 3 training at Trinity House in December 2017.

Support for the Academy continued with preparation of one Recommendation and one Guideline on training and certification and revision of six model courses:

- Draft IALA Model Course L2 Module 10.1&2 Remote monitoring of AtoN Ed.2 December 2017;
- Draft IALA Model Course L2 Module 11.1-5 AtoN structures, materials, corrosion and protection Ed.2 December 2017;
- Draft IALA Model Course L2 Module 11.6 Preservation of structures Ed.2 December 2017;
- Draft IALA Model Course L2 Module 11.7 Maintenance Planning and Records Ed.2 December 2017;
- Draft Model Course L2.8.1 AIS AtoN Operations Ed.1;
- Draft IALA Model Course L1.1 Aids to Navigation Manager Training Ed.3.

The Heritage Forum made good progress in preparing for the heritage exhibition at the 19<sup>th</sup> IALA Conference in 2018. Preparation of text for the IALA Complementary Lighthouse Use Manual was completed.

#### **4. WORK PLAN**

The ENG Committee work plan for the work period 2014-2018 was updated in the light of progress made during the session and the programme is substantially complete. The following table shows a summary of progress made during the four year work period.

A draft work plan for the work period 2018-2022 aligned with the seven draft Standards was prepared for consideration at PAP34.



### Work plan 2014-2018 progress summary

Task		Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
					Green	Yellow	Red	
TD#1 – Light and vision physics								
1.1.1	Produce a Guideline on Marine Signalling	2	5	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
1.1.2	Develop guidance on the selection of rhythmic characters including 1069 Synchronisation	2	5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG5
1.1.3	Update / Replace 1038 On Ambient Lights Levels	2	5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG5
1.5.2.	Workshop on Lights and Batteries – IALABATT/IALALITE	1	6		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Complete
TD#2 – AtoN design and maintenance								
2.1.1.	Develop further guidance on plastic buoys, systems & sensors	1	6	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Task deferred to 2018-22 Work Plan
2.1.2	Engineering guidance on the implementation of e-Navigation systems	3	7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Task deferred to 2018-22 Work Plan
2.2.1.	Develop guidance on sustainable AtoN design & maintenance.	3	6		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Compete at ENG6
2.2.2.	Develop guidance on the commissioning of AtoN equipment and systems and engineering audits.	2	5	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
2.3.1	Develop guidance on AtoN design & maintenance for hot climates.	4	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
2.3.2	Workshop on AtoN delivery and maintenance in extreme heat	3	4		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Complete
2.4.1	Review and update guidance on safety of personnel	4	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
2.5.1.	Populate the S100 registry for relevant AtoN classes	3	6	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Task deferred to 2018-22 Work Plan
TD#3 – Global capacity building and training								
3.2.1.	Support the WWA in updating model courses on standards for training and certification of AtoN personnel	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
TD#4 – Civil engineering and environment								
4.1.1.	Develop guidance on the use of heritage lighthouses for modern AtoN equipment & systems.	3	6		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to 2018-22
4.1.2.	Develop guidance on Maintenance of AtoN structures	2	6		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to 2018-22
Across all domains								
5.1.1	Update the Navguide as requested by ARM Committee	5	6	2-7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.1.	Navguide updates	3	6	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.10	Update 1041 On Sector Lights	1	3		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed ENG4
5.1.11	Update 1061 Illumination of Structures	1	2	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to next work period



Task		Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
					Green	Yellow	Red	
5.1.12	Update 1065 On Aids to Navigation Signal Light Beam Vertical Divergence	6	6	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.13	Review and Update of Guideline 1073 on Conspicuity of AtoN at Night	5	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.14	Review and Update Guideline 1069 on Synchronisation of Lights	2	5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG5
5.1.2	Review of IALA documents	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.1.2.	Review of IALA documents (ref ENG1 input paper on document ownership)	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.3	Review and Update E200 On Marine Signal Lights	3	6	4-7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Parts 1,2,&4 Completed
5.1.4	Update E-106 For the use of retro-reflecting material on aids to navigation marks within the IALA Maritime Buoyage System	4	5	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG6
5.1.5	Review and Update E108 Ed 2 For the Surface Colours used as visual signals on aids to navigation	6	6	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.1.6	Review of IALA Recommendation E-110 for the Rhythmic Characters of Lights on Aids to Navigation (2012)	6	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG5
5.1.7	Update Recommendation E-111 For port traffic signals	4	5	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to next work period
5.1.8	Update E-112 For Leading Lights and 1023 for the design of leading lights	4	6	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to next work period
5.1.9	Merge and update 1043 On Light Sources and 1048 On LED Technologies and 1049 On The Use of Modern Light Sources in Traditional Lighthouses	2	4	5-7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deferred to next work period
5.2.1	Identify current documents as potential Standards, Recommendations, Guidelines & Manuals	5	7		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Completed ENG4
5.3.1	Presentation to ENG committee on new developments in AtoN & related topics	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Completed at ENG7
5.3.1	Presentation to ENG committee on new developments in AtoN & related topics	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Complete
5.3.2	Develop the IALA Wiki	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ongoing
5.3.3	Develop the IALA Dictionary	1	7		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ongoing