



**IALA COUNCIL**  
**74<sup>th</sup> session**



**13-17 December 2021**  
**IALA Headquarters**

**10 – TECHNICAL ACTIVITIES**

**10.4 – ENG**

[10.4.1 – ENG14 summary report rev1](#)

Note by the Secretariat

**1. INTRODUCTION**

The 14th meeting of the ENG Committee was held for first time in IALA virtually 4 October to 2 November 2021. The session was attended by 114 registered participants from 30 countries. 13 participants attended for the first time.

The Committee continued the work for the 2018 - 2023 work period. Working in four working groups, the Committee considered 66 input papers and produced 8 output and working documents. Please refer to the annex for the overall status.

**2. IALA SUBMISSION TO OTHER ORGANISATIONS**

The following liaison note was prepared for the Council approval:

- C74-13.2.1 (ENG14-12.3.2) Liaison to ETSI on Radar Standard

**3. OUTPUTS FOR APPROVAL**

Two draft Guidelines has been finalised for the Council approval.

- C74-10.4.2 (ENG14-12.1.1) G1065 AtoN signal light beam vertical divergence, Ed 4.1.
- C74-10.3.4 (ENG14-12.2.1) New guideline on sustainable structural design of Marine Aids to Navigation

Three draft Model Courses have been finalised for the Council approval.

- C74-10.4.5 (ENG14-12.2.2) Model Course C2001-8 L2 Module 1.13 Maintenance of Steel Buoys Ed.3.0
- C74-10.4.6 (ENG14-12.2.3) IALA Model Course C2001-9 L2 Module 1.14 Power Sources on Buoys Ed.3.0
- C74-10.4.7 (ENG14-12.2.4) IALA Model Course C2007-1 L2 Module 7.1&2 Racons Ed.3.0

**4. THE COUNCIL IS REQUESTED TO**

**NOTE** the information provided in this document.



### Overall status of the ENG Committee 2018-2023 Work Programme after ENG14:

Task		WG	Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview	
						Green	Yellow	Red		
Standard 1010 – AtoN planning and service requirements										
1.1.1	Revised guidance on Simulation Technology to revise G1097 in cooperation with ARM task 1.2.4	2	8	14					This task is continued by ARM	
1.2.1	Develop Guidance on checking that 3rd party AtoN providers are providing what they are obliged to provide– 3rd party AtoN provider quality control. (Joint ARM cooperation)	2	9	14	15					
Standard 1020 – AtoN Design and delivery										
2.1.1	Review and update V-119 on the Implementation of Vessel Traffic Services (R0119) (Output to be a revised Recommendation and associated Guideline),( includes task 1.1.3)	1	8	12					Both for approval to Council	
2.1.2	Develop Guideline on Port Traffic Signals	1	11	14					Likely to be next work plan	
2.1.3	Develop E-112 Leading Lights and 1023 Leading Lines into a Guideline	1	9	14					Likely to be next work plan	
2.1.4	Complete Guideline 1061 Illumination of structures	1	10	14					Likely to be next work plan	
2.1.5	Update Guideline 1048 LED technologies and their use in signal lights	1	10	14						
2.1.6	Review & update guideline 1043 on Light sources Note: The old task in the 2014-2018 work period was Merge and update Guideline 1043 On Light Sources and Guideline 1048 on LED Technologies and Guideline 1049 on the Use of Modern Light Sources in Traditional Lighthouses (Task 5.1.9).	1	10	14						
2.1.7	Develop a guideline for E-106 Retroreflective materials	1	8	9					Completed	
2.2.1	Develop E200-3 on light measurement into a Guideline	1	11	14					Likely to be next work plan	
2.2.2	Develop new recommendation on marine light Terms of Measurement	1	12	14					Possibly needs to be pushed into new work plan	
2.2.3	Develop E200-5 on Optical Performance into a Guideline	1	12	14						
2.2.4	Revise Guideline on effective intensity	1	9	11					Completed	
2.2.5	Develop Guidance on monitoring of function and degradation of AtoN light sources	1	9	14						
2.2.6	Develop Guidance on service factor	1								
2.2.7	Develop Guidance on Colour fading of AtoN (plastic and painted) – methods to measure and assess	1	10	14						



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2.2.8	Finish guideline G1148 Marine Signal Lights - Calculation of Luminous Intensity and Range	1	8	10					Completed
	Develop Guidance on service factors								
2.2.9	Update Guideline 1041 on Sector Lights	1	9	14					
2.3.1	Develop guidance to identify appropriate standards for AtoN equipment with extreme environmental conditions. Humidity, temperature, enclosure ratings, UV etc) Also including peak intensity specification for LED AtoN, batteries, optic service factor, thermal cap, etc.	2/1	10	16					
2.3.2	Complete guidance on Maintenance of AtoN structures	2	8	12					Completed
2.3.3	Develop Guideline on meteorological and oceanographical data dissemination	2	8	14	16				
2.3.4	New Recommendation on the Responsible Design & Maintenance of AtoN (updated to include safety, sustainable design, and relevant building codes and standards)	2	8	10					Completed
2.3.5	Joint workshop with all 4 technical committees on Cyber Security in AtoN operations	2	8	12	14				
2.3.6	Develop Guideline on the Sustainable Structural Design of Marine Aids to Navigation	2	14	14					
2.4.1	Develop Guidance on what constitutes a good marine AtoN solar panel	2	10	14	16				
2.4.2	Deliver a Workshop - IALA AtoN Engineering	1	11	13	14				Deferred to next work period
2.4.3	Monitor Battery development for use in AtoN	2	8	14					
2.5.1	Develop guidance quantifying characteristics to meet nautical and operational requirements and ways to verify them	2	8	13	16				merged with 2.5.3
2.5.2	Develop new guideline on radar reflector (reflection) properties	2	8	13	16				
<del>2.5.3</del>	<del>Creating an overview guidance on floating AtoN</del>	<del>2</del>	<del>8</del>	<del>13</del>	<del>14</del>				merged in 2.5.1
2.6.1	Develop Guidance on modern equipment in traditional lighthouses	2	10	14					likely to be postponed 2023-2026
2.6.2	Monitor Climate Change to inform IALA of impact and potential adaptation requirements for AtoN providers	2	8	14					



Task		WG	Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
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2.6.3	1.1.1. IALA Heritage website: - Establish a World Heritage Lighthouse Cyber Centre, accessible via the IALA website. - Establish a database on World Heritage Lighthouses.	4	8	14					
2.6.4	Establish a concept for nominating one lighthouse as World Heritage Lighthouse of the year for each 'World AtoN Day'.	4	8	14					
2.6.5	Deliver Heritage Workshop	4	8	11	14				
2.7.1	Revise Recommendation R1004 to reference the UN Sustainable Development Goals	2	8	10	14				Completed
<b>Standard 1030 – Radionavigation services</b>									
3.1.1	Resilient PNT (applicable to all technical domains) – (identification, potential impact and mitigations)	3	8	11	15				
3.2.1	Terrestrial radionavigation systems	3	10	12					Completed
3.2.2	R-Mode (MF)	3	10	14	15				
3.2.3	R-Mode (AIS/VDES)	3	10	14					Task closed – VDES GL moved to ENAV
3.2.4	Workshop on R-Mode in 2019	3	9	10					Completed
3.2.5	Develop and maintain relevant Product Specifications eg. S-245 eLoran ASF data, S-246 eLoran transmitting station almanac, S-247 Differential Loran reference station etc.	3	10	14	15				
3.2.6	Guidance on timing and synchronisation	3	8	14	15				Run over into the new work period
3.2.7	eRacon (standard approach) ; Review recommendations ENAV146 & R-101 & Guideline 1010	3	11	14	15				Run over into the new work period
3.3.1	Consideration of how and when to use SBAS in maritime.	3	9	13					Task complete topic ongoing
3.4.2	Review existing DGNSS infrastructure and provide guidance for current system	3	10	12	14	15			
3.4.3	New Recommendation on augmentation for maritime use	3	8	10	13				complete
3.4.4	Provide guidance, strategy and advice on potential new uses of marine beacon DGNSS infrastructure	3	9	11					Item merged with 3.4.2
3.4.5	High accuracy systems	3	10	14	15				Run over into the new work period
3.5.1	Review and update current documentation under the preview of PNT WG	3	8	14	15				
3.5.2	Monitor developments in GNSS, DGNSS, radar, resilient PNT, e-Pelorus, terrestrial systems, R-Mode, inertial and any other relevant areas etc.	3	8	14	15				



Task		WG	Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
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3.6.1	Update to ITU M.823, potential replacement for A.915, Liaison with IMO, ITU, RTCM, etc on related topics and project areas.	3	8	14	15				
3.7.1	Input to MSP, Integrity considerations for resilient PNT, cybersecurity impact for PNT data, DATUM considerations	3	10	14	15				
<b>Standard 1050 Training and Certification</b>									
4.1.1	Development and review of WWA courses	1,2,3	8	14					
4.2.1	Navguide updates and review	VC	9	14					
<b>Standard 1060 – Digital communication technologies</b>									
5.1.1	Review telemetry Guideline 1008	2	10	14					
5.1.2	Review of engineering support for e-navigation services, (including hot/cold climates & radio propagation). TO BE CONFIRMED	3	8	14	16				

**Legend:**

**Green** – progress as planned

**Yellow** – task needs more time, target time prolonged

**Red** – very little progress on the task, target time prolonged

**Grey** – task completed / deleted

**Blank** – task not started