

## Work Programme for Committees 2018-2022 (as amended at Council 66)

### A. Standards, Recommendations and Guidelines

	update planned for 2018-2022		No relevant document
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[G] Not updated in new document numbering

Standard	Topic area	Recommendation				Guideline			Work to be done 2018-2022
		Ref.	Title	TC	Normative /Informative	Ref.	Title	TC	
<b>IALA1010 AtoN Planning and Service Requirements</b>	<b>Aids to Navigation planning</b>	R1001	The IALA Maritime Buoyage System	ARM	Normative	[G]1078	The Use of AtoN in the Design of Fairways (June 2011)	ARM	Revision and gap analysis of related documents
		R0111 (E-111)	Port Traffic Signals	ENG	Normative		Not planned		
		R0113 (O-113)	The Marking of Fixed Bridges and Other Structures over Navigable Waters	ARM	Normative		Not planned		
		R0139 (O-139)	The Marking of Man-Made Offshore Structures	ARM	Normative		<ul style="list-style-type: none"> <li>● meet the identified need of competent authorities, administrations, licence providing organizations and for general and/or detailed guidance on marking requirements of man-made offshore structures</li> <li>● provide potential solutions for marking, taking into account various local or regional circumstances</li> <li>● lead to a worldwide harmonized marking of these structures benefit the safe and efficient navigation of vessels visiting the mentioned areas and the protection of the</li> </ul>	ARM	

Standard	Topic area	Recommendation				Guideline			Work to be done 2018-2022
		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
							marine environment.		
		R1010	The Involvement of Maritime Authorities in Marine Spatial Planning	ARM	Informative	[G]1079	Establishing and Conducting User Consultancy by [Marine] Aids to Navigation Authorities (Dec 2009)	ARM	
						G1121	Navigational Safety Within Marine Spatial Planning (June 2017)	ARM	
						[G]1033	Provision of [Marine] Aids to Navigation for Different Classes of Vessels, Including High-Speed Craft (Dec 2003)	ARM	
			No document			[G]1096	Anticipated User e-Navigation Requirements from Berth to Berth, for AtoN Authorities (May 2013)	ARM	Revise the document anticipated user eNav requirements (may be deleted)
			Not planned			[G]1107	Planning and Reporting of e-Navigation Testbeds (June 2016)	ENAV	
			No document			[G]1090	The Use of Audible Signals (Dec 2012)	ARM	
	Obligations and regulatory compliance	R1xxx NEW	The need for a Competent Authority for Marine Aids to Navigation [and vessel traffic] services	ARM VTS	Informative	New	New Guideline(s) describing purpose, management, legislation needs, regulation needs, perhaps with examples of legislation and regulation clauses to assist understanding.	ARM & Possibly VTS	Develop with support of WWA
		R1xxx NEW	The international obligations of competent authorities IMO SOLAS, UNCLOS, EU Directives, etc.	ARM	Normative	[G]1054	Preparing for a Voluntary IMO Audit on Aids to Navigation Service Delivery (Nov 2006)	ARM	
			Not planned			[G]1005	Contracting Out [Marine] Aids to Navigation Services (Dec 2005)	ARM	
	Levels of service	R0130 (O-130)	Categorisation and Availability Objectives for Short Range Aids to Navigation	ARM	Normative	G1004	Level of Service	ARM	

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
	Risk Management	R1002	Risk Management for Marine Aids to Navigation	ARM	Normative	[G]1018	Risk Management (May 2013)	ARM	Ensure compatibility with risk toolbox
						G1123	The Use of IALA Waterway Risk Assessment Programme (IWRAP MkII) (June 2017)	ARM	Develop document to promulgate these to IMO (SN circular)
						G1124	The Use of Ports and Waterways Safety Assessment (PAWSA MkII) Tool (June 2017)	ARM	
						G1138	The Use of the Simplified IALA Risk Assessment Method (SIRA) (Dec 2017)	ARM	
						[G]1104	The Application of Maritime Surface Picture for Analysis in Risk Assessment and the Provision of [Marine] Aids to Navigation Service Delivery (Dec 2013)	ARM	
		R0142 (E-142)	Maritime Data Sharing 'IALA-NET' <ul style="list-style-type: none"><li>New title "Maritime data sharing for risk assessment and analysis"</li></ul>	ENG	Informative	New	Revise this Recommendation to note the storage and use of historical [AIS and other] data for risk analysis.	ARM	ENG and ARM in cooperation
						[G]1086	Global Sharing of Maritime Data (June 2012)	ARM	Consider with ref to the above
		R0138 (O-138)	The Use of GIS and Simulation by [Marine] Aids to Navigation Authorities	ARM	Informative	[G]1057	The Use of Geographical Information Systems by [Marine] Aids to Navigation Service Delivery (Dec 2007)	ARM	
						[G]1058	The Use of Simulation as a Tool for Waterway Design and [Marine] Aids to Navigation Planning (June 2011)	ARM	ARM revise R0138 and G1058 in cooperation with ENG
						[G]1097	Technical Features and Technology Relevant for Simulation of AtoN (May 2013)	ARM	Review and revise with ENG

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
		R1009	Disaster recovery	ARM	Informative	G1120	Disaster Recovery (June 2017)	ARM	
		R1015	Marking of Hazardous Wrecks	ARM	Normative	[G]1046	Response Plan for the Marking of New Wrecks (June 2005)	ARM	
		R1016	Mobile AtoN (MAtoN)	ARM	Normative	New	Guideline	ARM	
	Quality management	R0132 (O-132)	Quality Management for Aids to Navigation Authorities	ARM	Normative	[G]1052	Quality Management in [Marine] Aids to Navigation Service Delivery (Dec 2013)	ARM	Revise guideline (not copy ISO texts)
		R0118 (O-118)	The Recording of Aids to Navigation Positions	ARM	Normative		Not planned		
	Virtual marking	R0143 (O-143)	Provision of Virtual Aids to Navigation	ARM	Informative	[G]1081	Virtual [Marine] Aids to Navigation (May 2013)	ARM	Review the documents
<b>IALA1020 AtoN Design and Delivery</b>	Visual AtoN	R0106 E-106	The Use of Retroreflecting Material on Aids to Navigation Marks within the IALA Maritime Buoyage System (June 2017)	ENG	Normative	New	Guideline	ENG	
		R0108 E-108	The Surface Colours used as Visual Signal on Aids to Navigation (Dec 2017)	ENG	Normative	G1134	Surface Colours Used as Visual Signals on AtoN (Dec 2017)	ENG	
		R0110 E-110	The Rhythmic Characters of Lights on Aids to Navigation (June 2012)	ENG	Normative	[G]1116	Selection of Rhythmic Characters and Synchronisation of Lights for [Marine] Aids to Navigation (Dec 2015)	ENG	ARM review G1116 in association with ENG
		R0112 E-112	Leading Lights (Dec 2005)	ENG	Normative	[G]1023	Design of Leading Lines (Dec 2005)	ENG	An example is in R0112
		R1201 E-200-1	Marine Signal Lights – Colours (Dec 2017)	ENG	Normative		No guideline required		
		R0104 O-104	Off Station Signals for Major Floating Aids (June 2012)	ARM	Normative		Not planned		
			No document			[G]1038	Methods and Ambient Light Levels for the Activation of AtoN Lights (Dec 2016)	ENG	

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
			No document			[G]1043	Light Sources Used in Visual [Marine] Aids to Navigation (Dec 2011)	ENG	Revise
			No document			[G]1048	LED Technologies and their Use in Signal Lights (Dec 2005)	ENG	Revise
			No document			[G]1061	Light Applications – Illumination of Structures (Dec 2008)	ENG	Revise
			No document			G1094	Daymarks for [Marine] Aids to Navigation (June 2016)	ENG	
			No document			G1122	The Use of Pictograms on [Marine] Aids to Navigation (June 2017)	ARM	
	Range and Performance	R0200 E-200-0	Marine Signal Lights Overview		Informative	New	May be converted into Guideline (There is presently no guidance on how visual range checks of lighted AtoN should be conducted. The WWA has developed a form to do this which could be added as an Annex.)	ENG	
			No document			[G]1041	Sector Lights (June 2016)	ENG	
		R0201 E-200-1	Marine Signal Lights - Colours	ENG	Normative				
		R0202 E-200-2	Marine Signal Lights - Calculation, Definition and Notation of Luminous Range	ENG	Normative	G1135	Determination and calculation of effective intensity	ENG	
		R0203 E-200-3	Marine Signal Lights – Terms of Measurement	ENG	Normative	G1065	AtoN Signal Light Beam Vertical Divergence (Dec 2017)	ENG	
						New	Existing E200-3 will be converted into a new guideline on Measurement	ENG	
		R0204 E-200-4	Marine Signal Lights - Determination and Calculation of Effective Intensity	ENG	Normative	G1135	Determination and Calculation of Effective Intensity (Dec 2017)	ENG	Guideline to be reviewed in 2018
		E-200-5	Marine Signal Lights - Estimation of the Performance of Optical Apparatus	ENG	Normative	New	New guideline Re-write Rec into a guideline	ENG	
						New	Monitoring of the function and degradation of light sources	ENG	Write new guideline

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
						New	Service factors for AtoN lights	ENG	Write new guideline
						New	Colour fading of plastic AtoN	ENG	Write guideline (could be with a guideline on daymarks)
						G1073	Conspicuity of AtoN Lights at Night (Dec 2017)	ENG	
		R0109 E-109	The Calculation of the Range of a Sound Signal	ENG	Informative		No document		
			No document			[G]1035	Availability and Reliability of [Marine] Aids to Navigation (Dec 2004)	ENG	
			No document			[G]1037	Data Collection for [Marine] Aids to Navigation Performance Calculation (Dec 2009)	ENG	
	Design, implementation and maintenance	R0126 A-126	Use of the AIS Aid to Navigation in Marine Aids to Navigation Service	ARM	Informative	[G]1082	An Overview of AIS (June 2016)	ENAV	
						[G]1062	Establishment of AIS as a [Marine] Aid to Navigation (Dec 2008)	ENAV	Revise
						[G]1084	Procedure of the Authorisation of AIS AtoN	ARM	Revise
						[G]1098	The Application of AIS AtoN on Buoys (May 2013)	ENG	Update from 2022
		Rxxxx	New recommendation on the responsible design and maintenance of AtoN	ENG	Informative	[G]1077	Maintenance of [Marine] Aids to Navigation (Dec 2009)	ENG	Develop recommendation
		Rxxxx	Planned 2018-2022	ENG	Informative	G1092	Safety Management for AtoN Activities (Dec 2017)	ENG	Develop recommendation
			No document			[G]1108	The Challenges of Providing AtoN Services in Polar Regions (Dec 2013)	ENG	
		New	Requirements for AtoN provision in Polar regions (Standard 1010)	ARM					Develop recommendation

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
			No document			G1136	Providing AtoN Services in Extremely Hot and Humid Climates (Dec 2017)	ENG	
			No document			G1140	Commissioning of AtoN Equipment and Systems (Dec 2017)	ENG	
			No document			[G]1008	Remote Monitoring and Control of [Marine] Aids to Navigation (May 2009)	ENG	review
			No document			[G]1109	Theft and Vandalism Deterrents (Dec 2013)	ENG	
			No document			[G]1012	Protection of Lighthouses and [Marine] Aids to Navigation Against Lightning (May 2013)	ENG	
			No document			[G]1051	Provision and Identification of [Marine] Aids to Navigation in Built Up Areas (Dec 2005)	ARM	
			No document			[G]1091	Bird Deterrents (Dec 2012)	ENG	
	Floating AtoN	R0107 E-107	Moorings for Floating Aids to Navigation	ENG	Informative	[G]1066	Design of Floating [Marine] Aid to Navigation Moorings (June 2010)	ENG	
			No document			[G]1006	Plastic Buoys (Dec 2013)	ENG	
			No document			[G]1015	Painting [Marine] Aids to Navigation Buoys (Dec 2013)	ENG	
			No document			[G]1099	The Hydrostatic Design of Buoys (May 2013)	ENG	
	Environment and sustainability	R1004	Environmental management in the provision of Marine Aids to Navigation	ENG	Informative	G1036	Environmental Management in [Marine] Aids to Navigation (June 2017)	ENG	
						G1137	AtoN Management in Protected Areas (Dec 2017)	ARM	
	Heritage and legacy	R1005	Conserving the built heritage of lighthouses and other aids to navigation	ENG	Informative	[G]1007	Lighthouse Maintenance (Dec 2005)	ENG	
						[G]1076	Building Conditioning of Lighthouses (Dec 2009)	ENG	
						[G]1049	Use of Modern Light Sources in	ENG	

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
							Traditional Lighthouse Optics (Dec 2007)		
						[G]1063	Agreements for Complementary Use of Lighthouses (Dec 2008)	ENG	
						[G]1074	Branding and Marketing Historic Lighthouses (Dec 2009)	ENG	
						[G]1075	Business Plan for the Complementary Use of a Historic Lighthouse (Dec 2009)	ENG	
						[G]1093	The Management of Surplus Lighthouse Property (Dec 2012)	ENG	
						[G]1080	Selection and Display of Heritage Artefacts (Dec 2011)	ENG	
	Power systems		No document			G1039	Designing Solar Power Systems for AtoN (Dec 2017)	ENG	
			No document			G1039-1	Solar Power System Calculation Tool	ENG	
			No document			G1039-2	Handbook for Meteorological Data for IALA Solar Power System Calculation Tool	ENG	
			No document			[G]1064	Integrated Power Systems Lanterns (Dec 2008)	ENG	
			No document			G1067-0	Selection of Power Systems for AtoN and Associated Equipment (Dec 2017)	ENG	
			No document			G1067-1	Total Electric Loads of AtoN (Dec 2017)	ENG	
			No document			G1067-2	Power Sources (Dec 2017)	ENG	
			No document			G1067-3	Electric Energy Storage for AtoN (Dec 2017)	ENG	
			No document			New	Cybersecurity in AtoN operations	ENG	Guideline to write Involve all Committees (organize Workshop)
			No document			New	Floating AtoN	ENG	Guideline to



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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
									write
			No document			New	Buoy stability testing	ENG	Guideline to write
			No document			New	Marine solar panels	ENG	Guideline to write
			No document			New	Maintenance of AtoN structures	ENG	Guideline to write
			No document			New	AtoN Equipment for use in extreme environments	ENG	Guideline to write
<b>IALA1030 Radionavigation Services</b>			No document			G1127	Systems and Services for High Accuracy Positioning and Ranging (Dec 2017)	ENAV	
	Satellite positioning and timing	R1xxx <b>NEW</b>	Resilient PNT (identification, impact & mitigation)	ENG	Informative	New	Resilient PNT	ENG	Input to ITU and RTCM document, if necessary.
	Terrestrial positioning and timing	R1xxx <b>NEW</b>	Terrestrial radionavigation systems Can note the IMO multi-sensor receiver for SOLAS ships (NCSR/MSC)	ENG	Informative	G1125	The Technical Approach to Establishing a Maritime eLoran Service (June 2017)	ENAV	
		R1011	The performance and monitoring of eLoran services in the frequency band 90-110 kHz	ENG	Normative				Coordinate with RTCM
						New	For R-mode	ENG	Develop
						New	Product specification support (e-Loran etc)	ENG	Develop product specification
	RACON & Radar positioning	e-NAV-146	Maintaining Racon Service Capability	ENAV		[G]1010	Racon Range Performance (June 2005)	ENAV	Revise
		<del>R1006</del> R-101	Marine Radar Beacons (racons)	ENAV	Normative		No document		Review
						New	New guideline on e-Racons (standard approach)	ENG	New guideline
	Augmentation services	R0115	The Provision of Maritime Radionavigation Services in the	ENAV	Normative	[G]1016	Bilateral Agreements and Inter-Agency Memorandums of Understanding on	ENG	

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
		R-115	Frequency Band 283.5-315 kHz in Region 1 and 285-325 kHz in Regions 2 and 3				the Provision of DGNSS Services in the Frequency Band 283.5 – 325 kHz (June 2001)		
		R0121 R-121	The Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 - 325 kHz	ENAV	Normative	[G]1112	Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 – 325 kHz (May 2015)	ENG	
		R0150 R-150	DGNSS service provision upgrade and future use	ENAV	Informative	[G]1053	Submission of a DGNSS Service for Recognition as a Component of the IMO World-Wide Radionavigation Service (Nov 2006)	ENG	
		R-135	The Future of DGNSS	ENAV		[G]1060	Recapitalisation of DGNSS (June 2011)	ENG	
			No document			[G]1119	Marine Beacon Coverage Prediction (Dec 2016)	ENG	
			No document			G1126	Calculation of DGNSS Antenna Efficiency (June 2017)	ENG	
		R-129	GNSS Vulnerability and Mitigation Measures	ENAV		New	Becomes a Guideline under IALA1030. Maybe some text from R-129 can inform Recommendation above	ENAV	Review R129 & move to Satellite P&T
		New	SBAS performance for Maritime	ENG	Informative	G1129	The Retransmission of SBAS Corrections Using MF-Radio Beacon and AIS (Dec 2017) Develop guidance on satellite vulnerabilities.	ENG	
						New	Marine beacon support (maintenance, knowledge, harmonisation)	ENG	New guideline to write
<b>IALA1040 Vessel Traffic Services</b>	<b>VTS implementation</b>		No IALA document				No IALA document		Revision of IMO Resolution A.857(20) Guidelines on Vessel Traffic Services
		R0102	The application of the 'User Pays'	VTS	Informative		Not planned		

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
		V-102	principle to Vessel Traffic Services						
		R0119 V-119	The Implementation of Vessel Traffic Services (Review and update)	VTS	Normative	[G]1071	Establishment of a Vessel Traffic Service Beyond Territorial Seas (Dec 2009)	VTS	
						[G]1083	Standard Nomenclature to Identify and Refer to VTS Centres (June 2011)	VTS	
						New	[Guidance and/or] Model Course on Planning, Implementing, Operating and Managing VTS in developing countries	VTS	New Guidance
						New	Human Factors and Ergonomics in VTS	VTS	New Guidance
						New	Guidance for Non-VTS Ports (previously described as Local Port Services - LPS)	VTS	New Guidance
		R0120 V-120	Vessel Traffic Services in Inland Waters	VTS	Informative		Not planned		
	VTS operations	R0127 V-127	Operational Procedures for Vessel Traffic Services Review/update with a view to a new Recommendation on VTS Operations with associated Guidelines on Operational Procedures, etc. (For example, as has been done for Communications, Auditing and Assessing, etc.	VTS	Normative	[G]1089	Provision of VTS Services (INS, TOS & NAS) (Dec 2012)	VTS	
						[G]1110	Use of Decision Support Tools for VTS Personnel (Dec 2014)	VTS	Review
						G1131	Setting and Measuring VTS Objectives (Dec 2017)	VTS	
						New	Guidelines for Promulgating the Requirements of a VTS To Mariners – A VTS Users Guide Template	VTS	
			<ul style="list-style-type: none"> <li>Note - The current Recommendation only refers to Operational Procedures and provides no reference to the associated Guidelines listed in the adjoining column.</li> <li>A draft Recommendation on VTS</li> </ul>						

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
			Operations and a Guideline on Operational Procedures could be prepared intersessionally for VTS 45						
			No document			[G]1045	Staffing Levels at VTS Centres (Dec 2005)	VTS	
						[G]1118	Marine Casualty / Incident Reporting and Recording, Including Near-Miss Situations as it Relates to VTS (Dec 2016)	VTS	
						New	Maritime Service Portfolios for VTS	VTS	New Guidance
						New	Implications of Maritime Autonomous Surface Ships from a VTS Perspective	VTS	New Guidance
						New	How to develop a Safety Culture in VTS	VTS	New Guidance
						New	Development and Implementation of VTS related MSP's other than MSP 1, 2 and 3.	VTS	New Guidance
						New	Management of a VTS	VTS	New Guidance
	VTS data and information management	R0125 V-125	The use and presentation of symbology at a VTS centre	VTS	Normative		No document		
		R1014	Portrayal of VTS information and data	VTS	Normative	New	Guideline on the portrayal of VTS information and data	VTS	New Guideline
		New	Cyber-Security (Recommendation)	ENG	Informative				All Committees via Workshop
	VTS communications	R1012	VTS Communications	VTS	Normative	G1132	VTS VHF Voice Communication (Dec 2017)	VTS	
						New	VTS Communication Phrases/Phraseology	VTS	New Guideline

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		Ref.	Title	TC	Normative /Informative	Ref.	Title	TC	
		R1xxx <b>NEW</b>	Digital information transfer between ship and shore in VTS operations (Operational aspects)	VTS	Normative		See IALA1070 for a separate technical Recommendation to cover message format, communications channels, etc. Covers: <ul style="list-style-type: none"> <li>Maritime safety information (MSPs)</li> <li>Route information transfer (route exchange)</li> <li>And others</li> </ul>	VTS	The VTS Ctee prefers to wait for MSP related outputs first then takes this work item on board as appropriate.
	VTS technologies	R0128 V-128	Operational and Technical Performance of VTS Systems	VTS	Normative	[G]1111	Preparation of Operational and Technical Performance Requirements for VTS Systems (May 2015)	VTS	Review
						New	Technical Acceptance of a VTS System	VTS	New Guidance
	VTS Auditing and assessing	R1013	Auditing and Assessing Vessel Traffic Services	VTS	Normative	[G]1101	Auditing and Assessing VTS (Dec 2013)	VTS	
						[G]1115	Preparing for an IMO Member State Audit Scheme (IMSAS) on Vessel Traffic Services (Dec 2015)	VTS	
	VTS additional services		No document			[G]1070	VTS Role in Managing Restricted or Limited Access Areas (Dec 2009)	VTS	
			No document			[G]1102	VTS Interaction with Allied or Other Services ( Dec 2013)	VTS	
			No document			G1130	Technical Aspects of Information Exchange Between VTS and Allied or Other Services (Dec 2017)	VTS	
<b>IALA1050 Training and Certification</b>	Training and assessment	R0141 (E-141)	Training and Certification of AtoN Personnel	ENG	Normative	[G]1020	Training Related to [Marine] Aids to Navigation (Dec 2005)	ARM	Update (ongoing) via WWA Make one for both AtoN and VTS

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		Ref.	Title	TC	Normative /Informative	Ref.	Title	TC	
		R0103 (V-103)	Training and Certification of VTS Personnel	VTS	Normative	[G]1017	Assessment of Training Requirements for Existing VTS Personnel, Candidate VTS Operators, Revalidation of VTS Operator Certificates (Dec 2005)	VTS	Review 5 MC associated with V-103
						[G]1027	Simulation in VTS Training (Dec 2005)	VTS	
						[G]1103	Train the Trainer (Dec 2013)	VTS	
	Human factors and ergonomics		No document				No document		
	Capacity Building		No document				No document		
	Competency, certification and revalidation	R0149 (O-149)	Accreditation of Training Organisations	ARM	Normative	G1100	The Accreditation and Approval Process for AtoN Personnel Training (Dec 2017)	ENG	
						[G]1014	Accreditation and Approval Process for VTS Training Courses (Dec 2011)	VTS	
	Model Courses		Model Courses are not belong to Recommendations either Guidelines.			AtoN Level 1	L1.1 – L1.5 (see annex)		On going work
						AtoN Level 2	L2.0 – L.2.11 (see annex)		On going work
						VTS	V-103/1 – 5 (see annex)		On going work
						New	New Model Course on Master of AtoN Management		On going work
IALA1060 Digital Communication Technologies	Harmonised maritime connectivity framework (CMDS) Maritime Internet of Things (Intelligent sensors, AtoN monitoring)	R1xxx <b>NEW</b>	<p>Communications channels for [public service] digital information services in coastal areas.</p> <ul style="list-style-type: none"> <li>Single new Recommendation on (free-to-air, non-commercial) communications channels to be used by coastal authorities for digital information transfer between ship and shore in coastal areas</li> </ul>	ENAV		[G]1105	Shore-side portrayal ensuring harmonisation with e-Navigation related information	ENAV	Develop. Can refer to MRCP as an Appendix

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		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
			may absorb A-123 and A-124						
			No document			New	Tidal flow data capture & display	ENG	Guideline to write
		R0140 (e-NAV-140)	e-Navigation architecture	ENAV	Informative	[G]1113	Design and Implementation Principles for Harmonised System Architectures of Shore-Based Infrastructure (May 2015)	ENAV	Revise
						[G]1114	A Technical Specification for the Common Shore-Based System Architecture (CSSA) (May 2015)	ENAV	Revise
		R0148 (e-NAV-148)	The need to implement regional e-Navigation solutions based on international standards	ENAV	Informative	New	New guideline could be merged with R0140	ENAV	Revise
		R1xxx <b>NEW</b>	maritime connectivity platform	ENAV	Informative	New	Maritime Connectivity Platform	ENAV	Awaiting further development of MCP initiatives by Korea et al
	Wide/Medium bandwidth systems (AIS & VDES)	R1007	The VHF Data Exchange System (VDES) for shore infrastructure (June 2017)	ENAV	Normative	G1117	VHF Data Exchange System (VDES) Overview (Dec 2017)	ENAV	
						G1139	Technical Specification of VDES (Dec 2017)	ENAV	
						New	Input to ITU-R.M.2092-0 and -1	ENAV	Develop
						New	Input to IEC test standard	ENAV	Develop
		R0123 (A-123)	The Provision of Shore Based Automatic Identification System (AIS) (June 2007)	ENAV	Normative	[G]1050	Management and Monitoring of AIS Information (Dec 2005)	ARM	Review
		R1008	The AIS Service Planned in draft Standard 1060	ENAV		New	Move recommendation A-124 content to Recommendation R1008 remainder	ENAV	

Standard	Topic area	Recommendation				Guideline			Work to be done 2018-2022
		Ref.	Title	TC	Normative / Informative	Ref.	Title	TC	
			(supersedes A-124)				to Guideline(s)		
						New	A-124 APPENDIX 0 to APPENDIX 19 become Guidelines for Recommendation R1008	ENAV	
	Narrow bandwidth systems (NAVDAT, MF beacons)	R1xxx <b>NEW</b>	Digital MF information broadcast	ENAV	Normative	New	Supporting Guideline 500KHz Other channels (MF beacons)	ENAV	
<b>IALA1070</b> Information Services	Data models and data encoding (IVEF, S-100, S-200, ASM)					New	Data Model for Digital Information Services for VTS (e.g. route exchange)	VTS	A data model and a product specification in S-200 Under e-NAV-147
						New	Maritime Service Portfolios	ARM	Develop a new Guideline
		e-NAV-144	Harmonized implementation of Application Specific Message (ASM)	ENAV	Normative	[G]1095	Harmonized Implementation of Application Specific Messages (ASMs) (May 2013)	ENAV	
		R0147 e-NAV-147	Product Specification Development and Management	ARM	Normative	[G]1088	Introduction to Preparing S-100 Product Specifications (Dec 2012)	ARM	
						[G]1085	Standard Format for Electronic Exchange of AtoN Product Information	ARM	
						G1106	Producing an IALA S-200 Series Product Specification (June 2017)	ARM	
						G1106-1	IALA Product Specification Number Template (Dec 2017)	ARM	
						G1106-2	Proposal for Additional S-100 Feature Concept Dictionary (FCD) Item – Name of Proposed FCD Item (Dec 2017)	ARM	



Standard	Topic area	Recommendation				Guideline			Work to be done 2018-2022
		Ref.	Title	TC	Normative /Informative	Ref.	Title	TC	
						G1106-3	Product Specification under Development – Template (Dec 2017)	ARM	
		R0145 V-145	The Inter-VTS Exchange Format (IVEF) Service	VTS	Normative	New	Split into Recommendation and Guideline	VTS	Review recommendation
		R1xxx <b>NEW</b>	Maritime Resource Names	ENAV	Informative	G1087	Procedures for the Management of the IALA Domains under the IHO GI Registry (June 2017)	ENAV	
						G1128	The Specification of e-Navigation Technical Services (Dec 2017)	ENAV	
	Data exchange systems (Traffic Information)					[G]1072	AtoN Information Exchange and Presentation (Dec 2009)	ARM	Review to make 1 G with G1105
	Terminology, symbology and portrayal					New	Symbology and portrayal of AtoN	ARM	New guidance and liaison with IHO

## B. IALA Manuals

Title	Edition	Date of last revision	Remarks
NAVGUIDE	8	2018	
IALA Complementary Lighthouse Use Manual	2	2017	
IALA VTS Manual	6	2016	

## C. IALA Model Courses

### a. AtoN

Ref.	Edition	Title	Date of last revision
L1.1	Ed3	Marine Aids to Navigation - Manager Training	1-Dec-17
L1.3	Ed2	Aids to Navigation manager training Level 1- Use of the IALA Risk Management Tools	1-Dec-15
L1.4	Ed2	Aids to Navigation Management Training Level 1 – Global Navigation Satellite Systems and e-NAV	1-Dec-15
L1.5	Ed1	Historic Lighthouse Projects	14-Dec-14
L2.3.9	Ed2	Maintenance of Mercury Rotating Optics	1-Jun-16
L2.1.1 & 2.1.2	Ed1	Introduction to Aids to Navigation	10-Oct-12
L2.1.3 & 2.1.4	Ed2	Introduction to AtoN Buoyage	1-Jun-16
L2.1.8	Ed2	Buoy Cleaning	1-Jun-16
L2.1.12	Ed2	Maintenance of Plastic Buoys	1-Jun-16
L2.1.13	Ed2	Maintenance of Steel Buoys	1-Jun-16
L2.1.12	Ed2	Power Sources on Buoys	1-Jun-16
L2.6.1 & 2.6.2	Ed2	AtoN Service Craft and Buoy Tenders	1-Jun-16
L2.7.1 & 2.7.2	Ed2	Racon Beacons Maintenance	1-Jun-16
L2.9.1 - 2.9.9	Ed2	Introduction to Radionavigation and DGNSS	1-Jun-16
L2.1.9	Ed2	Introduction to Buoy Positions	1-Jun-16
L2.1.14	Ed2	An introduction to shore marks	1-Jun-17
L2.3.1 – 3	Ed2	Lights and Marine Lanterns	1-Dec-16
L2.3.7 –8	Ed2	Rotating Beacons and Classic lenses	1-Dec-16
L2.3.10	Ed2	range, sector and precision direction lights	1-Dec-16
L2.4.1 - 2	Ed2	Sound Signals	1-Dec-16
L2.5.1 & 2	Ed2	Introduction to coatings and specifications; surface preparation	1-Jun-17
L2.8.1	Ed2	AIS AtoN Operations	1-Dec-17
L2.3.1 - 3	Ed1	Introduction to Marine Signal Lanterns	31-May-13
L2.3.4 - 6	Ed2	Light Flashers Lamp changers and IPS lanterns	1-Dec-16
L2.3.1 - 3	Ed2	Introduction to Marine Lanterns	31-May-13
L2.11.1 - 5	Ed2	Marine Aids to Navigation Structures: Materials, Corrosion and Protection	1-Dec-17
L2.11.7	Ed2	Maintenance Planning & Records	1-Dec-17
L2.11.6	Ed2	Preservation of Structures	1-Dec-17
L2.10.1 & 2	Ed2	Introduction to remote monitoring of AtoN	1-Dec-17

Ref.	Edition	Title	Date of last revision
L2:2.7	Ed2	Lightning Protection	1-Jun-17
L2.2.5 & 6	Ed2	Mains AC Utility Power Systems; Diesel and Petrol Generators	1-Jun-17
L2.1.5- 2.1.6	Ed2	Buoy Handling and Safe Working Practices	1-Jun-16
L2.2.4	Ed2	Wind Generators	1-Jun-17
L2.0	Ed3	Technician Training Level 2 – Model Course Overview	1-Jun-16
L2.2	Ed1	Primary and Secondary Battery Maintenance	15-Dec-14
L2.2.3	Ed1	Photovoltaic (Solar panel) systems and maintenance	15-Dec-14
L2.2.1	Ed1	DC Power Systems	15-Dec-14
L2.1.7	Ed1	Buoy Moorings	15-Dec-14

## b. VTS

Ref.	Edition	Title	Date of last revision
V-103/1	Ed2	Model Course – VTS Operators Basic Training	1-Dec-09
V-103/2	Ed2	Model Course – Vessel Traffic Services Supervisor - Advancement Training	1-Dec-09
V-103/3	Ed2	Model Course – VTS On the Job Training (VTS Operator and VTS Supervisor)	1-Dec-09
V-103/4	Ed2	Model Course – Vessel Traffic Services - On the Job Training Instructor	1-Dec-09
V-103/5	Ed 1	Model Course- The revalidation process for VTS Qualification and Certification	1-Jun-16