



IALA ARM COMMITTEE

REPORT OF THE 14TH SESSION OF THE IALA ATON REQUIREMENTS AND MANAGEMENT (ARM) COMMITTEE

**15 to 29 October 2021
Virtual Meeting**

Thomas Southall
Committee Secretary

29 October 2021

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International Association of Marine Aids to Navigation and Lighthouse Authorities
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**Report of the 14th Session of the IALA
AtoN Requirements and Management (ARM) Committee
15 to 29 October 2021
Executive Summary**

The 14th Session of the ARM Committee was held virtually from 15 to 29 October 2021 with Phil Day as Chair and Dave Lewald as Vice-Chair. The Secretary for the meeting was Thomas Southall.

94 Participants from 27 countries participated in ARM14. 7 participants attended for the first time.

The Committee continued the work for the 2018 - 2022 work period. Working in three working groups, the Committee considered 86 input papers and produced 43 output and working documents.

The meeting was carried out in accordance with the Virtual Committee Arrangements online. Approximately 46 meetings were arranged.

Key outputs completed included:

- Amended Recommendation R0126 The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Services (A-126)
- Reviewed Guideline G1054 Preparing for An IMO Audit on Aids to Navigation Service Delivery
- Revised G1078 - The Use of AtoN in the Design of Fairways Channels
- New Guideline on the Management Of Maritime Resource Name Organization Identifiers
- Revised Recommendation 0-139 the Marking of Man-made Structures
- Guideline on Man-made Structures
- New Guideline on the Marking Of Breakwaters And Barriers

The following liaison notes were prepared:

- New Definitions for IALA Dictionary related to Task 1.5.3
- ARM comments on the revision of IALA standards within the report
- Liaison Note to ENAV and VTS -Technologies to Support Maritime Single Window
- Liaison note to all committees on Guideline 1052 Quality Management Systems for AtoN Service Delivery
- Liaison note to ENG on 3rd party Quality Control
- Liaison note to all committees on Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2
- Liaison Note to Council on AIS ASM survey
- Liaison note to PAP and MASS Task Force
- Liaison note to PAP on STCW amendments

Overall status of the ARM Committee 2018-2022 Work Programme after ARM14:

Task		Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
					Green	Yellow	Red	
WG#1 – Navigational Requirements								
1.1.1	Develop guidance on regulatory/legal framework for Aton Authorities							Task deleted following LAP advice
1.1.2	Revise G1054 Preparing for a Voluntary IMO Audit on Aids to Navigation Service Delivery (Nov 2006)	10	13	14				Complete at ARM14
1.4.1	Revised Guideline G1052 Quality Management in [Marine] Aids to Navigation Service Delivery (Dec 2013), removing ISO copied text.	10	12	14				
1.5.1	Reformat and review the IALA MBS incorporating MAtON. Needs General Assembly approval.	8	12	14				
1.5.2	Assist ENAV with development of radio aspects of MAtON and AMRD with IEC and ITU	8	11	12				Complete
1.5.3	Undertake gap analysis of IALA guidance associated with the MBS, including 1078 The Use of AtoN in the Design of Fairways (June 2011), identify further work to add to the task plan at ARM8. Includes SIGNI buoyage and submerged breakwaters.	8	12	14				Complete at ARM14
1.5.4	Develop guidance for navigators on the use of AtoN	13	14	16				
1.5.5	Review G1096 Anticipated User e-Navigation Requirements from Berth to Berth, for AtoN Authorities (May 2013)	10	11					Deleted
1.5.6	Develop guidance on AtoN provision in polar regions (winter conditions; possibly complete following liaison with ENG)							Complete
1.5.7	Develop guidance on the provision of AtoN for autonomous vehicle/vessel operations (Maritime Autonomous Surface Ship, MASS)	14	16					
1.5.8	Review and update Recommendation R-0139 on the Marking of Man-Made Offshore Structures to reflect trends in the proliferation of wind farms and other offshore platforms.	10	12	14				Complete at ARM14
1.5.9	Identify options for the future use of DGNSS stations in conjunction with ENG review of Recommendation R0150.	10	12					ENG Completed
1.5.10	Develop Guideline on the Use of MAtON	8	10					Complete at ARM12, update of A-126 complete at ARM14
1.6.1	Review R0143 Provision of virtual aids to navigation and G1081 Virtual AtoN to reflect developments	8	11	13				Completed at ARM13
2.1.1	In association with ENG review G1116 Selection of Rhythmic Characters and Synchronisation of Lights for [Marine] Aids to Navigation (Dec 2015)							Complete
5.3.1	Develop guidance on the symbology and portrayal of AtoN for charting	9	14					Postponed until 2022.
3.2.1	Review relevant sections of NAVGUIDE as requested by Secretariat	8	14	15				Ongoing
	Review IALA AtoN questionnaire							Complete
WG#2 – Information Services and Portrayal								
2.2.1	Review G1084 Procedure of the Authorisation of AIS AtoN	10	11					Incorporated in review of AIS documentation

Task		Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
					Green	Yellow	Red	
2.2.2	Provide guidance on the management of requirements and requirements traceability							Completed at ARM9
4.1.1	Review G1050 Management and Monitoring of AIS Information (Dec 2005)	9	11					Incorporated in review of AIS documentation
4.2.1	Maritime Connectivity, Define User Requirements for Maritime Connectivity, Define User Requirements for the Maritime Internet of Things (Define Requirements for MRN Addressing) and Contribute to IALA submission to IMO	9	14	16				Ongoing
5.1.1	Develop guidance on Maritime Services including the production of an 'e-Navigation Operational Service Description'	9	14					Completed at ARM12
5.1.2	New Guideline on Operational considerations for S-200 (S-201 AtoN information and S-230 Application Specific Messages)	9	11	16				Ongoing
5.1.3	Continue to Develop Product Specification S-201 in the Task Group already assigned							
5.1.4	Develop Annex C to S-201	9	11	16				Ongoing
5.1.5	Develop Requirements for S-125	8	14	16				Ongoing
5.1.6	Coordination with IHO/WMO for S-100, S-200, and MRN management (S-100/S-200 message coordination with other Committees on S-2xx development)	8	14	16				Ongoing
5.1.7	Develop guidance on MRN for users	8	14					Complete at ARM13
5.1.8	Develop MRN Registry Submission & Maintenance Guideline for IALA Secretariat	8	14					Completed at ARM14
5.1.9	Develop Recommendation to cover MRN Guidelines	9	10					
5.1.10	Coordinate Committee support for IALA representation at IHO working groups in cooperation with Secretariat (HSSC, S-100WG, NIPWG)	8	14	16				Ongoing
5.1.11	Monitor the development of S-201 Testbed	8	14	16				Ongoing
5.2.1	Review G1105 shore side portrayal ensuring harmonisation with e-Navigation related information	9	14	16				Ongoing
5.2.2	Develop Guideline on ship reporting from the shore-side perspective							Completed at ARM13
5.3.1	Develop guidance on the symbology and portrayal of AtoN for charting	9	14	16				Ongoing (with 5.2.1)
6.2.1	Joint IMO IHO IALA Workshop regarding the management of S-100 PS	9						TBC
6.2.2	Participate in ARM led joint workshop on cyber security	8	14	16				Ongoing
WG#3 – Risk Management								
1.2.1	Review G1018 Risk Management to ensure compatibility with risk toolbox. Includes full review of underlying Risk Toolbox documentation G1123, G1124, G1138	8	13	15				
1.2.2	Review R0142 Maritime Data Sharing IALA Net to reflect new title "Maritime data sharing" and the storage and use of historical [AIS and other] data for risk analysis. New Guideline incorporating a Conceptual framework for data sharing, capture and analysis	10	14					Delayed due to developments in IALANET
1.2.3	Review G1086 Global Sharing of Maritime Data (June 2012) in collaboration with task 1.2.2 (R0142 review)	9	14					Delayed due to developments in IALANET

Task		Start Session	Planned End Session	Revised End Session	Progress Indicator			Status Overview
					Green	Yellow	Red	
1.2.4	In cooperation with ENG (task 1.2.1) revise R0138 and G1058 and G1097 on simulation use by AtoN authorities	8	12	15				
1.2.5	Develop Recommendation for marine data sharing for risk assessment analysis or incorporate with R0142 task 1.2.2							Task merged with 1.2.2
1.2.7	Develop document to promulgate IALA risk management tool box to IMO (SN circular)	13		15				Will be progressed at the completion of all other tasks.
3.1.1	Review G1020 Training Related to [Marine] Aids to Navigation (Dec 2005)	8	14					Complete
6.1.1	Cooperate with WWA in providing Risk Seminar(s)	8	14	16				Ongoing

Legend:

Green – progress as planned
Yellow – task needs more time, target time prolonged
Red – task delayed due to external issue
Grey - task completed / deleted
Blank – task not started

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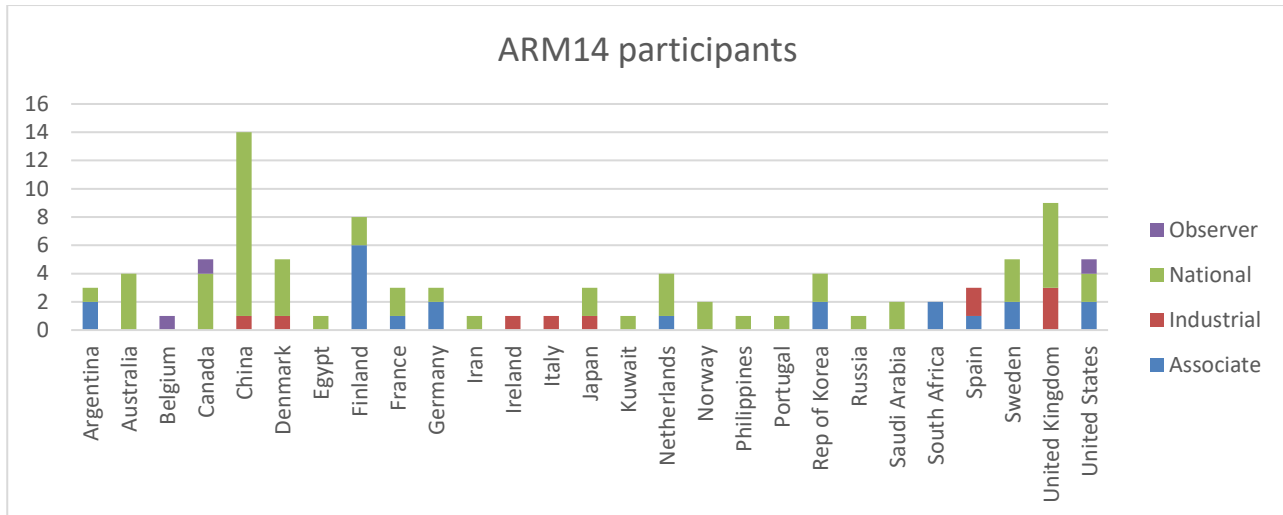
Report of the 14th Session of the IALA

AtoN Requirements and Management (ARM) Committee

1. INTRODUCTION

The 14th Session of the ARM Committee was held virtually from 15 to 29 October 2021 with Phil Day as Chair and Dave Lewald as Vice-Chair. The Secretary for the meeting was Thomas Southall.

94 Participants from 27 countries participated in ARM14. 7 participants attended for the first time.



1.1 Welcome from the Chair of the ARM Committee

The Committee Chair, Phil Day, welcomed the Committee to the fourteenth session of the ARM Committee (ARM14). The Chair introduced Dave Lewald, Vice-Chair of the ARM Committee and Thomas Southall who served as the Committee Secretary.

The Committee noted with sadness and regret the passing of Hendrik Eusterbarkey a long standing and respected member of ANM.

1.2 Welcome from the Secretary-General

Omar Frits Eriksson, Deputy Secretary-General on behalf of Francis Zachariae, Secretary-General of IALA welcomed all participants to ARM14; he stated:

“On behalf of the Secretariat and myself I would like to welcome you all to the meeting of the ARM Committee. We are of course very disappointed that it is another virtual event, but we hope that the next one can be in person here in SGEL. I think we really need that, and we certainly miss you all.

Since your last meeting on 1 July along with the international maritime community we celebrated World Marine Aids to Navigation Day, the third in the series following the good work initiated in Palma de Mallorca, Spain, in 2019 and repeated virtually around the globe last year and this.

The principal objective of this day was to promote greater awareness of IALA and its work by bringing to the attention of the wider public the role of marine aids to navigation and the significance of IALA’s technical work in enhancing safety of navigation and protection of the environment. I feel we achieved all this.

There has also been an excellent celebration of the Lighthouse of the Year, demonstration the success of this concept.

I must thank all involved for their very kind collaboration and support with this year’s most successful World Marine Aids to Navigation Day and Lighthouse of the year celebration.

The topic of Maritime Autonomous Surface Ships or MASS continues to grasp the imagination and after the workshop of late May hosted by Japan which attracted more than one hundred participants from twenty-nine

countries the topic was presented to the Spanish-speaking members of IALA at the end of June hosted by Chile. There are many excellent conclusions and you have the final report as one of your input papers.

As you probably know the Council has decided to establish a MASS task force under the PAP to investigate IALA's involvement in MASS developments. The group has held one meeting so far. All the committees are represented, and it will be interesting to follow the work and see the results.

Since January a growing number of States have signed the Convention on the International Organization for Marine Aids to Navigation. It is encouraging to note that we are a bit more than halfway through the year of the Convention with three ratifications/acceptances and fifteen signatures received from diplomatic representatives in Paris. I heard that Brazil will sign this week bringing us up to sixteen. This progress surely embodies the respect that the new organisation will have based on the many years of IALA's growth, maturity and excellence.

We are now well into the committee period and you can find all the relevant information on the updated dashboard and I also hope you enjoy the newly designed web site.

Looking ahead we will also have the Workshop on Cyber security in Marine AtoN operations in November and Workshop on Enhanced Radar Positioning System (ERPS) in November/December this year.

Once again, I send my thanks for the continued dedication of those who attend these gatherings and for the time that they give to ensure the committees keep working in these unprecedented times.

Finally, I pay tribute to the efforts of our members during these difficult times with COVID-19 in our midst. They have continued to provide aids to navigation so essential for the safety of marine traffic and the continuous facilitation of the global economy.

Staff of our members have been (and still are) required to attend their normal workplace when responding to outages and maintenance required to keep their services operational. This devotion deserves special mention.

Lastly, I will mention, that we were sorry to learn of the death on 14 August of Mme Christiane Ville, former head of administration at IALA. This was sad news for she was instrumental in the success of IALA over the many years she was part of the organisation, from its origins in 1957 to her retirement in 1991. Even after retirement she kept in touch and will be long remembered for her sound advice.

With this I wish you good luck with your important work the weeks ahead."

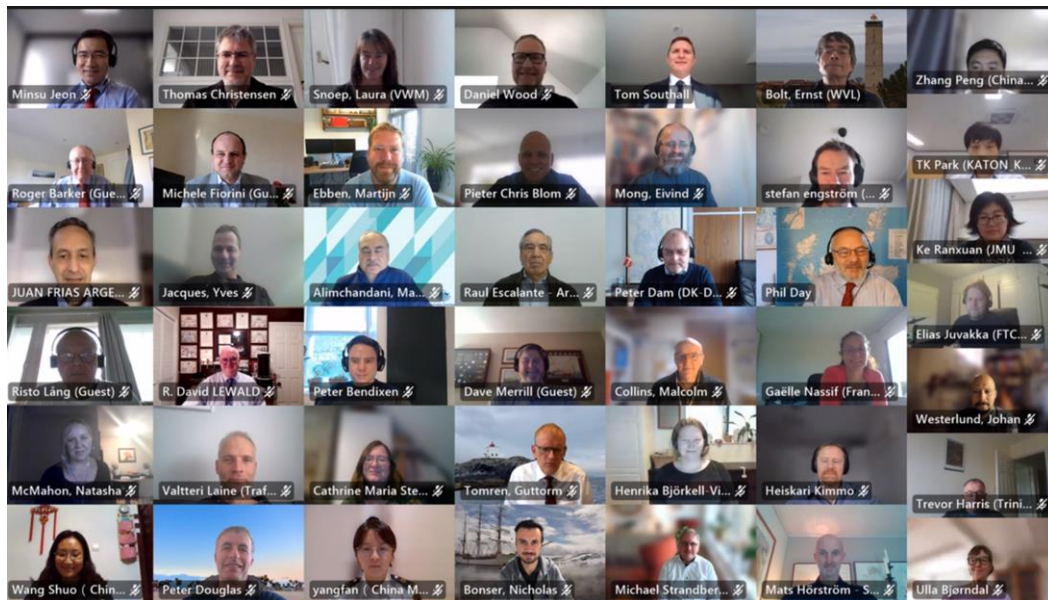
1.3 Approval of the agenda

The agenda was reviewed and approved (ARM14-1.2.1).

1.4 Introductions and Apologies

The Chair welcomed the new participants of the Committee.

A list of participants and their contact details can be found in Annex B



1.5 Working Arrangements

The following statement on the IALA General Data Protection Policy was made by the Committee Secretary:

IALA complies with the General Data Protection Regulations of the European Union. IALA will include a list of participants with their contact information in the report of this meeting. Any participant who wishes to remove their contact details from the participants list should advise the Committee Secretary as soon as possible.

The following question was asked by the Committee Secretary:

If anyone present has knowledge of any patents, including pending Patents, held either by themselves or by other organisations or individuals, the use of which may be required to practice or implement the content of IALA Documents being developed or worked on in this Committee to inform the IALA Secretariat.

No patents were noted.

The Committee Secretary provided all participants with a briefing on the *Virtual Committee Working Arrangements* document and tools available to them. This brief included an overview of the tasks, in the form of the ARM14 Action Plan that had been agreed by the ARM Committee Management Team to be progressed during ARM14 through virtual Task Groups (TG). Each task had a deadline for expressions of interest to participate to the specified Task Group Leader by a certain date. Timings of the TG meetings were arranged by each Task Group Leader in liaison with the Secretariat and displayed on a Committee dashboard calendar.

Task items that were worked on at ARM14 were displayed in the *Action Plan*, which can be found on IALA Dashboard for ARM.

The deadline for submitting documents to the silent approval procedure was set to 25 October at 17:00 UTC. Review of Action Items from last meeting

1.6 Review of action items from ARM12

Input paper ARM14-2.1.1 refers.

The Committee Secretary confirmed that all Secretariat actions from ARM13 were completed.

2. REVIEW OF INPUT PAPERS

2.1 Input papers to ARM13

Input papers were noted as listed in ARM14-3.1.1.

2.2 Input papers not related to an existing task

The Chair highlighted the following papers:

- ARM14-3.2.1 Proposal for revision of IALA guideline, the draft of the marking of Man-made structures
The Chair thanked China MSA for their submission and allocated it to WG1 as input to the task.
- ARM14-3.2.2 Application of Bridge Collision Prevention Warning System in China
China MSA were thanked for their input and the Committee noted that this will be taken into consideration for future work.
- ARM14-3.2.8 Proposal of Additional Marking on Fixed Bridge
Korea Institute of AtoN were thanked for their input and the Committee noted that this will be taken into consideration for future work.
- ARM14-3.2.4 and 3.2.4.1 Input paper on IMT
The Chair thanked the ENAV Committee for their input and asked the Committee to note the document.
- ARM14-3.2.5 and 3.2.5.1 VTS Update - Revision to IMO Resolution A857(20) – final
The Committee noted the input from the VTS Committee and the Chair asked participants to send the papers to relevant stakeholders in their countries.
- ARM14-3.2.6, 3.2.6.1 and 3.2.6.2 G1092 Proposed Revision ARM Committee Input Paper
- After further consideration of these documents it became apparent that this Guideline has historically been considered by the ENG Committee. The Secretariat will therefore take this review forward with the comments received.
- ARM14-3.2.10 Liaison Note to ARM Committee - Review and update for G1088_Rev1
This liaison note was sent to WG2 to consider when they may review Guideline G1088.
- ARM14-3.2.11 GNSS user requirements for ocean monitoring buoys_FINAL
The Committee noted this input paper and the authors were invited to present their paper to participants during ARM14.

3. REPORTS FROM OTHER BODIES

3.1 IALA

3.1.1 Report on IALA Council

The 73rd session of the IALA Council was held virtually from 8 to 10 June 2021 by videoconference. Technical Operations Manager, Minsu Jeon, highlighted the approved documents.

Other highlights were:

- Current drivers and trends document will be reviewed at the 74th session.
- Committee work programmes have been extended to 2018 – 2023 and 2023 – 2027 respectively.
- Webinars on virtual aids to navigation will be held in the next couple of months.
- Cape Byron Lighthouse was proclaimed as the *Lighthouse of the Year 2021*.
- A proposal for an ENG workshop on Enhanced Radar Positioning System was approved to take place virtually in November 2021.

3.1.2 Report of the IALA Policy Advisory Panel

Minsu Jeon, Technical Operations Manager, reported to the Committee that the 42nd session of PAP was held virtually 8 - 10 September 2021. The current Work Programme and cross-committee cooperation on various subjects were discussed.

There was good discussion on issues relating to portrayal and it was agreed that VTS and ARM would liaise closely on these tasks.

3.2 IMO

Minsu Jeon reported that IMO NCSR8 and IMO MSC 103 have been held since the last VTS session. Highlights that the Committee noted were:

NCSR 8

- The revision of Recommendation ITU-R M.1371-5
- Recognition of the Japanese regional navigation satellite system QZSS as a component of the WWRNS
- Use of public broadband communication and technical standardization for public mobile networks in the context of maritime safety
- Progress on standards development by IEC (NCSR 8/13)
- Report on the monitoring of ECDIS issues by IHO (NCSR 8/13/1)

MSC 103

IALA submitted the following documents to MSC:

- MSC 103/20/5 Opening for signature of the Convention on the International Organization for Marine Aids to Navigation (France and IALA)
- MSC 103/20/9 IMO Member State Audit Scheme (IALA)

Also discussed:

- MASS Regulatory Scoping Exercise
- VDES – a proposal for the amendment of SOLAS chapters 4 and 5 was agreed.

4.3. Digital@Sea

Regarding Digital@Sea Minsu Jeon referred the Committee to *ARM14-4.3.1 The Highlight of Digital at Sea AP 2021* to note. He reminded participants of Digital@Sea events in 2022. More details can be found at <http://digitalatsea.org/p1/c1>.

3.3 IHO/IALA liaison

Minsu Jeon reported that the 5th Session of the IHO IALA Technical Cooperation meeting was held virtually on 27 April 2021 topics including S-100, S-200 updates, GI registry, S-127, S-131, S-124 and S-125. The joint workshop was originally meant to be held in 2020 but due to the COVID situation, the group agreed to postpone the event one more year to 2022. The host, Norway, is still in favour of hosting this event physically and the group underlined that the programme needs to be refined in due course.

IHO HSSC has approved an IALA domain to be created in the portrayal register. This will enable IALA to make symbology proposals formally.

4. PRESENTATIONS

All recordings of the presentations given at ARM14 can be found at IALA Dashboard for All Committees under Resources / Committee Presentations (login necessary). The following presentations were given at ARM14:

- IALA World-Wide Academy Update / Kevin Gregory, IALA WWA

5. WORK PROGRAMME (2018 - 2023)

5.1 ARM Task Plan

An updated Task Plan (ARM14-11.1.1) will be forwarded to ARM15.

Action item:

The Secretariat is requested to forward the Updated Task Plan post-ARM14 (ARM14-11.1.1) to ARM15.

5.2 Action Plan for ARM14

The ARM14 Action Plan, which can be found [here](#), was noted by the Committee. The Secretary reminded participants that all meetings during ARM14 would be posted on the ARM14 Dashboard.

5.3 ARM task proposals for work programme 2023 – 2027

The new task register for the next Work Programme (WP) will, beside the tasks that are being carried over from this WP, include new tasks that are provided in the new template format for the next working period.

The Chair urged that any task proposals should be accompanied by a full entry for the Task Register using the updated template (ARM14-6.3.2).

Action items:

Committee participants are asked to provide proposals of new tasks for next WP in the new template format (ARM14-6.3.2) as input to ARM15.

5.4 IALA Standards

The Chair reviewed the IALA Standards and found only one change to highlight to the IALA Secretariat. In Standard S1010 Marine Aids To Navigation Planning and Service Requirements. Recommendation R0139 has been reviewed and will, if approved, be renamed The Marking of Man-Made Structures. It is proposed that *Recommendation R0113 The Marking of Fixed Bridges and Other Structures over Navigable Waters* will be converted into a guideline sitting under R0139 and will therefore potentially need to be removed from the Standard after ARM16.

Action item:

The Secretariat to note the changes to R0139 and potential changes to R0113 and reflect them in the review to Standard 1010 as necessary.

6. ESTABLISH WORKING GROUPS

Three working groups were established, with their respective Chairs and Vice-Chairs as outlined below.

Working Group (WG)	Working Group Chair / Vice Chair
WG1 – Navigational Requirements	Guttorm Tomren / Johan Westerlund
WG2 – Information Services and Portrayal	Dave Lewald
WG3 – Risk Management	Roger Barker / Cathrine Steenberg

7. WORKING GROUP 1 – NAVIGATIONAL REQUIREMENTS (WG1)

ARM14 has been a busy and productive meeting, several documents were planned for IALA Council approval after ARM14. As Chair of WG1 group Guttorm Tomren stated how proud he was of the work and commitment the WG members have shown during this session. As documented below, nearly all of the planned activities

have been concluded. Without downgrading other tasks, the work with the “MBS” is huge, and numerous edits and comments have been reviewed. The “MBS” is scheduled to be input to ARM15 as a clean version, then finally to be submitted for IALA Council approval.

7.1 Response to input papers

The Working Group reviewed the list of input papers and allocated them to new and current tasks.

The task group leaders have responded to comments regarding documents sent for silent approval and made changes where necessary.

7.2 Reformat and review the IALA MBS incorporating MAtoN (Task 1.5.1)

Task group leader: Natasha McMahon

The task group continued the revision of the MBS, taking into consideration the initial gap analysis that was completed at ARM9, as well as all the work from ARM 10, 11, 12 & 13. For ARM14, there was also input from PAP (PAP42-5.1.4.1.1), ENAV, ENG (Input 14-7.3.4 & 14-7.3.4.1) and VTS (Input 7-14.3.14 & 7-14.3.14.1). This included updates, incorporation of electronic & mobile applications and the inclusion of the autonomous world (MASS), as well as many edits to text. There is an inclusion of wording regarding MASS, with input from ARM WG 3, ENG, VTS & ENAV and the task group.

Other tasks related to the MBS, such as tasks 1.5.3 (GAP for MBS) and 1.5.10 (MAtoN), are completed and have been considered in the revision of the current MBS.

The task group have considered all of the liaison notes and edits. A response liaison note was drafted to inform all committees that their input was considered and applied where appropriate.

Task group will provide a finalized draft for council and GA assembly.

Action items:

The Secretariat is requested to forward ARM14-11.2.2.1 WP draft Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 (Clean Version) as a working paper to ARM15 for further consideration.

The Secretariat is requested to forward the ARM14-11.2.1.1 Liaison note to all committees on Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 for their consideration.

The Secretariat to edit ARM14-11.2.2.1 WP draft Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 (Clean Version) to bring in to line with the IALA Style Guide and submit to LAP and then ARM15 for further consideration.

7.3 Undertake a gap analysis and review of Guideline 1078 The Use of AtoN in the Design of Fairways (June 2011). (Task 1.5.3)

Task group Leader: James Collocott

The Task Group had two meetings over the course of ARM14. The revision of ARM14-7.3.11 G1078 - The Use of AtoN in the Design of Fairways & Channels (ARM13-7.3) and the compilation of ARM14-7.3.12 Task 1.5.3 - New Definitions for IALA Dictionary (ARM13-7.3.7.2) were completed and submitted for silent approval.

The Task Group Leader commended all the participants on their contributions and interaction.

Action items:

The Secretariat is requested to forward ARM14.11.2.1.2 G1078 - The Use of AtoN in the Design of Fairways & Channels to IALA Council for approval.

The Secretariat is requested to forward ARM14-11.2.1.3 New Definitions for IALA Dictionary relating to Task 1.5.3 to the DWG for progression.

7.4 Review Recommendation R-0139 on Marking of Man-made Offshore Structures (Task 1.5.8)

Task group leader: Trevor Harris

First task group meeting reviewed the input papers from China MSA (ARM14-3.2.1 & ARM14-3.2.2) and the paper from Korea Institute of AtoN (ARM14-3.2.8). The group decided that the papers referring to R0113 The Marking of Bridges can be forwarded to future ARM sessions for consideration when this document is reviewed. The task group lead submitted a task register proposal to open document R0113 for review at future ARM sessions to the WG chair for consideration and further action.

The group finalised the draft guideline on The Marking of Breakwaters and this was forwarded to the WG Chair for submission to silent approval.

The reduced Recommendation R0139 the Marking of Man-Made Structures was completed ready for passing to WG Chair for submission to silent approval.

Document ARM14-7.3.8 was circulated for review by email for comments prior to the second meeting of the task group.

Second task group meeting reviewed the comments received this week on WP ARM14-7.3.8. There was extensive discussion on how to mark fairways/channels/corridors/passages through the windfarm especially how these should be referenced.

Third task group meeting completed work on the guideline which will replace the original R0139 and this was forwarded to the WG chair with the new suggested reduced recommendation for approval.

Action items:

The Secretariat is requested to forward ARM14-11.2.2.2 WP Application of Bridge Collision Prevention Warning System in China (ARM14-3.2.2) and ARM14-11.2.2.3 WP Proposal of Additional Marking on Fixed Bridge (ARM14-3.2.8) as working papers to ARM15 for further consideration.

That the ARM Committee Management Team consider the Task-register proposal on review of R0113 document for the 2023 – 2027 Work Programme that is located in the relevant folder on the IALA file-share.

The Secretariat is requested to forward ARM14-11.2.1.4 draft guideline on man-made structures to IALA Council for approval.

The Secretariat is requested to forward ARM14-11.2.1.5 revised Recommendation 0-139 on Marking of Man-made Offshore Structures to IALA Council for approval.

The Secretariat is requested to forward ARM14-11.2.1.6 draft Guideline on the Marking Of Breakwaters And Barriers to IALA Council for approval.

7.5 Revise G1052 Quality Management in Aids to Navigation Service Delivery (Task 1.4.1)

Task group leader: Johan Westerlund

Work on this item was completed during the session. The draft guideline will now be forwarded to other committees for consideration, any comments will be considered at ARM15 and the guideline thereafter sent to Council for approval. The task group also considered an updated version of the draft guideline on Quality Control of AtoN Third Party Service Providers from ENG.

Action item:

The Secretariat is requested to forward ARM14-11.2.1.7 Liaison note to all committees on Guideline G1052 Quality Management Systems plus the working paper for AtoN Service Delivery for consideration.

The Secretariat is requested to forward ARM14-11.2.2.4 WP Revised Guideline G1052 Quality Management in Aids to Navigation Service Delivery as a working paper to ARM15 for further consideration.

The Secretariat is requested to forward ARM14-11.2.1.8 Liaison note to ENG on 3rd party Quality Control to the ENG Committee for their consideration.

7.6 Develop guidance on the provisions of AtoN for autonomous vehicle/vessel operations (Maritime Autonomous Surface Ship, MASS)

Task group leader: Guttorm Tomren

This task was started at ARM14, one meeting was held. Input papers were discussed briefly. The task will continue for ARM15, input papers to be forwarded as working papers. Intersessional work is planned.

Action items:

The Secretariat is requested to forward input papers ARM14-11.2.2.5 WP Input paper on MASS (ARM14-7.3.3), ARM14-11.2.2.6 WP Draft MASS Rec-WG2 review (ARM14-7.3.3.1), ARM14-11.2.2.7 WP Draft MASS Guideline-WG2 review (ARM14-7.3.3.2), ARM14-11.2.2.8 WP Input paper on the report of IALA WS on MASS (ARM14-7.3.6), ARM14-11.2.2.9 WP Report on the IALA Workshop on marine AtoN in the autonomous world_FINAL (1) (ARM14-7.3.6.1), ARM14-11.2.2.10 WP Liaison Note to ENAV ARM ENG MASS Task Force - Operations and Trials of Autonomous Ships - 'Case Studies' (ARM14-7.3.15), ARM14-11.2.2.11 WP TG1.2.5 Possible case studies - Operations and Trials of Autonomous Ships (ARM14-7.3.15.1), ARM14-11.2.2.12 WP Liaison Note to ENAV ARM ENG MASS Task Force - Implications of MASS from a VTS Perspective – a discussion paper (ARM14-7.3.16) and ARM14-11.2.2.13 WP TG.1.2.5 Discussion paper - Implications of MASS from a VTS perspective post plenary (ARM14-7.3.16.1) to ARM15 as working papers.

That Committee participants are invited to join the intersessional task group working on ARM's work on MASS and to express their interest to Guttorm Tomren guttorm.tomren@kystverket.no by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

7.7 Revise G1054 Preparing for a Voluntary IMO Audit on Aids to Navigation Service Delivery (Task 1.1.2)

Task group leader: Yang Jun

Work on this task was completed at this session and a clean version document was sent for silent approval. The final guideline is named as G1054 Preparing for an IMO Audit on Aids to Navigation Service Delivery.

The Task Group Leader gave his sincere thanks to all participants who had contributed to this task.

Action item:

The Secretariat is requested to submit ARM14-11.2.1.9 revised Guideline G1054 Preparing for an IMO Audit on Aids to Navigation Service Delivery to IALA Council for approval.

7.8 Develop Guidance for Navigators on the use of AtoN (Task 1.5.4)

Task group leader: James Collocott

This task was progressed by considering input papers ARM14-7.3.1, an input paper from China relating to the development of Guidance on Marine AtoN Training and Awareness for Mariners, ARM14-7.3.5.1: TG-1 5 4_Guidance on AtoN Training and Awareness for Mariners_V1, ARM14-7.3.5.2: Task 1 5 4_AtoN Awareness for Mariners_Gap Analysis_V1 and ARM14-7.3.5.3: WG 1 Task 1.5.4_WP IALA Dictionary_New and amended definitions.

The group had three meetings over the course of ARM14. The outcome and data generated from the input paper ARM14-7.3.1 confirmed the need to enhance the AtoN training and awareness for Mariners globally and reasonable progress was made on ARM14-7.3.5.1.

The work on this task will continue at ARM15.

Action item:

The Secretariat is requested to forward ARM14-11.2.2.14 WP TG-1 5 4_Guidance on AtoN Training and Awareness for Mariners_V2 (ARM14-7.3.5.1), ARM14-11.2.2.15 WP Task 1 5 4_AtoN Awareness for Mariners_Gap Analysis_V1_20211020 (ARM14-7.3.5.2) and ARM14-11.2.2.16 WP WG 1 Task 1.5.4_WP IALA Dictionary_New and amended definitions_20211021 (ARM14-7.3.5.3) as working papers to ARM15 for further consideration.

7.9 Review and update A-126 regarding MAtoN (Task 1.5.10.1)

Task group leader: Guttorm Tomren

The task group conducted one meeting during ARM-14. The document had undergone intersessional work and had reached a mature stage. After final edits, the document was then forwarded for silent approval. Thanks to all TG member for their contributions.

Action item:

The Secretariat is requested to forward ARM14-11.2.1.10 draft Recommendation R0126 The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation to IALA Council for approval.

7.10 Revision of IALA NAVGUIDE

ARM WG held a meeting during ARM 14, to discuss updates and comments brought forward for the new version of the NAVGUIDE. A meeting with all committee coordinators is scheduled for early November, those interested should a note an intersessional meeting will be held mid-November in order to finalize ARM input.

Action item:

That Committee participants are invited to join the intersessional task group working on ARM's input to the NAVGUIDE and to express their interest to Natasha McMahon Natasha.mcmahon@dfo-mpo.gc.ca by 5 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

8. WORKING GROUP 2 – INFORMATION SERVICES AND PORTRAYAL (WG2)

As elsewhere, WG2 attendance was virtual and because of this, the Chair decided on a selection of high-priority tasks to be conducted during the meeting. Despite the virtual nature of the meeting, the WG plenary attracted many participants. The Chair expressed his appreciation for the hard work and enthusiasm of the Working Group.

A review of the following Input Papers & Liaison Notes (not considered within Task Groups) was conducted by the WG Plenary:

- ARM 14-8.3.1 MCP Status – Noted.
- ARM14-8.4.1 liaison note to ARM on technical service specifications for the provision of AtoN Information – Noted.
- ARM 14-8.5.1 ENAV Liaison to ARM re Ship Reporting – Noted (See 8.14)
- ARM14-3.2.7 Survey of shipboard navigation equipment for the management and display of AIS ASM and AtoN – Joint WG1/2 work item (see 8.15)

8.1 Develop guidance on cyber security for AtoN authorities in collaboration with all other Committees. (Task 1.2.6.)

Task group leader: Martijn Ebben

No input documents for the Cyber Security task group in ARM14 were received. However, the ENAV28 committee received 2 input documents that have been discussed by email in collaboration with the ENAV28 WG1. It was agreed that the documents, ENAV28-5.1.1.4 and ENAV28-5.2.12, will be used as input for the IALA Cyber Security workshop that will take place in November 2021, which was also agreed on in the Cyber Security Workshop Steering Committee.

Members of the cyber security TG (combined ARM/ENAV): Michael Strandberg, Peter Hooijmans, Julius Möller, Martijn Ebben.

8.2 Maritime Connectivity (Task 4.2.1)

Task group leader: David Lewald

No action taken in ARM14.

8.3 Develop guidance on Maritime Services including the production of an 'e-Navigation Service Description (Task 5.1.1)

Task group leader: Michael Strandberg

The TG began a draft AtoN Maritime Service description (MS 17 – AtoN). The TG also held an initial discussion regarding the objective and requirements of the proposed guideline. During discussion it was realized that the title and table of contents was causing confusion and detracted from the overall understanding of the TG. Work on Services description will continue intersessionally and the TG will begin drafting of the proposed Guideline at ARM15.

Action items:

The Secretariat is requested to forward ARM14-11.3.2.1 WP draft AtoN Maritime Service description (MS 17 – AtoN) as a working paper to ARM15 for further consideration.

That Committee participants are invited to join the intersessional task group working on Task 5.1.1 Develop guidance on Maritime Services including the production of an 'e-Navigation Service Description and to express their interest to Michael Strandberg mst@dma.dk by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

8.4 New Guideline on Operational considerations for S-200 (S-201 AtoN information and S-230 Application Specific Messages) (Task 5.1.2)

Task group leader: David Lewald

No action taken during ARM14.

8.5 Develop a Product Specification S-201 (Task 5.1.3)

Task Group Leader: Dr. Sewoong Oh

The task group discussed permitted values for enumeration type and identified what needs to be updated including DCEG comments of France. The S-201 will be updated after ARM14 and will be submitted to the ARM15 after the TG member review is complete. Additionally, the TG showed a high interest in the symbols for new feature types of S-201 and Aton status of S-125, agreed to continue the discussion and development of the symbols.

Action item:

That Committee participants are invited to join the intersessional task group working on Task 5.1.3 Develop a Product Specification S-201 and to express their interest to Dr. Sewoong Oh osw@kriso.re.kr by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

8.6 Develop Annex C to S-201 (Task 5.1.4)

Task group leader: Dr. Sewoong Oh

Work is ongoing.

8.7 Develop Requirements for S-125 (Task 5.1.5)

Task group leader: Dr. Sewoong Oh

The task group discussed how to filter from S-201 Aton data model and include Aton status information. From the discussion, the S-125 will be drafted and reviewed by TG members in several inter-sessional meetings aiming to submit it to the ARM15.

Action item:

That Committee participants are invited to join the intersessional task group working on Task 5.1.5 Develop Requirements for S-125 and to express their interest to Dr. Sewoong Oh osw@kriso.re.kr by 19 November

2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

8.8 Coordination with IHO/WMO for S-100, S-200, and MRN management (S-100/S-200 message coordination with other Committees on S-2xx development) (Task 5.1.6)

Task group leader: David Lewald

Work is ongoing.

8.9 Develop MRN Registry Submission & Maintenance Guideline for IALA Secretariat (Task 5.1.8)

Task group leader: LeeAnne Gordon

The Task Group met twice during ARM14 to adjudicate comments on the draft, incorporate suggestions and edits, and complete the Guideline. The draft guideline was forwarded for silent approval.

Action item:

The Secretariat is requested to forward ARM14-11.3.1.1 draft Guideline on Management Of Maritime Resource Name Organization Identifiers to Council for approval.

8.10 Develop Recommendation to cover MRN Guidelines (Task 5.1.9)

Task group leader: LeeAnne Gordon

The Task Group met once during ARM14 to create a draft Recommendation to be forwarded to ARM15 for continued work. Task ongoing.

Action item:

The Secretariat is requested to forward ARM14-11.3.2.2 WP draft recommendation to cover MRN Guidelines as a working paper to ARM15 for further consideration.

8.11 Coordinate Committee support for IALA representation at IHO working groups in cooperation with Secretariat (HSSC, S-100WG, NIPWG) (Task 5.1.10)

Task group leader: David Lewald

Work is ongoing.

8.12 Monitor the development of S-201 Testbed (Task 5.1.11)

Task group leader: Dr. Sewoong Oh

ROK introduced the new project for the development of SMART Aton system and maritime service, and prototype system for Aton information system that applied the MRN of IALA G1128.

8.13 Review G1105 shore side portrayal ensuring harmonisation with e-Navigation related information inc. (Task 5.3.1)

Task group leader: David Lewald

A review of the Guideline was conducted but input from VTS will be necessary before editing can continue. Specifically, is the VTS draft “Guideline on the Portrayal of VTS Information and Data” intended to replace G1105 or will it be a separate guideline specific to VTS?

Action item:

The PAP to consider issues surrounding the Guideline G1105 and specifically if the VTS draft “Guideline on the Portrayal of VTS Information and Data” is intended to replace G1105 or will it be a separate guideline specific to VTS?

8.14 Develop Guideline on ship reporting from the shore-side perspective (Task 5.2.2)

Task group leader: Fred Pot

The Ship Reporting Task Group had one meeting during ARM14. They discussed renaming the Central Repository that is part of the Intermediary System for Ship Reporting to “Ship Report Registry Service”. It was decided to wait with updating the Guideline on Ship Reporting from a Shore-based Perspective (G1159) to make this name change until more substantive amendments need to be addressed.

The TG reviewed ARM 14-8.5.1 ENAV Liaison to ARM re Ship Reporting and prepared a reply Liaison note to ENAV Committee and also included the VTS Committee.

Action item:

The Secretariat is requested to forward the ARM14-11.3.1.2 Liaison Note to ENAV and VTS -Technologies to Support Maritime Single Window for their consideration.

That Committee participants are invited to join the intersessional task group working on Guideline on Ship Reporting to express their interest to Fred Pot fred.pot@bergmann-marine.com by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

8.15 Survey on usage of AIS Aids to Navigation and Application Specific Messages

Task group leader: Eivind Mong

A list of survey questions was developed based on the input paper ARM14-3.2.7.1 and input received from WG1 and WG2. It was proposed that the Secretariat develop this into a survey for all IALA members using an online survey tool. The urgency of the information was noted during the discussions as the information collected is intended for informing the international community on the status of adaptation and use of AIS AtoN and ASM.

A liaison note was drafted for Council to ask for support for IALA joining IMO submission by IMO member states to inform IMO MSC about the work of IALA in obtaining this information and the plans of requesting better connection between AIS receivers and navigation equipment.

Action item:

The Secretariat is requested to develop the survey questions into an online survey using an appropriate tool and inform the IALA membership about the survey emphasizing its importance.

The Secretariat is requested to forward the ARM14-11.3.1.3 Liaison Note to Council on AIS ASM for their consideration.

9. WORKING GROUP 3 – RISK MANAGEMENT (WG3)

Once again, the work was carried out by virtual meetings instead of physical attendance at the IALA HQ in Saint Germain-en-Laye. Based on the experience from the last Committee meeting, and as WG3 is a rather small working group, it was decided by the Chair and Vice-chair prior to commencement of ARM14 to complete all meetings as a rolling working group plenary.

This time, a number of new participants attended WG3, hence, the WG Chair started by giving an introduction to the Working Group and emphasized the importance of the work carried out by the WG participants within the field of risk management with the aim of improving safety at sea for all mariners.

Thereafter, each WG participant gave an introduction of themselves and their background.

Chair: Roger Barker

Vice-chair: Cathrine Steenberg

Task Group Leaders: Sarah Robinson, Ernst Bolt, Edward Rogers and Jakob Bang

Working Group participants: Raul Escalante, Valtteri Laine, Ke Ranxuan, Xu Haibo, Yiqin Sun, Pieter-Chris Blom, Shivani Seepersad, Tianyin Jiang, Chen Dequan, Kim Byung-Kuk, Tang Menguy, Daniel Wood, Jaime Alvarez, Malcolm Collins, Mahesh Alimchandani, and Neil Trainor.

The WG commenced its work by agreeing on an agenda based on Task Plan 2018-2022:

- Review of G1018 Risk Management and also review of G1123, G1124, and G1138 (Task 1.2.1)
- Review of R0142 Maritime Data Sharing IALA Net (Task 1.2.2)
- Review of G1086 Global Sharing of Maritime Data (Task 1.2.3)
- Review of R0138, G1058 and G1097 (Task 1.2.4)
- Develop Recommendation for marine data sharing for risk assessment analysis (Task 1.2.5)
- Develop document to promulgate IALA risk management tool box to IMO (Task 1.2.7)
- Review of G1020 in collaboration with WWA (Task 3.1.1)
- Review relevant sections of the NAVGUIDE (Task 3.2.1)
- Cooperation with WWA in providing Risk Seminars (Task 6.1.1)

The agenda for ARM14 was primarily to progress the on-going work on the over-arching guideline G1018 and the underlying guidelines for SIRA, IWRAP and Simulation.

Some of the underlying guidelines are nearly ready to enter the approval process, however, the aim for these guidelines during ARM14 was to make sure that there is consistency between the over-arching guideline G1018 and the underlying guidelines for IWRAP, SIRA, PAWSA and Simulation before seeking Committee approval.

9.1 Review G1018 Risk Management to ensure compatibility with risk toolbox. Includes full review of underlying Risk Toolbox documentation G1123, G1124, G1138 (Task 1.2.1)

Task group leader: Ernst Bolt

The WG continued the thorough and comprehensive revision of the current risk management guideline G1018, by making a final review of the document in plenary. The core structure is in place and the level of information provided to the users are clear and succinct without unnecessary duplication in the guidelines for PAWSA, IWRAP, SIRA, and Simulation. However, the Guideline needs to undergo a final review of particularly the Terminology section to seek correlation of the definitions between the committees and the WWA and have now been put into the form of IALA Dictionary.

Included within G1018 is the new One Page Risk Assessment. It is recognised that a suitable tool to complete this short assessment and this will be developed intersessionally and at ARM15. However, this tool will only be referenced in the Guideline and as such will not delay final publication of the guideline.

Hence, the guideline will be forwarded to ARM15 as a working paper. The final review of the definitions will take place at ARM15 whereafter it should be ready to enter the silent approval process.

9.1.1 The review of the Guideline for SIRA (G1138)

Task group leader: Edward Rogers

The review of the Guideline for SIRA (G1138) continued in plenary in the WG.

An overview was given regarding significant questions still to be addressed with regard to the correlation between the Guideline G1138 and the documentation currently used by the WWA in training courses.

Some work will be progressed intersessionally particular regarding accuracy of the document. The work on G1138 will continue to finalisation at ARM15.

9.1.2 The review of the Guideline for IWRAP (G1123)

Task group leader: Jakob Bang

The review of the Guideline for IWRAP (G1123) continued in plenary. Further minor revisions have been made and the Guideline is now ready for approval.

The Guideline will enter the silent approval process as one of the first documents at the beginning of ARM15.

9.1.3 The review of the Guideline for PAWSA (G1124)

Task group leader: Sarah Robinson

Regarding the Guideline for PAWSA (G1124) significant progress has been made separating the actual guideline from the PAWSA operational manual, thus making the guideline fit for purpose.

The work in the Guideline will continue at ARM15. Hence, a draft version of G1124 will be forwarded as input to ARM15 as a working paper.

Action items:

The Secretariat is requested to forward ARM14-11.4.2.1 WP G1018_Risk_Management_211027_clean, ARM14-9.1.3 WP Guideline 1123 The use of IWRAP MKII_20211027_clean version final, ARM14-11.4.2.2 WP Guideline 1124 Ed1 The use of PAWSA MKII June 2017 (ARM13-9.1.6), ARM14-11.4.2.3 WP G1124 PAWSA ARM 14 Outstanding items, ARM14-11.4.2.4 WP Guideline 1138 Ed.1 The use of SIRA (ARM13-270421)_Clean (ARM13-9.1.4) and ARM14-11.4.2.5 WP New Definitions for IALA Dictionary_ARM14-9.1.1_20211026 as working papers to ARM15 for further consideration.

That Committee participants are invited to join the intersessional task group working on Task 1.2.1 G1018 Risk Management specifically the one page risk-assessment and to express their interest to Ernst Bolt ernst.bolt@rws.nl by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

That Committee participants are invited to join the intersessional task group working on review of the Guideline for SIRA (G1138) and to express their interest to Ed Rogers e.rogers@nashmaritime.com by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard.

9.2 Review R0142 Maritime Data Sharing IALA Net to reflect new title “Maritime data sharing” and the storage and use of historical [AIS and other] data for risk analysis (Task 1.2.2) and Review G1086 Global Sharing of Maritime Data (June 2012)

Task group leader: Roger Barker

Further development of the IALANET has been affected by the Pandemic and is currently put on hold.

This task and specific work on R0142 and G1086 will be progressed in future sessions of the group depending on progress of the IALANET. However, the Chairman will maintain close contact with the WWA and the Dean on this important area of work.

Action items:

The Secretariat is requested to forward the ARM14-11.4.2.6 WP Recommendation R0142 On Maritime Data Sharing IALANET and ARM14-11.4.2.7 WP Guideline 1086 Ed.1 Global Sharing of Maritime Data & Information (ARM13-9.1.9) as working papers to ARM15 for further consideration.

9.3 In cooperation with ENG (Task 1.2.1) revise R0138, G1058 and G1097 on simulation use by AtoN authorities (Task 1.2.4)

Task group leader: Cathrine Steenberg

The Guideline for simulation G1058 had been reviewed and modified during ARM10 again during ARM13 and can now be considered as being finalized with the additional improvements made during ARM14.

During ARM12 the review of the Guideline G1097 was initiated, which was further progressed during ARM13. The review led to the conclusion that the Guideline should be more generic as the current guideline is rather technical with a level of high detail, which makes it outdated as soon as it is approved due to the fast development in technology. However, in the process of converting the document with a more generic content, it became clear that the content should be included as an Annex to G1058. Hence, during ARM14 G1058 has been amended with a new Annex containing a condensed content of G1097.

The Guideline G1058 including the new annex is ready to enter the silent approval process at the beginning of ARM15. Hence, a draft version of G1058 will be forwarded as input to ARM15 as a working paper.

Review of Recommendation R0138 will be postponed until the next Committee meeting ARM15.

Action items:

*The **Secretariat** is requested to forward ARM14-11.4.2.8 WP Recommendation R0138 (O-138) Use of GIS and Simulation by AtoN Authorities (ARM13-9.1.7), and ARM14-11.4.2.9 WP Guideline G1058 Ed.2 (ARM12-9.1.7) 28102021 (ARM13-9.1.8) as working papers to ARM15 for further consideration.*

9.4 Develop document to promulgate IALA risk management toolbox to IMO (SN circular) (Task 1.2.7)

Task 1.2.7 will be started when the full review of Guideline G1018 together with the supporting toolbox guidelines have been brought to a significant level of maturity (Task 1.2.4).

9.5 Review G1020 Training Related to [Marine] Aids to Navigation (Dec 2005) (Task 3.1.1)

A draft version of the IALA Model Course L1.3 on Risk Management Tool Ed 2 was sent to WWA for final amendment after ARM9. The Model Course has since been approved by Council.

9.6 Review relevant sections of NAVGUIDE as requested by Secretariat (Task 3.2.1)

In conjunction with other WGs, WG3 has been assigned to various sections to be included in the revised NAVGUIDE and commenced early assessment of the requirements. In addition, on completion of the revision of G1018 suggested amendments to the NAVGUIDE text will be provided.

9.7 Cooperate with WWA in providing Risk Seminar(s) (Task 6.1.1)

Coordination and cooperation between the WWA, its lecturers and WG3 is essential for providing guidance to National members as well as education through the Risk Management Courses provided by WWA.

The WG Chair confirmed that WG3 are continuing to fully support, where appropriate, the WWA in delivery of Risk Management Seminars.

10. ANY OTHER BUSINESS

10.1 MASS – Inclusion in ARM documents.

The Chair highlighted the work of the MASS Task Force and the surrounding work that is currently being carried out within IALA. He urged that all participants should consider MASS in their tasks. During ARM14 the Committee approved a Liaison Note to PAP and the MASS Task Force setting out ARM's approach to MASS. Jakob Bang, DMA, was also nominated to join Roger Barker as liaison for ARM to the MASS TF.

Action item:

That the Secretariat forwards ARM14-11.1.2 Liaison note to PAP and MASS Task force - ARM approach to MASS to PAP and the MASS Task Force for their consideration.

10.2 STCW - potential inclusion of ATON technicians/Managers training

Following advice that the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) & associated Code were likely to be revised in the coming years at IMO; The ARM

Committee was requested to comment on an IALA approach in this regard. Committee National members were requested to seek guidance from appropriate colleagues with competence in this area.

Responses were received from Finland, South Africa, Norway and the UK. Input ARM14 7.3.1 from China MSA & DMU was also considered. This was followed by a plenary discussion which supported the conclusion set out in output paper *ARM14-11.1.3 Liaison note to PAP on STCW amendments*.

Action item:

That the Secretariat forwards ARM14-11.1.3 Liaison note to to PAP on STCW amendments to PAP for their consideration.

10.3 G1105 – Shore-side Portrayal Ensuring Harmonisation with e-Navigation Information

The Committee noted that Guideline G1105 was first published in 2013 and although its longevity is a testament to the work carried out at that time it was agreed that it now requires review and update.

11. REVIEW OF OUTPUT AND WORKING PAPERS

The Working Group Chairs reported on the work carried out by their Working Groups.

The output from ARM14 was approved by the Committee using the silent approval procedure. The output documents are listed in Annex D.

The Committee Chair then thanked the Working Group Chairs, Vice-Chairs and participants of the working groups for all their efforts during the ARM14 session.

12. DATE AND VENUE OF NEXT MEETING

ARM15 is planned to be held between 21 – 25 March 2022 at IALA Headquarters, Saint Germain-en-Laye, France. The Secretariat will continue to monitor global events of the COVID-19 pandemic and advise its Members of any changes that may be instigated.

Other IALA events will be publicised on the IALA website.

13. CLOSING OF THE MEETING

The Committee Chair thanked the Committee and working group chairs for their hard work and effective output during the session.

He also hoped that everyone could take the IALA survey that is sent out after every Committee session in order to receive feedback for continuous improvements.

As it was Cathrine Steenberg's last session as Working Group 3 Vice-chair, the ARM Chair thanked her for her hard work and dedication to the Committee over many years and wished her well for the future.

Finally, the Chair asked if there were any final comments that members wished to make; there were none, at which he hoped to meet all participants in person during ARM15.

14. LIST OF ANNEXES

1 Agenda

A copy of the agenda is in Annex A.

2 Participants

A list of participants is in Annex B.

3 Input Papers

A list of input papers is in Annex C.

4 Output and Working papers

A list of output and working papers is in Annex D.

5 Action items

A list of action items is in Annex E.



14th Meeting of the AtoN Requirements and Management Committee (ARM14)

The 14th meeting of the **ARM Committee** will be held from 15 - 29 October 2021 virtually.

The opening plenary will commence at 1100 – 1300 UTC on Friday 15 October 2021, and the closing plenary will begin at 1100 – 1300 UTC on Friday 29 October 2021.

Agenda

1. Introduction
 - 1.1. Welcome address from the Secretary-General
 - 1.2. Approval of agenda
 - 1.3. Apologies and introductions
 - 1.4. Working arrangements
 - 1.4.1. ARM Social Programme
2. Review of action items
3. Review of input papers
 - 3.1. Input papers to ARM 14
 - 3.2. Input papers not related to an existing task
4. Reports from other bodies
 - 4.1. IALA
 - 4.1.1. IALA Council Minsu Jeon
 - 4.1.2. IALA Policy Advisory Panel (PAP) Minsu Jeon
 - 4.2. IMO Minsu Jeon
 - 4.3. Digital@Sea Minsu Jeon
 - 4.4. IHO/ITU/IALA liaison Minsu Jeon
5. Online presentations (via webinars on specific dates and times to be announced)
6. Work Programme (2018 - 2022)
 - 6.1. ARM Task Plan
 - 6.2. Action plan for ARM14
 - 6.3. ARM task proposals for work programme 2023 – 2027
 - 6.4. IALA Standards
7. Establish WG1 - Navigational requirements
 - 7.1. Obligations and regulatory compliance
 - 7.2. Quality management
 - 7.3. AtoN planning

- 7.4. Virtual marking
- 7.5. Visual signalling
- 7.6. Capacity building (NAVGUIDE)
- 8. Establish WG2 - Information services and portrayal
 - 8.1. Design, implementation and maintenance
 - 8.2. Wide/Medium bandwidth systems (AIS & VDES)
 - 8.3. Harmonised maritime connectivity framework (CMDS) Maritime IoT (Intelligent sensors, Aton monitoring)
 - 8.4. Data models and data encoding (IVEF, S-100, S-200, ASM)
 - 8.5. Data exchange systems (Traffic Information)
 - 8.6. Terminology, symbology, and portrayal
 - 8.7. Workshop(s)
- 9. Establish WG3 - Risk management
 - 9.1. Risk management
 - 9.2. Training and certification
 - 9.3. Seminar
- 10. Any other business
 - 10.1.1. MASS – Inclusion in ARM documents.
 - 10.1.2. STCW - potential inclusion of ATON technicians/Managers training
 - 10.1.3. G1105 – Shore-side Portrayal Ensuring Harmonisation with e-Navigation Information
- 11. Review of output and working papers
 - 11.1. Committee wide (Task Plan)
 - 11.2. WG1
 - 11.3. WG2
 - 11.4. WG3
- 12. Review of session report
- 13. Date and venue of next meeting
- 14. Close of the meeting

ANNEX B

LIST OF PARTICIPANTS

The following list of participants is grouped by their organization in alphabetical order:

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ANNEX C LIST OF INPUT PAPERS

All papers are posted on the Committee section of the IALA website.

Items in blue = late or updated paper.

Meeting	Paper Number	Input Paper Title	Source	Allocation
ARM14-	1.2.1	ARM14 provisional Agenda	IALA Secretariat	All
ARM14-	2.1.1	Action items from ARM13	IALA Secretariat	All
ARM14-	2.1.2	Report of ARM13	IALA Secretariat	All
ARM14-	3.1.1	Input paper list	IALA Secretariat	All
ARM14-	3.2.1	Proposal for revision of IALA guideline, the draft of the marking of Man-made structures	China MSA	WG1
ARM14-	3.2.2	Application of Bridge Collision Prevention Warning System in China	China MSA	WG1
ARM14-	3.2.3	Change Proposal for IALA G1128 THE SPECIFICATION OF e-NAVIGATION	GLA, SMA, OFFIS	WG2
ARM14-	3.2.4	Input paper on IMT	ENAV27	WG2
ARM14-	3.2.4.1	Draft_IMT_(3GPP)_Reco-WG2 review-rev2	ENAV27	WG2
ARM14-	3.2.5	VTS Update - Revision to IMO Resolution A857(20) - final	VTS	All
ARM14-	3.2.5.1	Enclosure - Draft IMO Resolution & Draft Guideline G1089	VTS	All
ARM14-	3.2.6	G1092 Proposed Revision ARM Committee Input Paper	IALA Secretariat	Plenary
ARM14-	3.2.6.1	G1092 Ed2.1 Safety Management for AtoN Activities December 2017	IALA Secretariat	Plenary
ARM14-	3.2.6.2	G1092 Ed2.2 Safety Management for AtoN Activities December 2017	IALA Secretariat	Plenary
ARM14-	3.2.7	Survey of shipboard navigation equipment for the management and display of AIS ASM and AtoN	Canadian Coastguard et al	WG1/2
ARM14-	3.2.7.1	AIS ASM AtoN Survey questionnaire	Canadian Coastguard et al	WG1/2
ARM14-	3.2.8	Proposal of Additional Marking on Fixed Bridge	Korean Institute of AtoN	WG1
ARM14-	3.2.9	MSC104 domestic ferry safety - see Article 20	Chair	WG1
ARM14-	3.2.10	Liaison Note to ARM Committee - Review and update for G1088_Rev1	VTSS1	WG2
ARM14-	3.2.11	GNSS user requirements for ocean monitoring buoys_FINAL	GMV / EUSPA / VVA	All
ARM14-	4.2.1	Report on IMO MSC and NCSR amended	IALA Secretariat	All

ARM14-	4.3.1	The Highlight of Digital at Sea AP 2021	IALA Secretariat	All
ARM14-	4.4.1	Report IHO IALA Technical 5th Coordination Meeting final	IALA Secretariat	All
ARM14-	4.4.2	IALA Report of ITU-R WP5B meeting 10 to 21 May 2021	S Bober	All
ARM14-	4.4.3	ITU liaison- Recommendation ITU-R M.1371-5	ITU WP5B	All
ARM14-	6.1.1	ARM Task Plan	ARM13	All
ARM14-	6.3.1	WP Draft ARM Task Plan 2022 - 2026 post ARM13 (ARM13-11.1.3)	ARM13	All
ARM14	6.3.2	Task register proposal 2023-2027	IALA Secretariat	All
ARM14-	6.4.1	standards revision	IALA Secretariat	Chair
ARM14-	6.4.1.1	structure of the standards	IALA Secretariat	Chair
ARM14-	6.4.1.2	Draft revision S1010 AtoN Planning and Service Requirements (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.3	Draft revision S1020 AtoN Design and Delivery (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.4	Draft revision S1030 Radionavigation Services (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.5	Draft revision S1040 Vessel Traffic Services (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.6	Draft revision S1050 Training and Certification (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.7	Draft revision S1060 Digital Communication Technologies (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	6.4.1.8	Draft revision S1070 Information Services (for review 2nd half 2021)	IALA Secretariat	Chair
ARM14-	7.1.1	WP Draft revised guideline G1054 IMSAS (ARM13-7.1.3.1)	ARM13	WG1
ARM14-	7.2.1	Liaison ARM on 3rd party Quality Control	ENG13	WG1
ARM14-	7.2.1.1	Task 1.2.1 Draft Guideline QC for 3rd Party AtoN Service Providers (7.04.2021)	ENG13	WG1
ARM14-	7.2.2	WP draft Guideline G1052 Quality-Management-Systems-for-AtoN-Service-Delivery (ARM13-7.2.1)	ARM13	WG1
ARM14-	7.3.1	Proposal for Develop Guidance on Marine AtoN Training and Awareness for Mariners	China MSA	WG1
ARM14-	7.3.2	Distribution Practice of Physical AIS AtoN in Qingdao Port of China	China MSA	WG1
ARM14-	7.3.3	Input paper on MASS	ENAV27	WG1
ARM14-	7.3.3.1	Draft MASS Rec-WG2 review	ENAV27	WG1
ARM14-	7.3.3.2	Draft MASS Guideline-WG2 review	ENAV27	WG1
ARM14-	7.3.4	Liaison note to ARM regarding revision of MBS R1001	ENG13	WG1

ARM14-	7.3.4.1	Draft R1001 Ed1 The IALA Maritime Buoyage System_XXX (1)_20201020 ARM12-7.3_PK	ENG13	WG1
ARM14-	7.3.5	Input paper Committee meeting_Task 1.5.4_Guidance for navigators on use of AtoN (WP)	TG1.5.4	WG1
ARM14-	7.3.5.1	TG-1 5 4_Guidance on AtoN Training and Awareness for Mariners_V1_20210914	TG1.5.4	WG1
ARM14-	7.3.5.2	Task 1 5 4_AtoN Awareness for Mariners_Gap Analysis_V1_20210629_pm_sent to Guttorm	TG1.5.4	WG1
ARM14-	7.3.5.3	WG 1 Task 1.5.4_WP IALA Dictionary_New and amended definitions_20210914	TG1.5.4	WG1
ARM14-	7.3.6	Input paper on the report of IALA WS on MASS	ENAV Chair	WG1
ARM14-	7.3.6.1	Report on the IALA Workshop on marine AtoN in the autonomous world_FINAL (1)	ENAV Chair	WG1
ARM14-	7.3.7	WP CLEAN and Formatted WP Draft Recommendation 0-139 (ARM13-7.3.1)	ARM13	WG1
ARM14-	7.3.8	WP CLEAN and Formatted WP Draft guideline on man made structures(ARM13-7.3.2)	ARM13	WG1
ARM14-	7.3.9	WP Draft Breakwater IALA Guideline GNNNNN Full Track Changed	ARM13	WG1
ARM14-	7.3.10	WP Draft guideline on man made structures (ARM13-7.3.2) Full Track Changed	ARM13	WG1
ARM14-	7.3.11	WP G1078 - The Use of AtoN in the Design of Fairways & Channels (ARM13-7.3.7.1)	ARM13	WG1
ARM14-	7.3.12	WP Task 1.5.3 - New Definitions for IALA Dictionary (ARM13-7.3.7.2)	ARM13	WG1
ARM14-	7.3.13	WP The IALA Maritime Buoyage System (ARM13-11.2.5.1)	ARM13	WG1
ARM14-	7.3.14	Liaison Note to ARM on MBS	VTSS1	WG1
ARM14-	7.3.14.1	Annex to Liaison Note to ARM on MBS (R1001)_Rev1	VTSS1	WG1
ARM14-	7.3.15	Liaison Note to ENAV ARM ENG MASS Task Force - Operations and Trials of Autonomous Ships - 'Case Studies'	VTSS1	WG1
ARM14-	7.3.15.1	WP TG1.2.5 Possible case studies - Operations and Trials of Autonomous Ships	VTSS1	WG1
ARM14-	7.3.16	Liaison Note to ENAV ARM ENG MASS Task Force - Implications of MASS from a VTS Perspective – a discussion paper	VTSS1	WG1
ARM14-	7.3.16.1	WP TG.1.2.5 Discussion paper - Implications of MASS from a VTS perspective post plenary	VTSS1	WG1
ARM14-	7.3.17	R0126 The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation Services (A-126) Ed1.6 June 2011	G Tomren	WG1

ARM14-	7.3.18	Liaison note to ARM on the final draft revision of MBS R1001_draft ver2.0	ENAV28	WG1
ARM14-	7.3.18.1	ENAV Comment on the draft WP The IALA MBS	ENAV28	WG1
ARM14-	7.6.1	Liaison Note to ARM - Navguide CH 5-VTS	VTS51	WG1
ARM14-	8.3.1	MCP status	Offis et al	WG2
ARM14-	8.4.1	liaison note to ARM on technical service specifications for the provision of AtoN information	ENAV27	WG2
ARM14-	8.4.2	WP Draft G1143 MRN Identifiers 2.1_April2021	ARM13	WG2
ARM14-	8.5.1	ENAV Liaison to ARM re Ship Reporting-WG2 rev	ENAV27	WG2
ARM14-	8.5.2	Revisions to G1159 on ship reporting	F Pot	WG2
ARM14-	8.5.2.1	Draft of G1159 Ed1.1 Guideline on Ship Reporting from a Shore-based Perspective	F Pot	WG2
ARM14-	9.1.1	WP Guideline_1018_Risk_Management._04232021 (ARM13-9.1.1)	ARM13	WG3
ARM14-	9.1.2	WP Risk Management Toolbox Questionnaire - 211020 (ARM13-9.1.1)	ARM13	WG3
ARM14-	9.1.3	WP Guideline 1123 Ed1 The use of IWRAP MKII_20210415 (ARM13-9.1.3)	ARM13	WG3
ARM14-	9.1.4	WP Guideline 1138 Ed.1 The use of SIRA (ARM13-270421)_Clean (ARM13-9.1.4)	ARM13	WG3
ARM14-	9.1.5	WP Guideline 1124 Ed1 The use of PAWSA MKII June 2017 (ARM13-9.1.6)	ARM13	WG3
ARM14-	9.1.6	WP Draft Guideline 1097 Ed.1.1 Tech Features and Technology Relevant for Sim(ARM13-9.1.5)	ARM13	WG3
ARM14-	9.1.7	WP Recommendation RO138 (O-138) Use of GIS and Simulation by AtoN Authorities (ARM13-9.1.7)	ARM13	WG3
ARM14-	9.1.8	WP Guideline G1058 Ed.2 (ARM12-9.1.7) 26042021 (ARM13-9.1.8)	ARM13	WG3
ARM14-	9.1.9	WP 1086 Ed1 Global Sharing of Maritime Data_22Jun2012 (ARM13-9.1.9)	ARM13	WG3
ARM14-	10.1.2.1	STCW amendments - involvement of IALA	Chair	All

ANNEX D

LIST OF OUTPUT DOCUMENTS AND WORKING PAPERS

Output documents are submitted for review/action by a body other than the Committee initiating the document.

Meeting	Paper Number	Output Paper Title	Source	Action
ARM14-	11.1.2	Liaison note to PAP and MASS Task force - ARM approach to MASS	ARM14	to PAP / MASS TF
ARM14-	11.1.3	Liaison note to to PAP on STCW amendments	ARM14	to PAP
ARM14-	11.2.1.1	Liaison note to all committees on Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2	WG1	to all Committees
ARM14-	11.2.1.2	G1078 - The Use of AtoN in the Design of Fairways & Channels	WG1	to Council
ARM14-	11.2.1.3	New Definitions for IALA Dictionary relating to Task 1.5.3	WG1	to DWG
ARM14-	11.2.1.4	Draft guideline on man made structures	WG1	to Council
ARM14-	11.2.1.5	Revised Recommendation 0-139 on Marking of Man-made Offshore Structures	WG1	to Council
ARM14-	11.2.1.6	Draft Guideline on the Marking Of Breakwaters And Barriers	WG1	to Council
ARM14-	11.2.1.7	Liaison note to all committees on Guideline 1052 Quality Management Systems for AtoN Service Delivery	WG1	to all Committees
ARM14-	11.2.1.8	Liaison note to ENG on 3rd party Quality Control	WG1	to ENG
ARM14-	11.2.1.9	G1054 Preparing for an IMO Audit on Aids to Navigation Service Delivery	WG1	to Council
ARM14-	11.2.1.10	draft Recommendation R0126 The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation	WG1	to Council
ARM14-	11.3.1.1	Draft Guideline on Management Of Maritime Resource Name Organisation Identifiers	WG2	to Council
ARM14-	11.3.1.2	Liaison Note to ENAV and VTS -Technologies to Support Maritime Single Window	WG2	to ENAV and VTS
ARM14-	11.3.1.3	Liaison Note to Council on AIS ASM survey	WG2	to Council

Working Papers are documents that will remain within the committee for further review.

Meeting	Paper Number	Working Paper Title	Source	Action
ARM14-	11.1.1	Updated Task Plan post-ARM14	Committee	to ARM15
ARM14-	11.2.2.1	WP draft Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 (Clean Version)	WG1	to ARM15
ARM14-	11.2.2.2	WP Application of Bridge Collision Prevention Warning System in China (ARM14-3.2.2)	WG1	to ARM15

Meeting	Paper Number	Working Paper Title	Source	Action
ARM14-	11.2.2.3	WP Proposal of Additional Marking on Fixed Bridge (ARM14-3.2.8)	WG1	to ARM15
ARM14-	11.2.2.4	WP Revised G1052 Quality Management in Aids to Navigation Service Delivery	WG1	to ARM15
ARM14-	11.2.2.5	WP Input paper on MASS (ARM14-7.3.3)	WG1	to ARM15
ARM14-	11.2.2.6	WP Draft MASS Rec-WG2 review (ARM14-7.3.3.1)	WG1	to ARM15
ARM14-	11.2.2.7	WP Draft MASS Guideline-WG2 review (ARM14-7.3.3.2)	WG1	to ARM15
ARM14-	11.2.2.8	WP Input paper on the report of IALA WS on MASS (ARM14-7.3.6)	WG1	to ARM15
ARM14-	11.2.2.9	WP Report on the IALA Workshop on marine AtoN in the autonomous world_FINAL (1) (ARM14-7.3.6.1)	WG1	to ARM15
ARM14-	11.2.2.10	WP Liaison Note to ENAV ARM ENG MASS Task Force - Operations and Trials of Autonomous Ships - 'Case Studies' (ARM14-7.3.15)	WG1	to ARM15
ARM14-	11.2.2.11	WP TG1.2.5 Possible case studies - Operations and Trials of Autonomous Ships (ARM14-7.3.15.1)	WG1	to ARM15
ARM14-	11.2.2.12	WP Liaison Note to ENAV ARM ENG MASS Task Force - Implications of MASS from a VTS Perspective – a discussion paper (ARM14-7.3.16)	WG1	to ARM15
ARM14-	11.2.2.13	WP TG.1.2.5 Discussion paper - Implications of MASS from a VTS perspective post plenary (ARM14-7.3.16.1)	WG1	to ARM15
ARM14-	11.2.2.14	WP TG-1 5 4_Guidance on AtoN Training and Awareness for Mariners_V2 (ARM14-7.3.5.1)	WG1	to ARM15
ARM14-	11.2.2.15	WP Task 1 5 4_AtoN Awareness for Mariners_Gap Analysis_V2 (ARM14-7.3.5.2)	WG1	to ARM15
ARM14-	11.2.2.16	ARM14-11.2.2.16 WP WG 1 Task 1.5.4_WP IALA Dictionary_New and amended definitions_20211020 (ARM14-7.3.5.3)	WG1	to ARM15
ARM14-	11.3.2.1	WP draft AtoN Maritime Service description (MS 17 – AtoN)	WG2	to ARM15
ARM14-	11.3.2.2	WP draft recommendation to cover MRN Guidelines	WG2	to ARM15
ARM14-	11.4.2.1	WP G1018_Risk_Management_211027_clean	WG3	to ARM15
ARM14-	11.4.2.2	WP Guideline 1124 Ed1 The use of PAWSA MKII June 2017 (ARM13-9.1.6)	WG3	to ARM15
ARM14-	11.4.2.3	WP G1124 PAWSA ARM 14 Outstanding items	WG3	to ARM15
ARM14-	11.4.2.4	WP Guideline 1138 Ed.1 The use of SIRA (ARM13-270421)_Clean (ARM13-9.1.4)	WG3	to ARM15

Meeting	Paper Number	Working Paper Title	Source	Action
ARM14-	11.4.2.5	WP New Definitions for IALA Dictionary_ARM14-9.1.1_20211026	WG3	to ARM15
ARM14-	11.4.2.6	WP Recommendation R0142 On Maritime Data Sharing IALANET	WG3	to ARM15
ARM14-	11.4.2.7	WP Guideline 1086 Ed.1 Global Sharing of Maritime Data & Information (ARM13-9.1.9)	WG3	to ARM15
ARM14-	11.4.2.8	WP Recommendation RO138 (O-138) Use of GIS and Simulation by AtoN Authorities (ARM13-9.1.7)	WG3	to ARM15
ARM14-	11.4.2.9	WP Guideline G1058 Ed.2 (ARM12-9.1.7) 28102021 (ARM13-9.1.8)	WG3	to ARM15

ANNEX E ACTION ITEMS

Action Items for Secretariat

1. The Secretariat is requested to forward the Updated Task Plan post-ARM14 (ARM14-11.1.1) to ARM15. 14
2. The Secretariat to note the changes to RO139 and potential changes to RO113 and reflect them in the review to Standard 1010 as necessary. 14
3. The Secretariat is requested to forward ARM14-11.2.2.1 WP draft Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 (Clean Version) as a working paper to ARM15 for further consideration. 15
4. The Secretariat is requested to forward the ARM14-11.2.1.1 Liaison note to all committees on Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 for their consideration. 15
5. The Secretariat to edit ARM14-11.2.2.1 WP draft Recommendation R1001 The IALA Maritime Buoyage System (MBS) Edition 2 (Clean Version) to bring in to line with the IALA Style Guide and submit to LAP and then ARM15 for further consideration. 15
6. The Secretariat is requested to forward ARM14.11.2.1.2 G1078 - The Use of AtoN in the Design of Fairways & Channels to IALA Council for approval. 15
7. The Secretariat is requested to forward ARM14-11.2.1.3 New Definitions for IALA Dictionary relating to Task 1.5.3 to the DWG for progression. 15
8. The Secretariat is requested to forward ARM14-11.2.2.2 WP Application of Bridge Collision Prevention Warning System in China (ARM14-3.2.2) and ARM14-11.2.2.3 WP Proposal of Additional Marking on Fixed Bridge (ARM14-3.2.8) as working papers to ARM15 for further consideration. 16
9. The Secretariat is requested to forward ARM14-11.2.1.4 draft guideline on man-made structures to IALA Council for approval. 16
10. The Secretariat is requested to forward ARM14-11.2.1.5 revised Recommendation 0-139 on Marking of Man-made Offshore Structures to IALA Council for approval. 16
11. The Secretariat is requested to forward ARM14-11.2.1.6 draft Guideline on the Marking Of Breakwaters And Barriers to IALA Council for approval. 16
12. The Secretariat is requested to forward ARM14-11.2.1.7 Liaison note to all committees on Guideline G1052 Quality Management Systems plus the working paper for AtoN Service Delivery for consideration. 16
13. The Secretariat is requested to forward ARM14-11.2.2.4 WP Revised Guideline G1052 Quality Management in Aids to Navigation Service Delivery as a working paper to ARM15 for further consideration. 16
14. The Secretariat is requested to forward ARM14-11.2.1.8 Liaison note to ENG on 3rd party Quality Control to the ENG Committee for their consideration. 16
15. The Secretariat is requested to forward input papers ARM14-11.2.2.5 WP Input paper on MASS (ARM14-7.3.3), ARM14-11.2.2.6 WP Draft MASS Rec-WG2 review (ARM14-7.3.3.1), ARM14-11.2.2.7 WP Draft MASS Guideline-WG2 review (ARM14-7.3.3.2), ARM14-11.2.2.8 WP Input paper on the report of IALA WS on MASS (ARM14-7.3.6), ARM14-11.2.2.9 WP Report on the IALA Workshop on marine AtoN in the autonomous world_FINAL (1) (ARM14-7.3.6.1), ARM14-11.2.2.10 WP Liaison Note to ENAV ARM ENG MASS Task Force - Operations and Trials of Autonomous Ships - 'Case Studies' (ARM14-7.3.15), ARM14-11.2.2.11 WP TG1.2.5 Possible case studies - Operations and Trials of Autonomous Ships (ARM14-7.3.15.1), ARM14-11.2.2.12 WP Liaison Note to ENAV ARM ENG MASS Task Force - Implications of MASS from a VTS Perspective – a discussion paper (ARM14-7.3.16) and ARM14-11.2.2.13 WP TG.1.2.5 Discussion paper - Implications of MASS from a VTS perspective post plenary (ARM14-7.3.16.1) to ARM15 as working papers. 17

16. The Secretariat is requested to submit ARM14-11.2.1.9 revised Guideline G1054 Preparing for an IMO Audit on Aids to Navigation Service Delivery to IALA Council for approval. 17
17. The Secretariat is requested to forward ARM14-11.2.2.14 WP TG-1 5 4_Guidance on AtoN Training and Awareness for Mariners_V2 (ARM14-7.3.5.1), ARM14-11.2.2.15 WP Task 1 5 4_AtoN Awareness for Mariners_Gap Analysis_V1_20211020 (ARM14-7.3.5.2) and ARM14-11.2.2.16 WP WG 1 Task 1.5.4_WP IALA Dictionary_New and amended definitions_20211021 (ARM14-7.3.5.3) as working papers to ARM15 for further consideration. 17
18. The Secretariat is requested to forward ARM14-11.2.1.10 draft Recommendation R0126 The Use of the Automatic Identification System (AIS) in Marine Aids to Navigation to IALA Council for approval. 18
19. The Secretariat is requested to forward ARM14-11.3.2.1 WP draft AtoN Maritime Service description (MS 17 – AtoN) as a working paper to ARM15 for further consideration. 19
20. The Secretariat is requested to forward ARM14-11.3.1.1 draft Guideline on Management Of Maritime Resource Name Organization Identifiers to Council for approval. 20
21. The Secretariat is requested to forward ARM14-11.3.2.2 WP draft recommendation to cover MRN Guidelines as a working paper to ARM15 for further consideration. 20
22. The PAP to consider issues surrounding the Guideline G1105 and specifically if the VTS draft “Guideline on the Portrayal of VTS Information and Data” is intended to replace G1105 or will if it will be a separate guideline specific to VTS? 20
23. The Secretariat is requested to forward the ARM14-11.3.1.2 Liaison Note to ENAV and VTS - Technologies to Support Maritime Single Window for their consideration. 21
24. The Secretariat is requested to develop the survey questions into an online survey using an appropriate tool and inform the IALA membership about the survey emphasizing its importance. 21
25. The Secretariat is requested to forward the ARM14-11.3.1.3 Liaison Note to Council on AIS ASM for their consideration. 21
26. The Secretariat is requested to forward ARM14-11.4.2.1 WP G1018_Risk_Management_211027_clean, ARM14-9.1.3 WP Guideline 1123 The use of IWRAP MKII_20211027_clean version final, ARM14-11.4.2.2 WP Guideline 1124 Ed1 The use of PAWSA MKII June 2017 (ARM13-9.1.6), ARM14-11.4.2.3 WP G1124 PAWSA ARM 14 Outstanding items, ARM14-11.4.2.4 WP Guideline 1138 Ed.1 The use of SIRA (ARM13-270421)_Clean (ARM13-9.1.4) and ARM14-11.4.2.5 WP New Definitions for IALA Dictionary_ARM14-9.1.1_20211026 as working papers to ARM15 for further consideration. 23
27. The Secretariat is requested to forward the ARM14-11.4.2.6 WP Recommendation R0142 On Maritime Data Sharing IALANET and ARM14-11.4.2.7 WP Guideline 1086 Ed.1 Global Sharing of Maritime Data & Information (ARM13-9.1.9) as working papers to ARM15 for further consideration. 23
28. That the Secretariat forwards ARM14-11.1.2 Liaison note to PAP and MASS Task force - ARM approach to MASS to PAP and the MASS Task Force for their consideration. 24
29. That the Secretariat forwards ARM14-11.1.3 Liaison note to to PAP on STCW amendments to PAP for their consideration. 25

Action Items for Participants

30. That the ARM Committee Management Team consider the Task-register proposal on review of R0113 document for the 2023 – 2027 Work Programme that is located in the relevant folder on the IALA file-share. 16
31. That Committee participants are invited to join the intersessional task group working on ARM’s work on MASS and to express their interest to Guttorm Tomren guttorm.tomren@kystverket.no

- by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 17
32. That Committee participants are invited to join the intersessional task group working on ARM's input to the NAVGUIDE and to express their interest to Natasha McMahon Natasha.mcmahon@dfo-mpo.gc.ca by 5 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 18
 33. That Committee participants are invited to join the intersessional task group working on Task 5.1.1 Develop guidance on Maritime Services including the production of an 'e-Navigation Service Description and to express their interest to Michael Strandberg mst@dma.dk by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 19
 34. That Committee participants are invited to join the intersessional task group working on Task 5.1.3 Develop a Product Specification S-201 and to express their interest to Dr. Sewoong Oh osw@kriso.re.kr by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 19
 35. That Committee participants are invited to join the intersessional task group working on Task 5.1.5 Develop Requirements for S-125 and to express their interest to Dr. Sewoong Oh osw@kriso.re.kr by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 19
 36. That Committee participants are invited to join the intersessional task group working on Guideline on Ship Reporting to express their interest to Fred Pot fred.pot@bergmann-marine.com by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 21
 37. That Committee participants are invited to join the intersessional task group working on Task 1.2.1 G1018 Risk Management specifically the one page risk-assessment and to express their interest to Ernst Bolt ernst.bolt@rws.nl by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 23
 38. That Committee participants are invited to join the intersessional task group working on review of the Guideline for SIRA (G1138) and to express their interest to Ed Rogers e.rogers@nashmaritime.com by 19 November 2021 noting the dates and times of the intersessional meetings will be published on the IALA ARM Committee Dashboard. 23



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Association Internationale de Signalisation Maritime